



# HIGH LEVEL WASTE CORPORATE BOARD NEWSLETTER

11 September 2008

## UPCOMING EVENTS:

The Low-Level Waste Federal Review Group (LFRG) in Washington, DC on 16-18 September 2008. Contact Maureen O'Dell for details (MAUREEN.O'DELL@hq.doe.gov)

Next High-Level Waste Corporate Board meeting will be held at DOE-RL on 6 November 2008. Meeting details will be presented here and e-mailed to those persons with an interest to participate. Topics for discussion include but are not limited to:

- Results of the Tank Integrity Workshop
- Strategic Initiative Briefing
- Performance Assessment Guide Proposal

## NEWS ITEMS

3 June 2008: WASHINGTON, DC – The U.S. Department of Energy today announced submittal of a License Application to the U.S. Nuclear Regulatory Commission seeking authorization to construct America's first repository for spent nuclear fuel and high-level radioactive waste at Yucca Mountain, Nevada. (<http://www.ocrwm.doe.gov>)

8 September 2008: Washington, DC - The Nuclear Regulatory Commission has formally docketed the Department of Energy's license

## **Minutes from the 24 July 2008 Meeting**

### **Opening Remarks and Introductions**

**M. Gilbertson**

**Deputy Assistant Secretary for Engineering and Technology**

Mark talked about the preparations associated with transition in administrations that will soon be occurring; activity is on-going to prepare documentation for the new management that explains what EM has done, currently is doing, and will be doing in the future. He pointed out that over the twenty years since its inception, EM has invested about \$70 billion in the remediation and management of the country's legacy wastes and there is the possibility of the task requiring an additional \$225 billion over the next forty years. Mark also mentioned other recent EM achievements including the Technology Roadmap, the establishment of HLW Communities of Practice, interactions with international organizations, and the formation of the HLW Corporate Board.

### **Welcome**

**R. Provencher**

**Deputy Manager for Idaho Cleanup Project**

Rick welcomed the Board members and Advisors warmly and noted that DOE-ID appreciated the opportunity to host the meeting. Currently, INL's most important HLW management issue is a disposal path for calcine. INL is working with the regulators and others to develop a mutually agreeable route. He welcomes any advice and insight the Board may offer.

### **High Level Waste Strategic Planning Initiative**

**S. Krahn**

**Director, Office of Waste Processing**

The March 2008 *Engineering and Technology Roadmap* grouped known program risks and uncertainties. From these groupings came

application for the proposed high-level nuclear waste repository at Yucca Mountain, Nev. The agency staff has also recommended that the Commission adopt, with further supplementation, DOE's Environmental Impact Statement for the repository project. (See NRC News Release No. 08-164 for details, <http://www.nrc.gov>, )

25 August 2008: WASHINGTON, DC – U.S. Department of the Interior Deputy Secretary Lynn Scarlett and U.S. Department of Energy (DOE) Acting Deputy Secretary Jeffrey F. Kupfer today announced the designation of DOE's B Reactor as a National Historic Landmark and unveiled DOE's plan for a new public access program to enable American citizens to visit B Reactor during the 2009 tourist season. (<http://www.doe.gov/news/6489.htm>)

8 September 2008: WASHINGTON, DC – The Department of Energy late last week awarded the long-awaited Hanford Mission Support contract to Lockheed Martin-led Mission Support Alliance, LLC. The team, which also includes Jacobs Engineering and Wackenhut, beat out the competing team of Computer Sciences Corporation-Battelle for the contract, set to be worth approximately \$3 billion over a five-year base period and five years of options. (<http://www.doe.gov/news/6505.htm>)

Low-Level Waste Corporate Board meeting was held at Las Vegas on 4 September 2008. Contact Gary Peterson for details ([gary.peterson@em.doe.gov](mailto:gary.peterson@em.doe.gov))

### CHANGES

John Eschenberg has been promoted from acting assistant

a set of strategic initiatives. A means of planning and applying this strategy to waste management issues is evolving and Steve discussed several strategic planning evolutions. He began with a description of the planning group's charter from EM-2, which outlines the goals, focus, constraints, and expected end product of their efforts. He then described how several strategic "cases" were assembled, using a building block approach, where each block is a major waste management activity. Steve discussed the categories of building blocks, and then presented several cases that were analyzed in this way. This analysis has several options worth noting such as "risk-based retrieval", "area closure", and "optimized processing." These options are not the way EM does business now but they are concepts that should receive consideration. Due to the early stage of this work, the next steps include the various teams continuing their efforts and the preparation of briefings for EM upper management. A more detailed update will be presented at the next Board meeting.

