

Department of Energy Office of Civilian Radioactive Waste Management Yucca Mountain Site Characterization Office P.O. Box 98608 Las Vegas, NV 89193-8608

OCT 1 3 1995

L. Dale Foust
Technical Project Officer for Yucca Mountain Site Characterization Project
TRW Environmental Safety Systems, Inc.
101 Convention Center Drive, Suite P-110
Las Vegas, NV 89109

EVALUATION OF RESPONSES TO DEFICIENCY REPORTS (DR) YMQAD-95-D011 AND YMQAD-95-D013 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION'S (YMQAD) AUDIT YM-ARP-95-19 OF THE CIVILIAN RADIOACTIVE WASTE MANAGEMENT SYSTEM MANAGEMENT AND OPERATING CONTRACTOR (SCPB: N/A)

The YMQAD staff has evaluated the responses to DRs YMQAD-95-D011 and YMQAD-95-D013. The responses have been determined to be satisfactory. Verification of completion of the remedial actions will be performed after the effective date provided. Any extension to this date must be requested in writing, with appropriate justification, prior to the date. Please send a copy of extension requests to Deborah Sult, YMQAD/QATSS, 101 Convention Center Drive, Suite 640, Las Vegas, Nevada 89109.

If you have any questions, please contact either Robert B. Constable at 794-7945 or John F. Pelletier at 794-7538.

YMQAD:RBC-183

Richard E. Spence, Director Yucca Mountain Quality Assurance Division

Enclosures: CARs YMQAD-95-D011 and YMQAD-95-D013

200014

OCT 1 3 1995

٩.

-2-

Foust

cc w/encl: J. G. Spraul, NRC, Washington, DC S. W. Zimmerman, NWPO, Carson City, NV T. A. Wood, HQ (RW-14) FORS R. L. Strickler, M&O, Vienna, VA Richard Jiu, M&O, Las Vegas, NV R. P. Ruth, M&O, Las Vegas, NV

cc w/o encl: W. L. Belke, NRC, Las Vegas, NV D. G. Sult, YMQAD/QATSS, Las Vegas, NV

é é	J'ILINAL			TOPOTHIS IS A RED STAN	
	RADIOACTIVE V U.S. DEPART	OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT U.S. DEPARTMENT OF ENERGY WASHINGTON, D.C.		Deficie	Trance Report ency Report 06-95-0-011 0F <del>2</del> 3 W
·					QA: L
Controlling Document:	PERFORMANCE/DEFICIENCY REPORT		2 Related Re	port No.	
AP-S111.2Q, Revision 0			YM-ARP-95		
3 Responsible Organization: M&O		<u> </u>	<u></u>		
5 Requirement/Measurement Crite Section 5.4.1, b) states, "To reques b) submits a writien request i	t or retrieve data from the				
6 Description of Condition:		·			
				•	
Initiator John Frellt	K 8/31/45	9 QA Review	FRE		9(3)/95
John Pelletier	入, 8/31/45 Date 08/31/95	1000	7-Pe		Q(31/95 te 08/31/95
John Petietier		1000	7-P-0	<u></u>	00/51/75
John Petietier O Response Due Date 20 days after issuance		QAR John Pelletier	rai la	<u></u>	te 9. 5.95
John Petietier O Response Due Date 20 days after issuance	Date 08/31/95 rill be requested throug P-SIII.2Q procedure,	OAR John Pelletier 11 OA Issuance Appro- OAR (PR)/AOOAM (D gh the YAP-SIII.2Q sys a comparison will be m	stem. Wh	Dat en the repor	t is
John Petietier 10 Response Due Date 20 days after issuance 12 Remedial Actions: TDIF 303124, Rev. 1 w received through the YA Analysis to ensure that w	Date 08/31/95 rill be requested throug P-SIII.2Q procedure,	OAR John Pelletier 11 OA Issuance Appro- OAR (PR)/AOOAM (D gh the YAP-SIII.2Q sys a comparison will be m	stem. Who ade with t	Dat en the repor	t is 31, 1995
John Petietier O Response Due Date 20 days after issuance 2 Remedial Actions: TDIF 303124, Rev. 1 w received through the YA Analysis to ensure that v	Date 08/31/95 will be requested throug P-SIII.2Q procedure, we used the correct date October 4, 1995	QAR John Pelletier 11 QA Issuance Appro- OAR (PR)/AOOAM (D gh the YAP-SIII.2Q sys a comparison will be m ta.	stem. Who ade with t	Dat en the repor the Scoping October	t is 31, 1995
10 Response Due Date 20 days after issuance 12 Remedial Actions: TDIF 303124, Rev. 1 w received through the YA Analysis to ensure that w 13 Remedial Action Response Big	Date 08/31/95 nill be requested throug P-SIII.2Q procedure, we used the correct dat October 4, 1995 Date	QAR John Pelletier 11 QA Issuance Appro- OAR (PR)/AOOAM (D gh the YAP-SIII.2Q sys a comparison will be m ta. 14 Remedial Action Du	stem. Who ade with t	Dat en the repor the Scoping October	t is 31, 1995

