



**Department of Energy**  
 Yucca Mountain Site Characterization  
 Project Office  
 P. O. Box 98608  
 Las Vegas, NV 89193-8608

WBS 1.2.11  
 QA: N/A

**JAN 29 1993**

Carl P. Gertz, Project Manager, YMP, NV

EVALUATION OF AMENDED RESPONSE TO CORRECTIVE ACTION REQUEST (CAR) YM-93-003  
 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION (YMQAD) AUDIT  
 YMP-92-24

The YMQAD staff has evaluated the amended response to CAR YM-93-003. The response has been determined to be satisfactory. Verification of completion of the corrective action 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 Nita J. Brogan, Science Applications International Corporation, Las Vegas, Nevada.

If you have any questions, please contact either Robert B. Constable at 794-7945 or Sam H. Horton at 794-7399.

Richard E. Spence, Director  
 Yucca Mountain Quality Assurance Division

YMQAD:RBC-2243

Enclosure:  
 CAR YM-93-003

- cc w/encl:
- K. R. Hooks, NRC, Washington, DC
  - S. W. Zimmerman, NWPO, Carson City, NV
  - S. D. Johnson, PSDO/REEC, Las Vegas, NV
  - J. W. Estella, SAIC, Las Vegas, NV
  - P. G. Jones, M&O/TRW, Las Vegas, NV
  - R. L. Maudlin, MACTEC, Las Vegas, NV
  - A. V. Gil, YMP, NV
  - B. J. Verna, YMP, NV

- cc w/o encl:
- J. W. Gilray, NRC, Las Vegas, NV
  - N. J. Brogan, SAIC, Las Vegas, NV
  - S. H. Horton, SAIC, Las Vegas, NV

050066

9302100350 930129  
 PDR WASTE  
 WM-11 PDR

ADD: Ken Hooks  
 Mr. Eric

102.7  
 WM-11  
 N403

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

8 CAR NO.: YM-93-003  
DATE: 10/6/92  
SHEET: 1 OF 1  
QA

**CORRECTIVE ACTION REQUEST**

1 Controlling Document AP-3.6Q, Revision 1		2 Related Report No. YMP-92-24	
3 Responsible Organization YMPO		4 Discussed With C. Gertz/B. Cruz	
5 Requirement: AP-3.6Q, Revision 1, Paragraph 5.1.3.2 requires that data that has not been (1) verified or (2) validated per NUREG 1298 or (3) is dependent on software that has not been validated, is identified and tracked in the same manner as to be determined data (TBD).  Paragraph 5.1.3.1 requires that to be determined data (TDB) must have a scheduled resolution date and be tracked in a log associated with the document which contains the data to be verified.			
6 Adverse Condition: Contrary to the above; Table 1 (page TEV-3) of Document YMP/CM-0006, Revision 2, does not delineate a scheduled resolution of data to be verified.			
9 Does a significant condition adverse to quality exist? Yes ___ No <u>X</u> If Yes, Circle One: A B C		10 Does a stop work condition exist? Yes ___ No <u>X</u> ; If Yes - Attach copy of SWO If Yes, Circle One: A B C D	
		11 Response Due Date: 20 Working days from issuance	
12 Required Actions: <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Extent of Deficiency <input checked="" type="checkbox"/> Preclude Recurrence <input type="checkbox"/> Root Cause Determination			
13 Recommended Actions: Identify the remedial actions to be taken to correct the deficiency note in Block 6. Investigate the program processes, activities or documentation to determine the extent and depth of similar conditions as noted in Block 6. Identify these deficiencies and provide the measures to correct them.			
7 Initiator Sam E. Horton <i>Sam Horton</i> Date <u>10/06/92</u>		14 Issuance Approved by: QADD <i>R.C. Spence</i> Date <u>10/8/92</u>	
15 Response Accepted QAR Date		16 Response Accepted QADD Date	
17 Amended Response Accepted QAR <i>Sam Horton</i> Date <u>12/5/93</u>		18 Amended Response Accepted QADD <i>DAV Montano</i> Date <u>01-28-93</u>	
19 Corrective Actions Verified QAR Date		20 Closure Approved by: QADD Date	

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CAR NO. YM-93-003  
DATE: \_\_\_\_\_  
PAGE: \_\_\_\_\_ OF \_\_\_\_\_  
QA

**CORRECTIVE ACTION REQUEST (Continuation Page)**

1. Corrective Action Response for CAR # YM-93-003

A. Remedial Action

No remedial action is to be taken regarding the requirements documents in the current document hierarchy. These are shown in Attachment 1, an annotated version of the CCB Register Report, under the "Level 2-CCB Baseline" portion of the Report. The annotations indicate applicability and status of logs. These annotated documents will be superseded by others currently in preparation for the new MGDS document hierarchy.