With the beginning of this strategic planning initiative, one question that was discussed at the meeting is how and when to communicate it to the various stakeholders. The plan needs to tell the story and give a descriptive overview that will resonate with the stakeholders and give them the confidence that EM is competently planning for future contingencies.

### **Multi-Year Program Plan Prioritization Process**

**J. Griffin**

**Manger of Research Programs**

Jeff started by describing the Initiative Development Team (IDT) structure and composition used by EM-21 to ensure broad participation in the planning process. The goals of the IDTs are to provide a prioritized list of Waste Processing tasks that address key site needs, and to develop a structured, consistent, and robust process for Technology Development program management decision making. This prioritization process was first used on FY2008 waste processing tasks. Lessons learned from that initial effort include bringing the field offices into the process early, the prioritization criteria required simplification, and that workshops are essential to discussions, understanding, and acceptance of the program. He went on to describe the prioritization process which includes the steps of developing an overview of problem definitions, selecting screening criteria, task development and selection followed by a risk review a peer review which includes the FPD and issuance of the final report. Activities in this process currently underway are the collection of data for updating and creating TDDs and meeting with the field offices. A prioritization workshop was conducted in Denver in late July.

[J. Griffin Presentation](#)

manager of the Department of Energy's Hanford Waste Treatment Plant project to assistant manager. He is responsible for the design, construction, and operation of the vitrification plant. Eschenberg came to Hanford in 2003 as the plant project manager and has more than 15 years of industrial experience.

*Weapons Complex Monitor, 11 August 2008*

## HLW Corporate Board

**Members:**

**Mark A. Gilbertson, *Chair***  
**Deputy Assistant Secretary for Engineering and Technology**

**Steven L. Krahn, *Executive Secretary***  
**Director, Office of Waste Processing**

**Frank Marcinowski, III**  
**Deputy Assistant Secretary for Regulatory Compliance**

**Terrel J. Spears,**  
**Savannah River Site**

**Jan Hagers**  
**DOE – Idaho**

**Matthew S. McCormick**  
**Richland Operations Office**

**Sunil Patel**  
**Chief of Operations Office**

**Sen Moy**  
**Richland Operations Office**

**Stacy L. Charboneau**  
**Office of River Protection**

**Glyn D. Trenchard**  
**Tank Farms Project Division**

**Dae Y. Chung**  
**Deputy Assistant Secretary for Office of Safety Management and**

## **EM Waste Acceptance Product Specification**

**T. Kluk**

**Physical Scientist, Office of Disposal Operations and**

**K. Picha**

**General Engineer, Office of Safety Management and Operations**

The EM Waste Acceptance Product Specification (WAPS) contains the criteria by which HLW will be judged for acceptance into a repository and currently is being revised to bring it up to date with other documentation. Tony started by presenting the historical documents leading up to the development of waste acceptance criteria. The WAPS started in the Office of Civilian Radioactive Waste Management (RW) and was based on documents for both the West Valley Demonstration Project and from Defense Waste Processing Facility. Tony and Ken presented a slide illustrating the HLW documentation hierarchy which shows how the requirements governing the preparation and disposal of HLW originate jointly from the highest levels of both EM and RW. These documents are issued by one organization with the concurrence of the other. They provided a list of proposed changes to the current revision of the WAPS divided into groups: waste form, canister, canistered waste form, quality assurance, and so forth. They next listed the bases (or drivers) for the changes to these WAPS specifications. The review of this document resulted in nearly 500 technical comments and queries and a revised draft is planned for the end of August. Major issues in the draft include a Pu concentration limit, the assignment of 0.5 MTHM per HLW canister, new requirements from the MOA and the NRC and the idea of making EM directly responsible for complying with NRC requirements (the AEA makes DOE-EM a self-regulating entity whereas the NWPA makes DOE-RW subject to the NRC).