and the second	$\bigcirc$	;	8 DR NO. YmgAD= 95-D-
provide the second second	OFF	FICE OF CIVILIAN	PAGE 2 OF
	RADIOACTIV	E WASTE MANAGEMENT	QA: L
	U.S. DEP	ARTMENT OF ENERGY	
т. ж	WA	SHINGTON, D.C.	- •
17 Recommended Actions:	DEF	ICIENCY REPORT	
		•	
1) Investigate to determine t	he extent of deficiency iden	tified in Block 6.	
2) Evaluate the impact of ob	taining technical data with	out complying with YAP-Slll.2Q.	
3) Provide a corrective action	n plan to ensure future acqu	nisitions of data from the TDB are in acco	rdance with YAP-SIII.2Q.
18 Investigative Actions:	·····		
SEE CONTIN	UATION PAGE 3	0F3 10-4-95	
		10-4-95	
		-	•
			and the second se
19 Root Cauce Determinatio	A.		
19 Root Cause Determinatio	n:		
19 Root Cause Determinatio	n:		
19 Root Cause Determinatio	<b>n:</b>		
19 Root Cause Determinatio	<b>n:</b>		•
19 Root Cause Determinatio	<b>n:</b>		
19 Root Cause Determinatio	n:		•
19 Root Cause Determinatio	n:		
19 Root Cause Determinatio	n:	. · ·	·
19 Root Cause Determinatio			
	/ence:		
20 Action to Predude Recur	/ence:		
20 Action to Predude Recur	/ence:	of 3 Wb	
20 Action to Predude Recur	/ence:	OF 3 416 M10-4-95	
20 Action to Predude Recur	/ence:	OF 3 416 N 10-4-95	
20 Action to Predude Recur	/ence:	0F 3 4 6 M 10-4-95	
20 Action to Predude Recur	/ence:	OF 3 116 M 10-4-95	
20 Action to Preclude Recurs SEE CONTIN	/ence:	· · · · · · · · · · · · · · · · · · ·	ion Dub Date:
20 Action to Predude Recur	rence: TUATION PAGE 3	22 Corrective Action Complet	
20 Action to Preclude Recurs SEE CONTIN	/ence:	5 22 Corrective Action Complet October	
20 Action to Preclude Recurs SEE CONTIN	TUATION PAGE 3	5 22 Corrective Action Complet October 24 Response Accepted	21, 1995
20 Action to Preclude Recur SEE CONTIN 21 Response by: 23 Response Accepted QAR	TUATION PAGE 3 Date 10/4/4	5 22 Corrective Action Complet October 24 Response Accepted	
20 Action to Preclude Recurs SEE CONTIN 21 Response by:	TUATION PAGE 3 Date 10/4/4	5 22 Corrective Action Complet October 24 Response Accepted	21, 1995 Date 10.2.95
20 Action to Preclude Recurs SEE CONTIN 21 Response by: 23 Response Accepted 0AR Control of Control 25 Aznended Response Acce	TUATION PAGE 3 Date 10/4/9 Date 10/5/9	22 Corrective Action Complet October 24 Response Accepted AOOAM(1)/OWOADU 26 Amended Response Accept	21, 1995
20 Action to Preclude Recur SEE CONTIN 21 Response by: 23 Response Accepted QAR	TUATION PAGE 3 Date 10/4/9 Date 10/5/9 Date Date	22 Corrective Action Complet October 24 Response Accepted AOOAM (1)()(1)(1)(1) 26 Amended Response Accepted AOOAM	21, 1995 Date 10.2.95
20 Action to Preclude Recurs SEE CONTIN 21 Response by: 23 Response Accepted 0AR 0 25 Aznended Response Acce 0AR 27 Corrective Actions Verifie	TUATION PAGE 3 Date 10/4/4 Date 10/5/9 Date 0/5/9	22 Corrective Action Complet October 24 Response Accepted AOOAM (1)()(1)(1)(1) 26 Amended Response Accep AOOAM 28 Closure Approved by:	21, 1995 Date 10.12.95 Ited Date
20 Action to Preclude Recurs SEE CONTIN 21 Response by: 23 Response Accepted 0AR 000 T 100 25 Aprended Response Acce 0AR	TUATION PAGE 3 Date 10/4/9 Date 10/5/9 Date Date	22 Corrective Action Complet October 24 Response Accepted AOOAM (1)()(1)(1)(1) 26 Amended Response Accepted AOOAM	21, 1995

