



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

February 4, 2000

Mr. Dwight Shelor, Acting Director  
Program Management and Administration  
Office of Civilian Radioactive Waste Management  
U. S. Department of Energy  
1000 Independence Avenue, SW  
Washington, DC 20585

SUBJECT: U. S. NUCLEAR REGULATORY COMMISSION AUDIT OBSERVATION AUDIT  
REPORT NO. OAR-00-02, "OBSERVATION AUDIT OF THE CIVILIAN  
RADIOACTIVE WASTE MANAGEMENT QUALITY ASSURANCE DIVISION  
AUDIT M&O-ARP-00-001"

Dear Mr. Shelor:

I am transmitting the U.S. Nuclear Regulatory Commission (NRC) Observation Audit Report No. OAR-00-02 of the U.S. Department of Energy (DOE), Office of Civilian Radioactive Waste Management (OCRWM), Office of Quality Assurance (OQA), Yucca Mountain Quality Assurance Division (YMQAD) limited scope, performance based audit of the OCRWM Quality Assurance (QA) program of the Civilian Radioactive Waste Management System Management and Operating (M&O) Contractor. The audit, M&O-ARP-00-001, was conducted on November 8-12, 1999, at the M&O offices in Las Vegas, NV.

This audit evaluated the activities that constitute scientific, engineering and performance assessment analyses and models pertaining to the Waste Package Process Model Report (PMR) and the technical activities associated with processes and controls related to the PMR. The following Analysis Model Reports (AMRs) were evaluated: Analysis of Mechanisms for Early Waste Package Failure (ANL-EBS-MD-000023, Rev 00); General Corrosion and Localized Corrosion of the Waste Package Outer Barrier (ANL-EBS-MD-000003, Rev 00C Draft); Aging and Phase Stability of the Waste Package Outer Barrier (ANL-EBS-MD-000002, Rev 00C Draft); Environment on the Surface of the Drip Shield and Waste Package Outer Barrier (ANL-EBS-MD-000001, Rev 00B Draft). The audit also included a review of appropriate procedures directly related to the AMRs and PMRs and evaluated the effectiveness of the analysis and model processes and the quality of the resultant end products identified. This was done by verifying implementation adequacy of the critical process steps relative to analysis and models for the Waste Package PMR.

The audit team concluded that the M&O documentation of activities that constitute scientific, engineering and performance assessment analysis and models pertaining to the Waste Package were satisfactory. One deficiency was identified during the audit. Thirty-four recommendations were offered as improvements to the program.

The NRC staff agrees with the audit team's conclusion, findings, and recommendations. The NRC staff determined that this audit was effective and that the M&O implementation of the QA program for the subject AMRs was adequate. However, the selected AMRs were still in the revision process and the associated software, data, and model packages had not been qualified, verified or validated; therefore, no qualification packages were reviewed by the audit team or NRC staff.

DF03

D. Shelor

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February 4, 2000

A written response to this letter and the enclosed report is not required. If you have any questions, please contact Ken Hooks of my staff at (301) 415-7777.

Sincerely,

[Original signed by: N.King Stablein for:]

C. William Reamer, Chief  
High-Level Waste and Performance  
Assessment Branch  
Projects and Engineering Section  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

Enclosure: US Nuclear Regulatory Commission Observation Audit Report  
OAR-00-02

cc: See attached list

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Letter to D. Shelor from C.W. Reamer dated: February 4, 2000

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D. Shelor

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Sincerely,

C. William Reamer, Chief  
High-Level Waste and Performance  
Assessment Branch  
Projects and Engineering Section  
Division of Waste Management  
Office of Nuclear Material Safety  
and Safeguards

Enclosure: US Nuclear Regulatory Commission Observation Audit Report  
~~Audit M&O ARP-99-001~~ OAR-00-02

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