



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

October 24, 1996

Mr. Ronald A. Milner, Director
Program Management and Integration
Office of Civilian Radioactive Waste Management
U.S. Department of Energy
1000 Independence Avenue, SW
Washington, D.C. 20585

SUBJECT: OBSERVATION AUDIT OF LOS ALAMOS NATIONAL LABORATORY

Dear Mr. Milner:

I am transmitting the U.S. Nuclear Regulatory Commission Observation Audit Report OA-96-08 of the U.S. Department of Energy, Office of Civilian Radioactive Waste Management, Office of Quality Assurance, Yucca Mountain Quality Assurance Division (YMQAD) audit of the quality assurance (QA) program of the Los Alamos National Laboratory (LANL). The audit, YM-ARC-96-14, was conducted on September 16-23, 1996, at LANL offices in Los Alamos, New Mexico, and Las Vegas, Nevada. The audit evaluated the adequacy and effectiveness of the LANL QA program for selected activities related to Work Breakdown Structures 1.2.3.2.5.1.1, "Probability of Magmatic Disruption of the Repository," 1.2.3.2.5.1.2, "Physical Processes of Magmatism and Effects on the Potential Repository," and 1.2.3.2.5.5.1, "Characterization of Volcanic Features." These activities have resulted in the draft 1996 Volcanism Synthesis Report that was also audited during this audit. The State of Nevada was also represented at this audit.

The audit resulted in five draft performance/deficiency reports regarding: (1) lack of identification of version of software package used; (2) untimely submittal of scientific notebooks to DOE's Records Processing Center; (3) lack of verification of calculations in scientific notebooks; (4) failure to clearly identify non-qualified (non-"Q") data in reports; and (5) discrepancies between reported data values within the draft 1996 Volcanism Synthesis Report and between that report and earlier Los Alamos Milestone reports.

The DOE audit team's overall finding was that LANL's QA performance was "marginally effective." NRC staff agrees with this finding and believes that the above deficiencies have resulted in a product that has an unacceptable level of quality. (Although released by LANL as a "draft," the 1996 Volcanism Synthesis Report had been received by DOE, indicating it had completed internal review.) We request that DOE inform the NRC of what is being done to ensure that an acceptable level of quality will be achieved in the future, not only with the audited report but with similar work products.

The NRC staff has determined that YMQAD Audit YM-ARC-96-14 was useful and effective. The audit was organized and conducted in a thorough and professional manner. Audit team members were independent of the activities

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they audited, they were well qualified in their disciplines, and their assignments and checklist items were adequately described in the audit plan.

YMQAD should continue to closely monitor implementation of the LANL QA program to ensure that the deficiencies identified during this audit are corrected in a timely manner and that future QA program implementation is effective. The NRC staff expects to participate in this monitoring as observers and may perform its own independent audits at a later date to assess LANL implementation of its QA program.

As noted above, a written response to this letter is requested. If you have any questions, please call Jack Spraul of my staff on (301) 415-6715.

Sincerely,
[Original signed by:]
John H. Austin, Chief
Performance Assessment and High-Level
Waste Integration Branch
Division of Waste Management
Office of Nuclear Material Safety
and Safeguards

Enclosure: As stated

cc:

- R. Loux, State of Nevada
- C. Johnson, State of Nevada
- S. Zimmerman, State of Nevada
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- L. Bradshaw, Nye County, NV
- N. Stellavato, Nye County, NV
- W. Barnard, NWTRB
- R. Holden, NCAI
- T. Burton, NIEC
- B. Price, Nevada Legislative Committee
- J. Meder, Nevada Legislative Counsel Bureau
- M. Murphy, Nye County, NV
- D. Bechtel, Clark County, NV
- P. Niedzielski-Eichner, Nye County, NV
- W. Cameron, White Pine County, NV
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