

**QUARTERLY PROGRESS REPORT TO CONGRESS**  
**U.S. DEPARTMENT OF ENERGY OFFICE OF CIVILIAN RADIOACTIVE WASTE**  
**MANAGEMENT**

**January 1 – March 31, 2007**

## **Introduction**

In testimony on July 19, 2006, the Director of the Department of Energy's (DOE) Office of Civilian Radioactive Waste Management (OCRWM) committed to provide quarterly progress reports to the House Energy and Air Quality Subcommittee. This is the third quarterly report to Congress. The purpose of this report is to:

- Review major accomplishments of the last quarter
- Identify key ongoing activities
- Highlight significant challenges

These reports document significant trends, major developments, and important initiatives relating to our progress in building a national disposal system for spent nuclear fuel and high-level radioactive waste. Each report focuses on the previous and upcoming quarters and elaborates on the long-term challenges facing this critical national project.

During the first quarter of 2007, the Director of OCRWM testified before Congress at two appropriations hearings, and the Secretary of Energy submitted proposed legislation, the "Nuclear Waste Management and Disposal Act." The Director testified that the full budget request of \$494.5 million for FY 2008 is vital to achievement of Program objectives, and, in particular, the submittal of our license application to the Nuclear Regulatory Commission (NRC) no later than June 2008. The testimony also emphasized the importance of enacting the legislation proposed by the Administration for meeting future capital and operating funding requirements, and mitigating the mounting costs to taxpayers resulting from delay in commencing repository operations. The following describes the key activities in the first calendar quarter of 2007.

## **Major Accomplishments**

Budget Authority Analysis – An analysis of projected costs for the Yucca Mountain Project was completed in March 2007 as requested by the House Energy and Air Quality Subcommittee. The estimates were calculated based on the current design and reflect the funding needed to allow opening the repository on its best achievable schedule in March 2017. The estimates contain contingency and management reserve at levels that provide an 80 percent confidence that the actual costs will be at or below the estimate. The analysis summarizes annual budget projections through completion of repository surface facilities in FY 2022. The total capital costs to complete operational facilities and transportation infrastructure are \$18.5 billion. Operating costs from 2016 through 2023 are an additional \$8.4 billion. The summary charts are enclosed with this report. The analysis is also available on the OCRWM website, [www.ocrwm.doe.gov](http://www.ocrwm.doe.gov).



License Application – Following the establishment of a special project for management of the license application work at the end of 2006, the license application development plan was completed. DOE remains on schedule to submit the application to the NRC no later than June 30, 2008. This date may be adversely affected if the FY 2008 appropriations are less than the President's FY 2008 budget request.

Independent Assessments – OCRWM has selected contractors to perform three independent assessments. The first assessment will address the adequacy of the quality assurance plans and their implementation by OCRWM, its main contractor (Bechtel SAIC Company, LLC), and Sandia National Laboratories. The second assessment will address the adequacy of the license application against the acceptance criteria contained in relevant NRC requirements. The third assessment will address the engineering processes being utilized by OCRWM and its main contractor. All independent assessments are expected to be completed within six months. These independent assessments are important to ensure that processes and organizational issues in these areas are identified and adequately addressed and to ensure that we submit a high-quality license application that meets NRC requirements.

Licensing Support Network – NRC regulations require that all parties to the Yucca Mountain licensing proceeding make their relevant documentary material publicly available on the Licensing Support Network (LSN) and certify their collections. DOE must certify its LSN collection six months before submitting its license application to the NRC. DOE is on schedule to certify its LSN collection not later than December 21, 2007.

DOE has also proceeded with the early release of additional documentary material in advance of DOE's LSN certification and recently made available approximately 2.1 million documents on the LSN. This is intended to facilitate and expedite the Yucca Mountain licensing proceeding and to assist the NRC staff, the State of Nevada, and potential parties to the proceeding in their review of DOE's documentary material. OCRWM will continue to add documents to the LSN on an ongoing basis.

