

YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION

QUALITY ASSURANCE SURVEILLANCE REPORT OF

LOS ALAMOS NATIONAL LABORATORY

SURVEILLANCE REPORT NUMBER YMP-SR-91-014

CONDUCTED APRIL 15 THROUGH APRIL 25, 1991

ACTIVITIES SURVEILLED:

Preparation and Review of the Exploratory Shaft Facility  
Design Requirements Document (ESFDR), Appendices B and  
C, Test Planning Packages and Personnel Training.

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ENCLOSURE

## 1.0 INTRODUCTION

This report contains the results of Yucca Mountain Quality Assurance Division (YMQAD) surveillance No. YMP-SR-91-014 of Los Alamos National Laboratory (Los Alamos), conducted in Las Vegas, Nevada, at the Test Manager's Office (TMO) and in Los Alamos, New Mexico, from April 15 through April 25, 1991. This surveillance was performed to verify compliance and effective implementation of Los Alamos and Yucca Mountain Site Characterization Project Office (YMPO) implementing procedures.

## 2.0 PURPOSE AND SCOPE

The purpose of this surveillance was to evaluate the effectiveness of the implementation of certain Los Alamos quality procedures associated with the preparation and review of the Exploratory Shaft Facility Design Requirements document (ESFDR), Appendices B and C. Test Plans and Associated Personnel Training. The scope of the surveillance included the following criteria and their attendant procedures.

<u>Criterion</u>	<u>Title</u>
II	Quality Assurance (QA) Program
	TWS-QAS-QP-02.5, Revision 0, Selection of Personnel
	TWS-QAS-QP-02.6, Revision 1, Personnel Orientation and Indoctrination
	TWS-QAS-QP-02.7, Revision 1, Personnel Training
	TWS-QAS-QP-02.9, Revision 0, Personnel Proficiency Evaluation
III	Design Control
	TWS-QAS-QP-03.16, Revision 0, Procedure for TMO Review of Design Information
V	Instruction, Procedures, Plans and Drawings
	AP-5.32Q, Revision 1, Test Planning and Implementation Requirements

## 3.0 SURVEILLANCE PERSONNEL

The surveillance was conducted by the following personnel:

Donald J. Harris, Senior QA Engineer (Surveillance Team Leader), Harza Engineering Company/YMQAD

Kenneth T. McFall, QA Scientist, Science Applications International Corporation/YMQAD

Terry W. Noland, Principal Engineer, Westinghouse Electric Company/YMQAD

#### 4.0 SUMMARY OF SURVEILLANCE RESULTS

The implementing procedures listed in Section 2.0 of this report were the source of questions used to conduct this surveillance. Checklists generated from these documents were used to determine compliance. The following results were obtained during the surveillance.

1. TWS-QAS-QP-03.16, Revision 0, "Procedure for TMO Review of Design Information"

The Surveillance Team examined the records generated in accordance with this procedure for compliance to selected paragraphs of the procedure dealing with Technical Reviews.

The Surveillance Team verified the request to issue a Design Review Notice to the Los Alamos Technical Project Officer (TPO), Quality Assurance Project Leader (QAPL), Design Manager of the work to be reviewed, and the designated reviewers, before the distribution of the Design Review Package (Memo TWS-EES-13-LV-03-91-02, subject: Technical Review of ESF Design Requirements). The Surveillance Team verified that the requester had determined the technical discipline to be used to accomplish the purpose and scope of the review and determined the number of reviewers. The designated reviewers for Appendices B and C of the ESFDR were

Francis Hansen - Sandia National Laboratories (SNL)  
Robert Craig - U.S. Geological Survey (USGS)  
Dale G. Wilder - Lawrence Livermore National Laboratory (LLNL)  
E. P. Springer - Los Alamos  
Michael J. Clevenger - Los Alamos

The Surveillance Team verified that the SNL and Los Alamos reviewers submitted Los Alamos review sheets to document their comments. USGS issued a letter (Craig to the Los Alamos Test Manager, subject: Technical Review of ESF Design Requirements, Appendices B and C), that stated, "No comments" on March 7, 1991. LLNL issued a letter (Wilder to the Los Alamos Test Manager, subject: Response to Technical Review of ESFDR, Appendices B and C) that stated acceptance of Appendices B and C "as-is", on March 13, 1991.

The Surveillance Team verified the assigned USGS, LLNL, and SNL reviewers had documented training (read) of Los Alamos procedure TWS-QAS-QP-03.16, Revision 0, prior to performing the required reviews.

The Surveillance Team verified that the requester issued a letter (TWS-EES-1-LV-03-91-09) stating the outcome of the completed reviews, and the Review Records Package was on file at the TMO.

The Surveillance Team discovered that the Reviewer Qualification form, Attachment 6, of the procedure was not completed for the SNL, LLNL, and USGS reviewers; these forms were completed for the reviewers during the course of the surveillance.

2. AP-5.32Q, Revision 1, "Test Planning and Implementation Requirements"

The Test Planning Packages that were anticipated to have been ready by the time of the surveillance were not ready. There were two Test Planning Package Requests that had been submitted; however, these requests are not classified as QA Records and are therefore non-auditable. This resulted in a determination that this activity is indeterminate because no Test Packages were sufficiently completed to allow evaluation.

3. Examination of Flow-Down Requirements

The Surveillance Team examined the flow-down of requirements from the Site Characterization Plan Baseline (SCPB) to Appendices B and C of the ESFDR. Appendix B of the ESFDR was found to contain the requirements presented in the SCPB. The descriptions of the requirements and constraints contained in Appendix B adequately reflected the requirements and constraints presented in the SCPB.

