



Department of Energy  
Washington, DC 20585

QA: L

MAR 13 1997

L. D. Foust, Technical Project Officer  
for Yucca Mountain Site  
Characterization Project  
TRW Environmental Safety Systems, Inc.  
1180 Town Center Drive, M/S 423  
Las Vegas, NV 89134

ISSUANCE OF SURVEILLANCE RECORD YM-SR-97-013 RESULTING FROM THE  
OFFICE OF QUALITY ASSURANCE (OQA) SURVEILLANCE OF THE LOS ALAMOS  
NATIONAL LABORATORY (LANL)

Enclosed is the record of Surveillance YM-SR-97-013 conducted by the OQA at LANL's  
facilities in Los Alamos, New Mexico.

The purpose of this surveillance was to verify implementation of LANL's Quality Assurance  
procedures as they relate to the Mineralogy, Petrology, and Rock Chemistry of Transport  
Pathways studies under Work Breakdown Structure number 1.2.3.2.1.1.1.

This surveillance is considered completed and closed as of the date of this letter. No deficiencies  
were identified as a result of this surveillance. A response to this surveillance record and any  
documented recommendations are not required.

If you have any questions, please contact either James Blaylock at (702) 794-1420 or  
Patrick V. Auer at (702) 794-1432.

*James Blaylock*  
Donald G. Horton, Director  
Office of Quality Assurance

OQA:JB-1151

Enclosure:  
Surveillance Record YM-SR-97-013

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*Recip: NMSS/HLUR*



MAR 13 1997

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**OFFICE OF CIVILIAN  
RADIOACTIVE WASTE MANAGEMENT  
U.S. DEPARTMENT OF ENERGY  
WASHINGTON, D.C.**

Surveillance No. YM-SR-97-013

**QUALITY ASSURANCE SURVEILLANCE RECORD**

**SURVEILLANCE DATA**

1. ORGANIZATION/LOCATION: Los Alamos National Laboratory (LANL)	2. SUBJECT: Mineralogy, Petrology, and Rock Chemistry of Transport Pathways	3. DATE: February 18, 1997
4. SURVEILLANCE OBJECTIVE: Assess the implementation of LANL's Quality Assurance (QA) procedures as they relate to the Mineralogy, Petrology and Rock Chemistry of Transport Pathways studies (WBS 1.2.3.2.1.1.1).		
5. SURVEILLANCE SCOPE: Review documentation and interview personnel for activities related to the implementation of LANL's QA procedures for the Mineralogy, Petrology, and Rock Chemistry of Transport Pathways studies.		6. SURVEILLANCE TEAM:  Patrick V. Auer  Additional Team Members:  <u>N/A</u>
7. PREPARED BY:  <u>Patrick V. Auer</u> <u>Patrick V. Auer</u> <u>2-18-97</u> Surveillance Team Leader                      Date	8. CONCURRENCE:  <u>N/A</u> <u>James Blaylock</u> <u>3/12/97</u> QA Division Director                      Date	

**SURVEILLANCE RESULTS**

9. BASIS OF EVALUATION/DESCRIPTION OF OBSERVATIONS:  On February 24 through 27, a surveillance was conducted at LANL in Los Alamos, New Mexico, to assess the implementation of LANL's QA procedures as they relate to the Mineralogy, Petrology, and Rock Chemistry of Transport Pathways studies conducted under WBS 1.2.3.2.1.1.1.  A report, "Preliminary Three-Dimensional Mineralogic Model of Yucca Mountain, Nevada" (Level 4 deliverable No. SP321AM4), submitted to the Civilian Radioactive Waste Management System Management and Operating Contractor (CWRMS M&O) for review and copies to the Yucca Mountain Site Characterization Office (YMSCO) was chosen as a basis to review implementation of LANL's QA procedures. The report contains a statement indicating that it is a "non-Q product," see recommendation number 1. The report was due on January 15, 1997. The report incorporated the information and a technical review was performed as required by LANL's procedure LANL-YMP-03.23, Revision 4, "Preparation and Review of Technical Information Products and Study Plans."  See Page(s) <u>2</u>	
10. SURVEILLANCE CONCLUSIONS:  Based on document reviews and personnel interviews, it has been determined that the overall effectiveness and adequacy of the Mineralogy, Petrology and Rock Chemistry of Transport Pathways studies is in accordance with LANL's QA procedures and is considered satisfactory. One recommendation was generated as a result of this surveillance.  See Page(s) <u>3</u>	
11. COMPLETED BY:  <u>Patrick V. Auer</u> <u>3-6-97</u> Surveillance Team Leader                      Date	12. APPROVED BY:  <u>James Blaylock</u> <u>3/12/97</u> QA Division Director                      Date

**Block 9 (Continued)****BASIS FOR EVALUATION/DESCRIPTION OF OBSERVATIONS:**

The data for the model was obtained from quantitative X-ray powder diffraction analyses of core and cuttings from drill holes at Yucca Mountain (YM). The report clearly indicates where Q and non-Q data was used and the impact of not using the non-Q data would have on the model as required by the LANL's work package for FY 1997. The data tracking numbers for Q and non-Q data currently used in the 3-D model are as follows:

**Q Data****Non-Q Data****Data tracking numbers:**

LA00000000086.002

LA000000000110.002

LASC831321DQ96.001

LA000000000111.002

LASC831321DQ96.002

LA000000000116.002

Calibration certificates for the two X-ray diffraction machines (Property Number 487066 and 743467) were verified and found to be current.

LANL's procedure LANL-EES-DP-116, Revision 2, "Quantitative X-Ray Diffraction Data Reduction Procedure" was recently revised. The revision and required technical and quality reviews were conducted and comments documented in accordance with LANL-YMP-QP-06.3, Revision 5, "Preparation, Review, and Approval of Detailed Technical Procedures." The three technical personnel contacted during this surveillance had completed required training on this procedure. Additionally, technical personnel were asked to demonstrate access to their controlled documents. LANL-EES-DP-116 was chosen for the demonstration and was readily pulled up on the individual's work station through the LANL Internet web site.

**Personnel contacted during the course of the surveillance:**

Julie Canepa, Technical Project Officer, LANL

Dave Bish, Principal Investigator, LANL

Steve Chipera, Associate Investigator, LANL

Dave Vaniman, Principal Investigator, LANL

Mike Clevenger, Quality Assurance Project Leader, LANL

Clovis Martinez, Quality Assurance Engineer, LANL

Jim Young, Quality Assurance Engineer, LANL

Sandy Martinez, Training &amp; Records, LANL

**Block 10 (Continued)**

**SURVEILLANCE CONCLUSIONS:**

**The following recommendation is for management consideration and does not require any formal response:**

**Recommendation 1**

The report for the preliminary three dimensional mineralogical model of YM, Level 4, Deliverable Number SP321AM4 to the CRWMS M&O and copies to YMSCO is designated as a "non-Q product" in LANL's FY 1997 work package. The report properly identifies Q and non-Q data. The work is in fact conducted under applicable LANL QA and detailed technical procedures as identified in the current Office of Civilian Radioactive Waste Management (OCRWM)-accepted Requirements Traceability Network (RTN) Matrix. The Participant Planning Sheet for this activity also requires the work to be accomplished under the current OCRWM-accepted RTN Matrix. It is recommended that the designation, "non-Q product" be removed from the work package acceptance criteria to avoid any confusion or misunderstanding as to whether or not the work was conducted under applicable QA controls.