U.S. Geological Survey (USGS) Email Extent of Condition Report – On March 27, 2007, OCRWM issued a report presenting the results of a Root Cause Analysis Team investigation and analysis following the discovery of emails written by a few USGS employees performing Yucca Mountain-related work between 1998 and 2004 that showed a disregard for quality assurance requirements. While the team found no evidence that information associated with the USGS work was falsified or modified as suggested in the emails, some infiltration modeling products on which these employees worked did not meet OCRWM's traceability and transparency requirements and corrective actions to prevent errors were not always effective. The report identifies the root cause of these conditions as a failure by OCRWM senior management to establish and hold the OCRWM organization accountable for meeting quality expectations with regard to the USGS infiltration modeling products. The report includes corrective actions that have been or are being implemented to ensure that infiltration modeling work being performed by Sandia National Laboratories to replace the USGS work meets OCRWM's



quality assurance requirements and also to improve OCRWM management's quality and accountability processes across the Program.

The *Root Cause Analysis Report in Response to Condition Report 5223 Regarding Emails Suggesting Noncompliance with Quality Assurance Requirements* and the Corrective Action Plan are available on the OCRWM website, [www.ocrwm.doe.gov](http://www.ocrwm.doe.gov).

Corrective Action Program (CAP) – OCRWM has completed a root cause analysis of its chronic inability to implement an effective corrective action process which identifies and addresses quality, process, and human performance problems and prevents their recurrence. A corrective action plan has been developed and is being sponsored by the Director. The plan elements are focused on establishing expectations and standards for CAP performance and enforcing them as a core business activity for all Program personnel.

Affected Units of Government (AUG) – As part of OCRWM's ongoing efforts to assure that AUGs continue to be fully informed about the Program and have frequent opportunities to ask questions, a workshop was held on March 22 for the AUGs on OCRWM's Critical Decision process; repository design; and transportation, aging, and disposal (TAD) canister system. This workshop was requested by the AUGs and was followed by our regular quarterly meeting with the AUGs.

### **Key Ongoing Activities**

TAD Canister Performance Specification – Cask design vendors met with OCRWM in March to present their Proof of Concept TAD canister system designs that address the requirements of the preliminary TAD performance specification. Vendors presented system design overviews and recommendations for improving operations within the utility infrastructure. Updating and finalizing the TAD performance specification is scheduled for completion in May.

Supplemental Environmental Impact Statements (SEISs) – Following public scoping meetings held in November 2006, two draft SEISs are currently being prepared. The Yucca Mountain repository SEIS will support the license application and will be submitted to the NRC, and the rail SEIS will provide the basis for route selection for the rail line in Nevada to the repository. Drafts of both are expected to be released for public review and comment in October 2007, and public comment hearings will also be held.

Transportation Outreach - OCRWM continues its collaborative efforts to develop a national transportation plan. OCRWM met with stakeholders at the January 31, 2007, Transportation External Coordination meeting, which included more than 100 stakeholders representing over 40 organizations. The meeting included exchanges on development of shipment routing criteria and other transportation-related matters.

## Significant Challenges

Funding Requirements and Access to the Nuclear Waste Fund – Budget Authority projections for FY 2009 through repository operations show that annual appropriations of over \$1 billion will be required. Unless legislation is enacted to allow Yucca Mountain costs to be appropriated without being “scored” against discretionary funding caps for the Department, these increased appropriations will reduce spending on other DOE programs. The legislation submitted to Congress by the Administration would resolve this problem by reclassifying Nuclear Waste Fund receipts to offset appropriations. Funding for the Program would still have to be requested annually by the President and appropriated by the Congress.

If access to the Nuclear Waste Fund remains constrained by current scoring methods and annual appropriations continue to be limited to current funding levels, the repository and the requisite transportation systems cannot be built. Due to the delay in opening the repository, the projected taxpayer liabilities are currently expected to be approximately \$7 billion under the best achievable schedule that assumes operations begin in 2017. For each additional year of delay in commencing operations beyond 2017, potential taxpayer liability is expected to increase by approximately \$500 million per year.