4. TWS-QAS-QP-02.5, Revision 0, "Selection of Personnel"

The Surveillance Team examined the training files retained by the TMO in Las Vegas, Nevada; the Quality Assurance Support (QAS) Training Coordinator, and the dual storage file retained by the QA Liaison (QAL) of Group EES-13 and Los Alamos Technical Associates, Inc. (LATA). All files were limited access. The files were reviewed for compliance to selected paragraphs of this procedure dealing with Position Description and Personnel Qualification Evaluation forms.

The personnel training files that were examined during this phase of the surveillance, were specifically for the following personnel:

Ned Elkins  
Michael I. Clevenger  
Everett P. Springer

The Position Description and Personnel Qualification Evaluation forms were present for the above personnel. However, it was noted that the education and experience verification information was not completed. This was previously documented on Los Alamos DR-0136 during Yucca Mountain Site Characterization Project (YMP) Audit 91-03, and the corrective action is currently in process.

The Surveillance Team reviewed the TMO file for Ned Elkins and the QAS Training Coordinators for the duplicate record copies. The Surveillance Team then reviewed the training Coordinator's file and the QAL group files for EES-13 and LATA for completeness and duplicate record copies for Michael J. Clevenger and Everett P. Springer.

5. TWS-QAS-QP-02.6, Revision 1, "Personnel Orientation and Indoctrination"

The Surveillance Team examined the personnel training files identified in Section 4.0, Item 1, for compliance to selected paragraphs of this procedure dealing with YMP orientation, indoctrination, and reading acknowledgment forms.

The orientation and indoctrination form were present and satisfactorily completed.

The reading acknowledgment forms were properly completed and signed by the employees and the appropriate YMP supervisor. The Surveillance Team reviewed the TMO training file, QAS Training Coordinator, and the QAL file of Group EES-13 and LATA for completeness and accountability of duplicate training record files.

6. TWS-QAS-QP-02.7, Revision 1, "Personnel Training"

The Surveillance Team examined the training files identified in Section 4.0, Item 1, for compliance to selected paragraphs of this procedure dealing with reading acknowledgment and formal training forms.

The Surveillance Team verified the table of contents for Los Alamos/YMP Quality Assurance Program Plan (QAPP), Revision 4, and QA procedures indicating the training level (either "R" (read) or "F" (formal)) training for the Quality Procedures (QPs) and Detailed Procedures (DPs). Letter TWS-EES-13-12-90-005 (West to distribution, dated December 18, 1990; subject: Notification of Recently Distributed Procedures) provided the mechanism to notify managers and supervisors of program procedure changes.

The Surveillance Team verified that reading acknowledgment forms and formal training forms were properly completed and signed by the employees and the appropriate YMP supervisor for the sampled training files (for the personnel identified in Section 4.0, Item 1, of this report).

7. TWS-QAS-QP-02.9, Revision 0, "Personnel Proficiency Evaluations"

The Surveillance Team examined the Personnel Training files identified in Section 4.0, Item 1, of this report for compliance to selected paragraphs of this procedure dealing with annual Personnel Proficiency Evaluation forms.

The Surveillance Team verified that the Personnel Proficiency Evaluation forms were initiated for the personnel identified in Item 4 of this report.

The Surveillance Team verified that the YMP supervisor did not indicate unsatisfactory performance of any employee on the Personnel Proficiency Evaluation forms examined.

#### 5.0 PERSONNEL CONTACTED DURING THE COURSE OF THE SURVEILLANCE

Ned Elkins, Test Managers Office, Los Alamos, Las Vegas  
Michael Clevenger, QAL  
Gabriela Gainer, LATA, QA Engineer  
Lynn Sanders, LATA, Records Coordinator

#### 6.0 MEASURING AND TEST EQUIPMENT USED DURING THE SURVEILLANCE

No measuring and/or test equipment was used during the course of this surveillance.

#### 7.0 SURVEILLANCE TEAM EVALUATION

The surveillance results indicate that the Los Alamos QA program was implemented satisfactorily for the preparation and review of the ESFDR, Appendices B and C. The required training to accommodate this effort was documented satisfactorily. The results of the Surveillance Team review of the requirements flow-down was appropriate and satisfactory. The Test Plan Packages review was deemed to be indeterminate based on only two requests being submitted for approval. The records generated in support of this effort have not been validated and submitted to the record center; therefore, this phase was not evaluated and is deemed to be indeterminate.

#### 8.0 SYNOPSIS OF DEFICIENCIES

No CARs were generated as a result of this surveillance.

#### 9.0 RECOMMENDATIONS

The Surveillance Team recommends that a Lessons Learned Task Force of participants and the YMPO be initiated to refine Work or Task Authorizations and interface controls prior to initiation of any new major activities by the YMPO. During the Los Alamos and SNL surveillances, it became apparent that the activities associated with the preparation and review of the System Requirements (SR), System Description (SD), Repository Design Requirements (RDR), and ESFDR documents resulted in numerous questions and concerns that required clarification or resolution from the YMPO and subsequently between SNL and Los Alamos.

The Surveillance Team intends to evaluate the YMPO Work Authorization documents and interface controls during the surveillance scheduled for May.

#### 10.0 REQUIRED ACTIONS

No actions are required of Los Alamos as a result of this surveillance.