•

.

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

Performance Report Deficiency Report

NO. YMRAD-95-D-011 PAGE <u>3</u> OF <u>3</u> QA: L

### PR/DR CONTINUATION PAGE

#### 18. Investigative Actions:

The condition identified in Block 6 was not applicable to TDIF 303124. Data was needed to support the design support analysis for the TS North Ramp Ground Support Scoping Analysis. The needed data did not exist in the TDB at that time. In accordance with the established system for obtaining data from the laboratories, SNL was requested to provide a bounding analysis for thermal and seismic loading. This request was documented in a letter from R. Sandifer to L. Shepherd, dated October 25, 1993 (LV.ESSB.SB. 10/93-531).

The data used in the analysis was received from SNL under a cover letter from L. Shepherd to A. Segrest, dated January 18, 1994 (LV.ESSB.JHP.1/94-517). An M&O review of the information was made, some deficiencies to be corrected were noted, and these were transmitted to SNL.

YAP-SIII.2Q did not exist at the time. It became effective March 7, 1994, superseding AP-5.2Q. M&O QAP-3-12 existed, but it was not applicable to the Laboratories at that time. To acquire the needed data in a timely manner, a direct request was made to SNL.

### 20. Action to Preclude Recurrence:

A review will be made of current "Q" analyses to determine which TDIFs are used as inputs. Then a request will be made, through the YAP-SIII.2Q process, to obtain the inputs, and compare with the data in the analyses to ensure correctness (for those TDIFs available from the TDB). Additionally, the following primary TDIF users will complete documented training in YAP-SIII.2Q (if not already accomplished):

> John Pye Mary Woods Bill Kennedy Saeed Bonabian Rick Nolting Kal Bhattacharyya Mal Taylor

These actions will be completed by October 21, 1995.

