



Department of Energy

Washington, DC 20585

FEB 21 1997

QA:N

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 YMP-SR-97-008 RESULTING FROM THE  
OFFICE OF QUALITY ASSURANCE (OQA) SURVEILLANCE OF THE LOS ALAMOS  
NATIONAL LABORATORY (LANL)

Enclosed is the record of Surveillance YMP-SR-97-008 conducted by the OQA at the LANL in  
the Exploratory Studies Facility at the Yucca Mountain Site, Nevada.

The purpose of the surveillance was to verify compliance to requirements specified in documents  
implemented by the LANL.

There were no Corrective Action Requests, Deficiency Reports, or Performance Reports issued  
as a result of the surveillance. This surveillance is considered completed and closed as of the  
date of this letter. A response to this surveillance record is not required.

If you have any questions, please contact either James Blaylock at (702) 794-1420 or  
Richard L. Weeks at (702) 794-1431.

Donald G. Horton, Director  
Office of Quality Assurance

OQA:JB-0956

Enclosure:  
Surveillance Record YMP-SR-97-008

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cc w/encl:

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Records Processing Center

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

Surveillance No. YMP-SR-97-008

## QUALITY ASSURANCE SURVEILLANCE RECORD

## SURVEILLANCE DATA

1. ORGANIZATION/LOCATION: Los Alamos National Laboratory (LANL)	2. SUBJECT: Data Collection System(DCS)	3. DATE: January 14 - 24, 1997
4. SURVEILLANCE OBJECTIVE: Verify compliance to requirements specified in documents implemented by LANL.		
5. SURVEILLANCE SCOPE: Implementation of selected requirements described in Field Work Package (FWP)- Exploratory Studies Facility (ESF)-96-001, Revision 0, ESF Data Collection Systems (DCS), LANL-Yucca Mountain Project (YMP)-Quality Procedure (QP)-03.5, Revision 7, Documenting Scientific Investigations, and LANL-YMP-QP-12.3, Revision 3, Control of Measuring and Test Equipment (M&TE) and Standards for data collection activities for the Single Heater Test (SHT) located in the Thermal Testing Facility (TTF), Alcove #5.		6. SURVEILLANCE TEAM: Team Leader:  Richard L. Weeks  Additional Team Members:  N/A
7. PREPARED BY: <i>Richard L. Weeks</i> Richard L. Weeks Surveillance Team Leader		8. CONCURRENCE: <i>Chadwick B. Johnson</i> Chadwick B. Johnson QA Division Director
2/10/97 Date		2/19/97 Date

## SURVEILLANCE RESULTS

## 9. BASIS OF EVALUATION/DESCRIPTION OF OBSERVATIONS:

The purpose of this surveillance was to verify that ESF Technical Coordination Office (TCO) responsibilities as described in FWP-ESF-96-001, Revision 0, LANL-YMP-QP-03.5, Revision 7, and LANL-YMP-QP-12.3, Revision 3, were met and that specific requirements were effectively implemented.

FWP-ESF-96-001, Revision 0, describes the process controls utilized by the ESF TCO to manage the configuration, procurement, installation, calibration, operation, and maintenance of the DCS for activities performed in the ESF. LANL has the responsibility for the ESF TCO. The activities evaluated by this surveillance are controlled under Work Breakdown Structure (WBS) 1.2.6.8.4, "Test Coordination Office Integrated Data Control System Coordination" and limited to LANL responsibilities regarding their role as ESF TCO. The examined data gathering system collects data for the following Site Characterization Plan activities:

- Section 8.3.1.15.1.5 - Excavation Investigations
- Section 8.3.1.15.1.6 - In Situ Thermomechanical Properties
- Section 8.3.1.15.1.7 - In Situ Mechanical Properties
- Section 8.3.4.2.4.4 - Engineered Barrier System Field Tests

See Page(s) 2-5

## 10. SURVEILLANCE CONCLUSIONS:

Based on interviews with LANL personnel, observation of work tasks and examination of documentation it is concluded that for those activities examined, LANL is complying with procedural requirements and effectively implementing the QA program. There were no deficiency documents issued as a result of the surveillance. One deficient condition was identified and corrected prior to completion of the surveillance. Entries to a SN were not signed and dated. LANL personnel were very cooperative during all aspects of the surveillance. I was especially appreciative of the long hours put in by F. Hornuth in order to accommodate the visit to Alcove #5.

