

YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION

QUALITY ASSURANCE SURVEILLANCE REPORT OF

TECHNICAL AND MANAGEMENT SUPPORT SERVICES

SURVEILLANCE NUMBER YMP-SR-91-010

CONDUCTED MARCH 27 THROUGH 28, 1991

ACTIVITY SURVEILLED:

PLAN FOR RISK/BENEFIT ANALYSIS OF ALTERNATIVE STRATEGIES  
FOR CHARACTERIZING THE CALICO HILLS UNIT AT YUCCA MOUNTAIN

Prepared by:



Frank J. Kratzinger  
Surveillance Team Leader  
Yucca Mountain Quality Assurance Division

Date:

4/5/91

Approved by:



Donald G. Horton  
Director  
Yucca Mountain Quality Assurance Division

Date:

4/9/91

## 1.0 INTRODUCTION

This report contains the results of the Yucca Mountain Quality Assurance Division (YMQAD) Surveillance YMP-SR-91-010 of the Technical and Management Support Services (T&MSS) contractor, conducted in Las Vegas, Nevada, on March 27 through 28, 1991.

## 2.0 PURPOSE AND SCOPE

The purpose of the surveillance was to verify that the programmatic requirements of the "Plan for Risk/Benefit Analysis of Alternative Strategies for Characterizing the Calico Hills Unit at Yucca Mountain" (CHRBA), YMP/90-3, Revision 0, were satisfactorily implemented.

## 3.0 SURVEILLANCE PERSONNEL

The surveillance was conducted by Frank J. Kratzinger, Quality Assurance (QA) Engineer, Science Applications International Corporation (SAIC)/YMQAD.

## 4.0 PERSONNEL CONTACTED DURING THE SURVEILLANCE

The following personnel were contacted during the surveillance:

Nate Hopton, Manager, Geotechnical Department, SAIC  
April Gil, Geologist, SAIC

## 5.0 SUMMARY OF SURVEILLANCE RESULTS

- 5.1 Documented evidence of the qualifications of the working group members (identified in Enclosure 1 of this report) was reviewed and found to be acceptable.
- 5.2 The training records of the working group (identified in Enclosure 1 of this report) were reviewed and, after minor deficiencies were corrected during the surveillance, were found to be acceptable.
- 5.3 A requirement of the CHRBA is that for each judgment produced by the working group, the interim product documents the contribution of each member tasked by the Chair to participate, and the assumptions and inferences used by each member.

There was no documented evidence to support the above requirement and the deficiency was identified in Corrective Action Request (CAR) No. YM-91-039.

5.4 It was verified that the Chair had compiled the following records into the draft Record Memorandum (RM) for the CHRBA:

- o Qualification records of working group members
- o Training records of working group members
- o Meeting minutes

The above records were all found to be acceptable.

The interim products of the working group were also to be included in the draft RM but there was no documented evidence available. This deficiency is reported in CAR No. YM-91-039.

5.5 The statements of concurrence of the active working group members, (identified in Enclosure 1 of this report) were reviewed and, after an oversight deficiency was corrected during the surveillance, were found to be acceptable.

5.6 The CHRBA Plan requires that the Chair transmit the RM to the Director, Regulatory and Site Evaluation Division (RSED), U.S. Department of Energy (DOE)/Yucca Mountain Site Characterization Project Office (YMPO), within 120 days of commencement of the CHRBA.

The analysis was initiated during April, 1990, and as of March 3, 1991, has not been formally transmitted to the YMPO. This deficiency is identified in CAR No. YM-91-040.

## 6.0 SYNOPSIS OF DEFICIENCIES

The following two CARs were issued as a result of this surveillance and are included for information as Enclosure 2 to this report:

<u>CAR</u>	<u>Deficiency</u>
YM-91-039	No documentation of the contribution of each member tasked by the Chair to participate, and the assumptions and inferences used by each member for each judgment produced by the working group.
YM-91-040	The Record Memorandum for the CHRBA has not been transmitted to the YMPO within the 120-day requirement of the CHRBA Plan.

## 7.0 DEFICIENCIES CORRECTED DURING THE SURVEILLANCE

A concurrence statement for Sections 2.1 through 2.6 of the Risk/Benefit Analysis Record Memorandum was obtained from David C. Dobson.

The following training records were corrected during the surveillance and submitted to the Local Records Center:

D. Dobson	SSN block blank or not marked NA
L. Gallant	Purpose of Assignment not completed
C. Herrington	No manager signature
R. Lee	SSN block blank or not marked NA
R. Lee	No manager signature
B. Lewis	No manager signature
R. Murray	SSN block blank or not marked NA
R. Murray	No manager signature
W. Wilson	Correction to SSN not initialed and dated

8.0 MEASURING AND TEST EQUIPMENT USED DURING THE SURVEILLANCE

None

9.0 REQUIRED ACTIONS

Responses to the CARs delineated in Section 6.0 of this report are due within the time frame stated in Block 10 of each CAR, as detailed in the CAR transmittal letter. Upon response, and satisfactory verification of all remedial and corrective actions, the CARs will be closed and the YMQAD will notify T&MSS by letter of the closure.