				المخلفة المالية	
		ICIMAL		HTHIS IS A HED STA	
	THIS IS A RED STAMP OFFICE OF CIVILIAN				
Na See na Nasara ang Kabupatèn Salahan Salah salah			Performance Rep Deficiency Report		
	RADIOACTIVE W	VASTE MANAGE	MENT		
- • • • • •		MENT OF ENERG	NO VILAAL OF ALL		
		NGTON, D.C.			
		WASHINGTON, D.C.		QA: L /	
	PERFORMANCE	/DEFICIENCY RE	PORT		
1 Controlling Document:			2 Related Reg	port No.	
QARD, Revision 4			YM-ARP-95-19		
3 Responsible Organization:		4 Discussed With:		······································	
M&O		John Pye			
5 Requirement/Measurement Crit					
Sect 3.2.1, A. states, "Design inpu	uts should be identified and o	documented, and their s	election reviewed	and approved by these	
responsible for the design."					
		•			
Data utilized as design input for the documented as to its status (data us to its status (data us evidence that the selection of design	utilized was "PRELIMINAR	Y" and contained error	s). Additionally,	there is no objective	
Data utilized as design input for the documented as to its status (data us to its status (data us evidence that the selection of design	utilized was "PRELIMINAR	Y" and contained error	s). Additionally,	there is no objective	
Data utilized as design input for the documented as to its status (data us to its status (data us evidence that the selection of design	utilized was "PRELIMINAR	Y" and contained error	s). Additionally,	there is no objective	
Data utilized as design input for the documented as to its status (data utilized as to its sta	utilized was "PRELIMINAR	Y" and contained error "Design Support Analy:	s). Additionally,	there is no objective Design Package 2C" was	
Data utilized as design input for the documented as to its status (data use evidence that the selection of desi- technically reviewed.	utilized was "PRELIMINAR	Y" and contained error	s). Additionally,	there is no objective	
Data utilized as design input for the locumented as to its status (data u evidence that the selection of desi- technically reviewed.	utilized was "PRELIMINAR gn input from revision 1 of "	Y" and contained error	s). Additionally, ses:North Ramp I Gun ( Tulka	there is no objective Design Package 2C" was	
Data utilized as design input for the locumented as to its status (data u evidence that the selection of design technically reviewed.	utilized was "PRELIMINAR ign input from revision 1 of " Wo-for 8/31/95	Y" and contained error "Design Support Analy: 0 QA Rodew ()	s). Additionally, ses:North Ramp I SM (Fills etter	there is no objective Design Package 2C" was	
Data utilized as design input for the locumented as to its status (data u evidence that the selection of design technically reviewed.	utilized was "PRELIMINAR ign input from revision 1 of " Wo-for 8/31/95	Y" and contained error "Design Support Analy: OAR John Pell	s). Additionally, ses:North Ramp I SM (Fills etter	there is no objective Design Package 2C" was	
Data utilized as design input for the documented as to its status (data u evidence that the selection of design technically reviewed.	utilized was "PRELIMINAR ign input from revision 1 of " Wo-for 8/31/95	Y" and contained error "Design Support Analy: OAR John Pell 11 OA Issuance /	s). Additionally, ses:North Ramp I SM (Fills etter	there is no objective Design Package 2C" was Date 08/31/95	
Data utilized as design input for the documented as to its status (data used evidence that the selection of design technically reviewed. 7 Initiator Automatic With Frank Tsai Frank Tsai 10 Response Due Date 20 days after issuance 12 Remedial Actions:	utilized was "PRELIMINAR ign input from revision 1 of " Wio for 8/21/95 The Date 08/31/95	Y" and contained error "Design Support Analy: OAR John Fell 11 OA Issuance A OAR (PR//AOOA	s). Additionally, ses:North Ramp I Generation (Freider poppoval barra for M (DR)	there is no objective Design Package 2C" was <u>Stori/43</u> Date 08/31/95 Date 9.595	
Data utilized as design input for the locumented as to its status (data a evidence that the selection of design technically reviewed. I Initiator Lucar Frank Tsai Frank Tsai D Response Due Date 20 days after issuance 12 Remedial Actions: The TS North Ramp	p Ground Support Scop	Y" and contained error "Design Support Analy: OAR John Pell 11 OA Issuance / OAR (PR)/AOOA	s). Additionally, ses:North Ramp I Gun (Freight etter pproval white M (DR)	there is no objective Design Package 2C" was Date 08/31/95 Date 9.595	
Data utilized as design input for the documented as to its status (data utilized as to its sta	p Ground Support Scop sign Analysis, Rev. 00,	Y" and contained error "Design Support Analy: OAR John Feil 11 OA Issuance A OAR (PR/AOOA ing Analysis has be which was approve	s). Additionally, ses:North Ramp I m ( T the pproval table M (DR) een combined i ed on Septemb	there is no objective Design Package 2C" was Date 08/31/95 Date 9.595 into the ESF er 6, 1995.	
Data utilized as design input for the documented as to its status (data a evidence that the selection of design technically reviewed.	p Ground Support Scop sign Analysis, Rev. 00, that the design input w	Y" and contained error "Design Support Analy: OAR John Fell 11 OA Issuance A OAR (PR/AOOA ing Analysis has be which was approve as technically revie	s). Additionally, ses:North Ramp I which ( Figure pproval which ( A m (DR) een combined i ed on Septemb wed exists. Se	there is no objective Design Package 2C" was Date 08/31/95 Date 9.595 Date 9.595 et the attached	