11. COMPLETED BY: <i>Richard L. Weeks</i> Richard L. Weeks Surveillance Team Leader	12. APPROVED BY: <i>Chadwick B. Johnson</i> Chadwick B. Johnson QA Division Director
2/10/97 Date	2/19/97 Date

Enclosure

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

Following are specific activities that were verified for compliance during this surveillance. Italicized text states the requirement evaluated and standard text states the results of the evaluation and lists the documents examined.

FWP-ESF-96-001, Revision 0, "Exploratory Studies Facility Data Collection Systems"

**Paragraph 1.1**

*DCS equipment undergoes acceptance testing, system calibration and configuration verification testing under applicable [Principal Investigator] PI and ESF TCO controlled quality affecting procedures.*

System configuration and acceptance testing is documented in Scientific Notebook (SN) LA-EES-13-LV-NBK-96-003. Several pages of SN entries, which were examined, document the functional acceptance of the data collection system by the respective Principal Investigators (PI). The examined SN entries included data that documented acceptable performance of the Geomation data collection system, Model 2380, Systems 104 and 106.

**Paragraph 3.1**

*Engineering Support will develop a verification plan and assemble records to ensure the equipment functionality and configuration meet the needs of the PI organization.*

*Technical Support will install and calibrate equipment obtained by Engineering Support and conduct a verification in accordance with the criteria in the verification plan to demonstrate equipment readiness prior to operation or data collection. Results of the verification will be documented.*

*The PIs and ESF TCO will document the acceptance of the verification, and establish calibration and data collection standards.*

LANL personnel indicated that a verification plan had not been developed. On January 3, 1997, prior to this surveillance, LANL issued Deficiency Report Number LANL-97-D-006 to address this condition.

*Technical Support personnel will operate, maintain, and calibrate the data collection equipment following the process developed by Engineering Support. Automated data collection will be conducted around the clock as necessary. Calibration will be performed and documented in accordance with QP-12.3.*

*The PI, ESF TCO, and/or Technical Support will collect data from DCS locations by downloading data to a portable computer or recording it in notebooks in accordance with scientific notebook procedures. Copies of these data will be provided to the Data Manager for backup.*

It was verified by observation of the activity and examination of documentation that LANL personnel (ESF DCS Project Engineer/Data Manager) operate and calibrate the data collection system. A visit was made to the TTF, also referred to as Alcove #5, to observe the downloading of data. Two computer files, designated "his" and "log", were downloaded representing the time period January 1 through 21, 1997. The files were copied to a disk for transport to the LANL office in Las Vegas. A copy of the instructions for downloading data, which are documented in the SN LA-EES-13-LV-NBK-96-003, was used by LANL personnel to complete the work. Calibration activities are discussed below. Maintenance activities were not observed during this surveillance.

*The Data Manager, with the assistance of the Field Work Package Records Coordinator (FWPRC), will develop a system to back-up and safeguard data and will manage the distribution of data to the responsible PIs.*

Downloaded data files representing the time interval October 1, 1996 through November 30, 1996, were examined. The following information was displayed on a monitor for examination:

- Memorandum transmitting copies of the CD rom versions of the data to the PIs
- Information on power outages
- DCS operational notes

The memorandum which transmitted the data is designated LA-EES-13-LV-12-96-008, dated December 3, 1996. Attached to the memorandum is a Receipt Acknowledgment Form which is to be returned to the LANL ESF Data Manager indicating that the disks have been received. One returned and signed form was examined from W. Lin, dated December 9, 1996.