Table 2.1-1. Technical Participants (page 1 of 2)

NAME	AFFILIATION	QUALIFIED SPECIALTY	ACTIVE IN CHRBA AT CONCLUSION?
Ernest L. Hardin	SAIC	Task Leader	Yes
Elisabeth Browne	ADA	Decision Analyst	No
Hollis Call	ADA	Decision Analyst	No
Bruce Crowe	LANL	Geologist	Yes
David C. Dobson	DOE/YMP	Regulatory/Geologist	No
Lawrence Gallant	ADA	Decision Analyst	No
Errol Gardiner	SAIC	Mining Engineer	Yes
Charles C. Herrington	SAIC	Regulatory Specialist	Yes
2.1-2 Jerry L. King	SAIC	Regulatory Specialist	Yes
John Lathrop	Strategic Insights	Principal Decision Analyst	Yes
Richard C. Lee	SAIC	Geophysicist	No
Barney Lewis	USGS	Hydrologist/Hydrogeologist	Yes
Robert C. Murray	SAIC	Geologist	Yes
Russell A. Paige	Harza	Geologist	Yes
Martha W. Pendleton	SAIC	Regulatory/Geologist	Yes
John B. Robertson	HydroGeoLogic, Inc.	Hydrogeologist	Yes
Victor Rohrer	Westinghouse	Cost & Scheduling	Yes

Table 2.1-1. Technical Participants (page 2 of 2)

NAME	AFFILIATION	QUALIFIED SPECIALTY	ACTIVE IN CHRBA AT CONCLUSION?
Bruce Schepens	REECO	Mining Engineer/Cost & Scheduling	No
Scott Sinnock	SNL	Performance Assessment	Yes
Michael D. Voegele	SAIC	Regulatory Specialist	Yes
Charlie Voss	Golder Associates	Geotechnical Engineer	Yes
William E. Wilson	USGS	Hydrologist/Hydrogeologist	No
David Wonderly	REECO	Drilling Engineer	Yes

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

14CAR NO.: YM-91-039  
 DATE: 03/29/91  
 SHEET: 1 OF 1  
 QA  
 WBS No.: 1.2.5.2.2

**CORRECTIVE ACTION REQUEST**

1 Controlling Document YMP/90-3, Rev. 0	2 Related Report No. YMP-SR-91-010
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3 Responsible Organization T&MSS	4 Discussed With N. Hopton, A. Gil
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10 Response Due 20 days after issue	11 Responsibility for Corrective Action T&MSS	12 Stop Work Order Y or N N
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5 Requirement:  
 Para. 2.6 ...For each judgement produced by the working group, the interim product shall document the contribution of each member tasked by the Chairman to participate, and the assumptions and inferences used by each member.

6 Adverse Condition:  
 There is no documentation of the contribution of each member tasked by the Chairman to participate, and the assumptions and inferences used by each member for each judgement produced by the working group.

7 Recommended Action(s):  
 Identify the remedial action to be taken to correct the deficiency noted in block 6. Identify the cause of the condition and the planned corrective action to prevent recurrence.

8 Initiator Frank J. Kretzinger <i>Frank J. Kretzinger</i>	Date: <u>4/1/91</u>	9 Severity Level - 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/>	13 Approved By: OQA <i>James Bleylock</i>	Date: <u>4/2/91</u>
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15 Verification of Corrective Action:

16 Corrective Action Completed and Accepted: OAR _____ Date _____	17 Closure Approved By: OQA _____
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**OFFICE OF CIVILIAN  
RADIOACTIVE WASTE MANAGEMENT  
U.S. DEPARTMENT OF ENERGY  
WASHINGTON, D.C.**

14CAR NO.: YM-91-040  
 DATE: 03/29/90  
 SHEET: 1 OF 1  
 QA  
 WBS No.: 1.2.5.2.2

**CORRECTIVE ACTION REQUEST**

1 Controlling Document YMP/90-3, Rev. 0	2 Related Report No. YMP-SR-91-010
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3 Responsible Organization T&MSS	4 Discussed With N. Hopton, A. Gil
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10 Response Due 20 days after issue	11 Responsibility for Corrective Action T&MSS	12 Stop Work Order Y or N N
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5 Requirement:  
 Para. 2.7 The Chairman shall transmit the Record Memorandum (RM) to the Director, RSED, DOE/Yucca Mountain Project Office, within 120 days of commencement of the Risk Benefit Analysis.

6 Adverse Condition:  
 The Risk Benefit Analysis was started on 04/16/90. To-date (03/27/91) the Analysis is still in a QMP 06-04 review status and has not been transmitted to the Project Office.

7 Recommended Action(s):  
 Identify the remedial action to be taken to correct the deficiency noted in block 6. Identify the cause of the condition and the planned corrective action to prevent recurrence.

8 Initiator Frank J. Kratzinger <i>Frank Kratzinger</i>	Date: <u>4/1/91</u>	9 Severity Level - 1 <input type="checkbox"/> 2 <input checked="" type="checkbox"/> 3 <input type="checkbox"/>	13 Approved By: OQA <i>James Blaylock for</i>	Date: <u>4/2/91</u>
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15 Verification of Corrective Action:

16 Corrective Action Completed and Accepted: QAR _____ Date _____	17 Closure Approved By: OQA _____
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