Data utilized as design input for the documented as to its status (data a evidence that the selection of desi- technically reviewed.	p Ground Support Scop sign Analysis, Rev. 00, that the design input w Shepherd to YMSCO,	Y" and contained error "Design Support Analy: OAR John Pell 11 OA Issuance A OAR (PR)/AOOA which was approve as technically revie stating that the doct	s). Additionally, ses:North Ramp I where the set of th	there is no objective Design Package 2C" was Date 08/31/95 Date 08/31/95 Date 9.595 et the attached I technical,	
Data utilized as design input for the documented as to its status (data a evidence that the selection of desi- technically reviewed.	p Ground Support Scop sign Analysis, Rev. 00, that the design input w	Y" and contained error "Design Support Analy: OAR John Pell 11 OA Issuance A OAR (PR)/AOOA which was approve as technically revie stating that the doct	s). Additionally, ses:North Ramp I where the set of th	there is no objective Design Package 2C" was Date 08/31/95 Date 08/31/95 Date 9.595 et the attached I technical,	
10 Response Due Date 20 days after issuance 12 Remedial Actions: The TS North Ramp Ground Support Des Objective evidence letter copy from L.	p Ground Support Scop sign Analysis, Rev. 00, that the design input w Shepherd to YMSCO,	Y" and contained error "Design Support Analy: OAR John Pell 11 OA Issuance A OAR (PR)/AOOA which was approve as technically revie stating that the doct	s). Additionally, ses:North Ramp I where the set of th	there is no objective Design Package 2C" was Date 08/31/95 Date 08/31/95 Date 9.595 et the attached I technical,	
Data utilized as design input for the documented as to its status (data used evidence that the selection of design technically reviewed. 7 Initiator Control Control Control Control Frank Tsai Function Control To Response Due Date 20 days after issuance 12 Remedial Actions: The TS North Ramp Ground Support Design Objective evidence of letter copy from L. management, and Q	p Ground Support Scop sign Analysis, Rev. 00, that the design input w Shepherd to YMSCO, so	Y" and contained error "Design Support Analys" OAR John Fell 11 OA Issuance A OAR (PR/AOOA bing Analysis has be which was approve as technically revie stating that the doct CRWM-approved SI	s). Additionally, ses:North Ramp I du Truck etier pproval with CR een combined i ed on Septemb wed exists. Se ument received NL QA progra	there is no objective Design Package 2C" was Date 08/31/95 Date 9.595 into the ESF er 6, 1995. be the attached I technical, m.	
Data utilized as design input for the documented as to its status (data a evidence that the selection of desi- technically reviewed.	p Ground Support Scop sign Analysis, Rev. 00, that the design input w Shepherd to YMSCO, A review under the OC	Y" and contained error "Design Support Analys" OAR John Fell 11 OA Issuance A OAR (PR/AOOA bing Analysis has be which was approve as technically revie stating that the doct CRWM-approved SI	s). Additionally, ses:North Ramp I du Truck etier pproval with CR een combined i ed on Septemb wed exists. Se ument received NL QA progra	there is no objective Design Package 2C" was Date 08/31/95 Date 08/31/95 Date 9.595 into the ESF er 6, 1995. be the attached i technical, m.	
Data utilized as design input for the documented as to its status (data user evidence that the selection of design technically reviewed. 7 Initiator Frank Tsai Frank Tsai 20 days after issuance 12 Remedial Actions: The TS North Ramp Ground Support Design Objective evidence of letter copy from L. management, and Q	p Ground Support Scop sign Analysis, Rev. 00, that the design input w Shepherd to YMSCO, A review under the OC October 4, 1995 Date	Y" and contained error "Design Support Analys" QAR John Pell 11 QA Issuance A QAR (PR)/AOQA oing Analysis has be which was approve as technically revie stating that the doct CRWM-approved SI 14 Remedial Activ	s). Additionally, ses:North Ramp I dual frequence etier poproval with the een combined is een combined is don Septemb wed exists. Se ument received NL QA progra	there is no objective Design Package 2C" was Date 08/31/95 Date 9.595 into the ESF er 6, 1995. be the attached I technical, m.	
Data utilized as design input for the documented as to its status (data user evidence that the selection of design technically reviewed.	p Ground Support Scop sign Analysis, Rev. 00, that the design input w Shepherd to YMSCO, A review under the OC	Y" and contained error "Design Support Analys" OAR John Fell 11 OA Issuance A OAR (PR/AOOA bing Analysis has be which was approve as technically revie stating that the doct CRWM-approved SI	s). Additionally, ses:North Ramp I dual frequence etier poproval with the een combined is een combined is don Septemb wed exists. Se ument received NL QA progra	there is no objective Design Package 2C" was Date 08/31/95 Date 08/31/95 Date 9.595 into the ESF er 6, 1995. be the attached i technical, m.	

