

## Session 06

### Panel: Status of U.S. Department of Energy's Geologic Repository Program at Yucca Mountain, Nevada

Panel Reporter: April V. Gil, U.S. Department of Energy, Office of Civilian Radioactive Waste Management (OCRWM)

The purpose of this panel is to provide a forum for the discussion of the latest developments in the U.S. high-level waste and spent fuel geologic disposal program at Yucca Mountain, Nevada. The panel includes updates on licensing, repository design, scientific investigations, transportation, and public outreach activities.

The following individuals participated in the panel:

- Edward F. Sproat, III, Director, OCRWM
- Ted Feigenbaum, president and general manager, Bechtel SAIC Company, LLC
- Dr. J. Russell Dyer, Office of the Chief Scientist, OCRWM
- Judith Holm, Transportation Operations Development manager, OCRWM
- Allen Benson, Director, Office of External Affairs, OCRWM (Session Chair)

Yucca Mountain Project Overview – Ward Sproat, the new director of the U.S. Department of Energy's Office of Civilian Radioactive Waste Management, outlined his four strategic objectives for managing the US high-level radioactive waste program: 1) submit a high quality license and docketable application to the U.S. Nuclear Regulatory Commission no later than June, 2008; 2) design, staff and train the OCRWM organization so it has the skills and culture needed to design, license, and manage the construction and operation of the Yucca Mountain Project with safety, quality and cost effectiveness; 3) address the Federal Government's mounting liability associated with unmet contractual obligations to move spent fuel from nuclear plant sites; and, 4) develop and begin implementation of a comprehensive national spent fuel transportation plan that accommodates state, local and tribal concerns and input to the greatest extent practicable.

Mr. Sproat also laid out the "best achievable" schedule for key program milestones, including certification of the Licensing Support Network by December 2007; completion of the supplemental Environmental Impact Statement by May 2008 and receipt of waste in March 2017. These dates were described as contingent on a number of external factors, including budget levels, legislative proposals, and litigation, which could delay waste receipt until 2021. The OCRWM budget request for fiscal year 2008 is \$494.5 million, of which \$ 292 million would be funded through the civilian Nuclear Waste Fund; the remainder is provided by defense.

The BSC Perspective – Ted Feigenbaum, president and general manager, Bechtel SAIC Company, LLC discussed the role of BSC in supporting OCRWM with designing and licensing the geologic repository. The Transportation, Aging and Disposal (TAD) canister concept was a change in direction that will result in more effective operations at the repository. Progress on preparation of the license application (LA) is considerable, with over 1500 technical products and 71 LA sections under development. Mr. Feigenbaum showed a video representing the spent

fuel and high level waste handling facilities envisioned for an operating repository, including waste receipt, remote handling and welding, emplacement drifts, waste package emplacement and monitoring. BSC is confident that the June 2008 LA schedule will be met.

Science and Technology Update – Dr. J. Russell Dyer, Office of the Chief Scientist, OCRWM, provided an update on recent scientific investigations in support of the repository development, including work on determining the rate of water infiltration, seismic hazards evaluation from ground motion, and continued studies on evidence of volcanism in the area. Dr. Dyer also addressed changes due to the TAD concept, which are expected to be less than those from the revision to the U.S. Environmental Protection Agency's (EPA) revised standards for Yucca Mountain. The draft EPA standard requires evaluation of the probable risk from the completed repository at the time of peak dose rather than the previous time of compliance of 10,000 years. Dr. Dyer also presented preliminary results from the revised infiltration model that removed consideration of evaporation, resulting in a more conservative estimate. Ground motion studies will take into consideration the cumulative effects of failure modes for long term waste containment. The Probabilistic Volcanic Hazards Assessment, an expert elicitation completed in 1996 to establish the probability of volcanic hazards disrupting the repository during the postclosure period, will be updated with the results of additional field studies from buried aeromagnetic anomalies in Crater Flat, Nevada.

Transportation Program Update - Judith Holm, Transportation Operations Development manager, OCRWM, provided a summary of national and Nevada transportation studies, emphasizing that routing development will have broad public involvement, including provision of funding for states and tribes. A policy statement is currently in preparation regarding this process; OCRWM expects approximately 80 groups to be considered under provision 180 [c] of the Nuclear Waste Policy Act (technical assistance and funds to States for training for public safety officials of appropriate units of local government and Indian tribes through whose jurisdiction the Secretary plans to transport spent nuclear fuel or high-level radioactive waste...). Rail has been chosen as the preferred method of transport in Nevada; the Nevada rail Environmental Impact Statement has been delayed but will be available to support the 2008 License Application. A draft of the National Transportation Plan is expected to be completed in mid-year 2007, with the final plan issued later this year.

Public Outreach and Intergovernmental Relations - Allen Benson, Director, Office of External Affairs, OCRWM, emphasized the commitment to keeping the public informed and noted the increase in interactions with stakeholders as licensing approaches. Meetings with the Affected Units of Local Government are held quarterly, an information center has been opened in Nye County, Nevada (Pahrump), and more than 71,000 visitors have toured Yucca Mountain since the tours began in the early 1990's.

Attendance at Panel 06 was comparable to previous year's attendance (approximately 50 attendees), and many remained for the transportation session that immediately followed. The audience showed a keen interest in the topics discussed by the panel as evidenced by a lively question and answer session that followed the formal

presentations. Questions included: the history of development of the national policy on geologic disposal; the program's source of funding; the level of cooperation between OCRWM and the Waste Isolation Pilot Project in New Mexico; the effect of the 2008 election on plans for License Application submittal; use of a demonstration project for high level waste handling; the use of conservative vs. realistic assumptions in modeling repository performance; and the impact of reprocessing on geologic disposal