## [T. Kluck and K. Picha Presentation](#)

### **Tank Closure / Piping**

**M. LeTourneau**

**Environmental Protection Specialist, Office of Regulatory Compliance**

Several documents as a group provide a basis for a closure strategy for piping and auxiliary systems: *Radiation Protection of The Public and the Environment* (DOE Order 5400.5), *Radioactive Waste Management* (DOE Order 435.1), and Section 3116 of the *National Defense Authorization Act of 2005*. We can draw on site personnel for expertise in various closure areas: Idaho for grout pumping and moving and Hanford for tank retrieval technologies. Marty spent considerable time discussing Performance Assessments. Marty offered the idea that the Department needs a guide to the conduct of

## Operations

### Advisors:

**Ted M. Besmann**  
Oak Ridge National Laboratory,  
Office of Science

**Bryan C. Bower,**  
Director,  
West Valley Demonstration Project

**Paul Bredt,**  
Pacific Northwest National  
Laboratory, Office of Science

**James C. Bresee,**  
Office of Nuclear Engineering

**Thomas M. Brouns,**  
Pacific Northwest National  
Laboratories

**Dana C. Christensen,**  
Oak Ridge National Laboratory

**Michael J. Connolly,**  
Idaho National Laboratory

**Neil R. Davis,**  
Savannah River Site

**Ryan Dodd,**  
Office of River Protection

**Andrew R. Felmy,**  
Pacific Northwest National  
Laboratory

**Edward C. Fox,**  
Oak Ridge National Laboratory

**David Kosson, CRESP, Vanderbilt  
University**

**Christopher A. Kouts,**  
Director,  
Office of Civilian Radioactive Waste  
Management Office

**John E. Marra,**

a Performance Assessment. The remainder of his discussion concentrated on communication issues. We need to recognize that communication with the stakeholders has not been as good as it could be and work toward improving the transfer of information. We also need to recognize that the knowledge and expertise level varies from one group of stakeholders to the next: regulators usually are very knowledgeable whereas citizen advisory boards often are composed of people who are not trained to analyze detailed technical information. We need to work to improve our ability to communicate complex ideas to those we interact with. We need to get stakeholders involved early in the process and we need to be consistent in our discussions and policies.

### **Grouting of Tank Farms and Transfer Lines**

**M. Shaw**  
Assistant Manager for Facility and Material Disposition, DOE-  
ID

Mark started with an overview description of the Idaho tank farm which was followed by a discussion of tank and vault grouting and then cooling coil and transfer line grouting. The tank farm is composed of 11 underground 300,000 gallon stainless steel tanks seven of which have been filled with grout (four are still in use) and four 30,000 gallon stainless steel vaults. These tanks contained an acidic waste. Because the tanks are made of stainless steel, it was unnecessary to neutralize the waste and problems with precipitated sludge and saltcake were prevented. Most of the tanks have internal cooling coils which complicate the grout filling task. A specific tank closure sequence needed to be developed including spray washing after the tank was emptied. Filling the tanks with an engineered grout was next. This was done in a series of pours done in such a way that any residual liquid in the tank flowed to the inlet of pump so the liquid could be removed and treated to the greatest extent possible. Filling the tank with a Controlled Low Strength Material Grout followed completion of liquid removal. Then the tank fill pipes and risers were filled. The final task was to fill the cooling coils and transfer lines. Since the transfer lines have secondary containment, both the primary and the secondary containment were filled.

### [M. Shaw Presentation](#)

### **Yucca Mountain Repository License**

**R. Dyer**  
Director, Office of the Chief Scientist, Office of Civilian  
Radioactive Waste Management

On June 3, 2008, the U.S. Department of Energy submitted an application to the U.S. Nuclear Regulatory Commission (NRC) for a license to construct a repository at Yucca Mountain. The License

## **Savannah River National Laboratory**

**Phil McGinnis,  
Oak Ridge National Laboratory**

**Roger Nelson,  
Carlsbad Field Office**

**Theodore E. Olds,  
Office of River Protection**

**Russ Patterson,  
Carlsbad Field Office**

**Charles W. Powers,  
CRESP, Vanderbilt University**

**Roy Schepens  
Parsons Corporation**

Application describes the Department's plan to isolate spent nuclear fuel and high-level radioactive waste safely in tunnels deep underground at Yucca Mountain and seeks authorization to construct the nation's first geologic repository. The Final Environmental Impact Statement, as well as 200 key supporting documents, accompanies the Application. The License Application includes General Information and a Safety Analysis Report. The General Information includes: a description of the repository and its operations; schedules for construction, receipt, and emplacement of waste; a description of the physical protection plan for safeguarding the facility; a description of the material control and accounting program to be implemented to track radioactive materials movement at the repository; and a description of site characterization studies. The Safety Analysis Report is the principal technical document in the licensing process. It discusses why the repository is considered safe and how it complies with NRC regulations. Major topics of the SAR include: Preclosure Safety Analysis, Postclosure Safety Analysis, and Programmatic Requirements. Russ Concluded his discussion with a physical description of the proposed repository.