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

DR NO.	YMQ	AD-95-1	- 01	
OR NO. PAGE	2	OF	2	3 19 10
		QA:	L	Yi0/3)'

# DEFICIENCY REPORT

#### **17 Recommended Actions:**

1) Investigate to determine the extent of deficiency identified in Block 6.

2) Determine the impact of using the PRELIMINARY, unreviewed data that was selected for design input.

3) Provide a corrective action plan to ensure technical reviews for the selection of data for design input is adequate.

18 Investigative Actions:

SEE CONTINUATION PAGE

19 Root Cause Determination:

20 Action to Preclude Recurrence:

SEE CONTINUATION PAGE

21 Response by:	Date 10/	4/95 22 Corrective Action Cor	mpletion Due_Date: October 4, 1995
23 Response Accepte	DAL CON	24 Response Accepted	
OAR John -	Portalione 10	15/95 ADDAM ()0000	Date () 1].95
25 Amended Response	e Accepted	26 Amended Response A	Accepted
QAR	Date	AOQAM	Date
27 Corrective Actions	Verified	28 Closure Approved by:	
OAR	Date	MADDA	Date

Exhibit AP-16.10.2

Rev. 07/03/95

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

Deficiency Report Deficiency Report NO. <u>YMCAD-95-D-013</u> PAGE <u>3</u> OF <u>3</u>

QA: L

8

PR/DR CONTINUATION PAGE

18. Investigative Actions:

The SNL Design Support Analyses: North Ramp Design Package 2C, Rev. 1 (TDIF 302273) was used only in the TS North Ramp Ground Support Scoping Analysis. The Scoping Analysis was corrected, consistent with the SNL analysis. An evaluation of the consequences of initially using preliminary data concluded that there was no impact on the results of the analysis.

20. Action to Preclude Recurrence:

(1) QAP-3-9 was revised February 5, 1995 to require identification of unqualified data (section 5.2.3 L).

(2) The checklist for design analyses includes the following questions: Are the design inputs correctly selected? Are the design inputs appropriate for use in the design (e.g., any assumptions, constraints, bounds, or limits of the input reflected in the design)? Do TBDs and/or TBVs match logs? Is unqualified data, assumptions based on preliminary data, or data requiring remedification noted "TBV" or for "REFERENCE ONLY"?

Corrective Action Completion Due: October 4, 1995