#### LANL-YMP-QP-03.5, Documenting Scientific Investigations

##### Paragraph 6.1.3.1

*A primary record identifier (following the format in QP-17-6).*

Verification was satisfactory for SNs LA-EES-13-LV-NBK-96-003 whichs describe the process to ensure that the Geomation data collection system is calibrated, configured and accepted by the responsible PI and for LA-EES-13-LV-NBK-96-004 which describes the process for documenting DCS operational activities for data downloading, configuration changes, operational checks, and problems and maintenance activities.

Paragraph 6.1.3.2

*Name of YMP personnel responsible for the notebook.*

The name was listed on Page 2 of SN LA-EES-13-LV-NBK-96-004.

Paragraph 6.1.3.3

*Statement of objective and a description of the work to be performed;...*

A statement is provided that describes the purpose and description of the work to be documented in SNs LA-EES-13-LV-NBK-96-003 and LA-EES-13-LV-NBK-96-004.

Paragraph 6.1.8.2

*Signature or initials of the YMP personnel making the entry (including electronic entry) and the date. This is done at the end of each day entries are entered in the notebook.*

Two SNs were examined to verify compliance to this requirement; entries to SN LA-EES-13-LV-NBK-96-004 were signed and dated as required. Two examples of unsigned entries were found in SN LA-EES-13-LV-NBK-96-003. All other examined entries were signed and dated. The unsigned entries were signed and dated prior to the end of the surveillance.

LANL-YMP-QP-12.3, Control of Measuring and Test Equipment (M&TE) and Standards

Paragraph 6.3.6

*Verifies that a label, tag, or other suitable marking is placed on or adjacent to the M&TE that lists, as a minimum, the following information:*

- *The Los Alamos M&TE Identifier as listed on the M&TE Report.*
- *The date the M&TE was calibrated.*
- *The next calibration due date.*

Four Measurement Control Units located in Geomation data collection system were examined. System 106, Serial Number 10601 was examined to verify that calibration stickers were in place and contained required information. The following units were examined and found to be in compliance with requirements:

<u>Unit No.</u>	<u>ID. Number</u>	<u>Date of Calibration</u>	<u>Date Calibration Due</u>
LL01	007442	1/14/97	7/14/97
LL02	007443	1/14/97	7/14/97
LL03	007380	9/26/96	3/26/97
LL04	007432	12/10/96	6/10/97

Paragraph 7.0

*The following records result from this procedure:*

- *M&TE Report*

Three M&TE Reports were examined and found to be complete and are listed below.

Civilian Radioactive Waste Management System Management and Operation  
(CRWMSM&O) 700733, Measurement Control Unit (MCU), Geomation 2380  
CRWMSM&O 700700, MCU, Geomation 2380  
CRWMSM&O 700732, MCU, Geomation 2380

The following personnel were contacted during the surveillance:

Andrew Burningham, M&O/TRW, QA Liaison  
Emil F. Homuth, LANL, Test Planning Specialist  
Gene J. Griego, LANL, Technical Aid  
Alice Thompson, M&O/TRW, Records Processing Center Operations Coordinator

**BLOCK 10 (Continued) SURVEILLANCE CONCLUSIONS**

**Recommendations:**

The following recommendation is presented for consideration:

FWP-ESF-96-001, Revision 0, should be revised to include a reference to YAP-15.1Q, "Control of Nonconformances." This reference would hopefully ensure that individuals implementing FWP's comply with project requirements and generate Nonconformance Reports, when appropriate, for M&TE determined to be out of calibration. Section 2.0, Applicability, of YAP-15.1Q, Revision 2, states in part, "...This procedure also applies to the evaluation and disposition of the validity of results of items and samples as well as work products when Measuring and Test Equipment is found to be out of calibration...."