B. Investigative Action

Investigation has shown that 5 of the 8 documents of a requirements or configuration data nature noted in Attachment 1 do not include the TBD/TBV logs. The status is annotated on the right hand margin of Attachment 1. The need for TBD/TBV logs is not specified in an existing procedure that pertains to document preparation such as OCRWM QAP 3.5, Technical Document Preparation. The current description of a log in AP-3.6Q, Configuration Management, is somewhat hidden in a procedure concerning the management of configuration items and documents. Also, the purpose of a TBD/TBV log is to summarize required technical information. Information concerning management perogatives relative to organizational responsibilities and schedule tracking/control considerations are not appropriate in a technical document since they are subject to a different set of changing priorities. The absence of a TBD/TBV log is not adverse to quality since the TBD/TBV information is integral within the text of a requirements document.

C. Root Cause Determination

Not Applicable

*Stc dtj 11/9/92 - EDD:BDH-829*

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

CAR NO. YM-93-003  
DATE: \_\_\_\_\_  
PAGE: \_\_\_\_\_ OF \_\_\_\_\_  
QA

**CORRECTIVE ACTION REQUEST (Continuation Page)**

CAR # YM-93-003 (continuation)

**D. Corrective Action to Preclude Recurrence**

The corrective action is in three parts: (a) A DAR regarding AP-3.6Q will be submitted to delete TBD/TBV logs, for the reasons noted in paragraph 1.B above. (b) A DAR regarding OCRWM QAP-3-5, Preparation of Technical Documents, will be submitted to add the need of TBD/TBV/TBR logs for requirement documents. The logs will take the form of summary tables that show section numbers and TBD/TBV/TBR entries. No need for schedule or responsibility data will be included. (c) Project level documents for the new MGDS document hierarchy will include TBD/TBV/TBR logs. These documents are the Repository Design Requirements, Site Design and Test Requirements, Engineered Barrier Design Requirements, ESF Design Requirements and Surface Based Test Facility Design Requirements.

**22. Assigned Responsibility**

Action	Individual	Completion
1.A	N/A	
1.B	T. C. Geer	Completed October 30, 1992
1.C	N/A	
1.D (a)	T. C. Geer	Submit DAR by December 15, 1992
1.D (b)	T. C. Geer	Submit DAR recommendation to OCRWM Hq. by December 15, 1992
1.D (c)	T. C. Geer	Complete logs by March 31, 1993

3. Response Approved: W. B. Simecka Date: 11/6/92  
W. B. Simecka

CCB REGISTER REPORT

DOCUMENT NUMBER	DOCUMENT TITLE	REV. NUMBER	CHANGE NUMBER	EFFECTIVE DATE	RESPONSIBLE ORGANIZATION
<b>PCCB - Level 1 - YMPO ACCEPTED</b>					
OE/RW-0043	OCRPM Program Management System Manual	04	DCP-057	07/31/91	PCB
OE/RW-0223	Program Change Control Procedure (PCCP)	04	DCP-037	03/31/92	PCB
OE/RW-0313P	YMP Site Characterization Project Plan	00	DCP-041	01/28/92	PCB
OE/RW-0334	Physical System Requirements - Overall System	00	DCP-044	01/17/92	EDD
OE/RW-0319	Physical System Requirements - Store Waste for SCP Conceptual Design	00	DCP-046	01/17/92	EDD
OE/RW-0253	Program Cost and Schedule Baseline (PCSB)	02	DCP-050	01/14/92	PCB
OE/RW-0335	Interim Approach to MRS Facility Design	00	DCP-051	01/22/92	PCB
OE/RW-0270P	Waste Management System Description (WMSD)	01	DCP-056	02/06/92	EDD
OE/RW-0264	Waste Management System Requirements (WMSR) Vol. 1	02	DCP-056	02/06/92	EDD
OE/RW-0268P	Waste Management System Requirements (WMSR) Vol. IV	02	DCP-056	02/06/92	EDD

Level 2 - CCB Baseline

LOGS EXIST (?)

YMP/CM-0006	Exploratory Shaft Facility Subsystem Design Requirements Document (ESF SDRD) for Title II ***	02	90/023	10/24/90	EDD	NO
YMP/CM-0007	Technical Requirements for the Yucca Mountain Site Characterization Project Surface - Based Testing	07	92/088	06/15/92	EDD	YES
YMP/CM-0008	Yucca Mountain Site Description (Basis for SCP Chapter 8)	00	91/015	04/10/91	RSED	N/A
YMP/CM-0009	Conceptual Design of a Repository (Basis for SCP Chapter 8)	00	91/016	04/10/91	EDD	N/A
YMP/CM-0010	Waste Package Design Basis (Basis for SCP Chapter 8)	00	91/017	04/10/91	EDD	NO

OCB REGISTER REPORT

DOCUMENT NUMBER	DOCUMENT TITLE	REV. NUMBER	CHANGE NUMBER	EFFECTIVE DATE	RESPONSIBLE ORGANIZATION	
Level 2 - OCB Baseline						
YMP/CM-0011	Yucca Mountain Site Characterization Program Baseline	09	92/140	09/12/92	M&O	LOGS EXIST(?) YES
YMP/CM-0015	YMP Cost and Schedule Baseline	03	92/031	02/26/92	PCB	N/A
YMP/CM-0016	Yucca Mountain Site Characterization Project Exploratory Studies Facility - Title I Technical Baseline. **** Vols I and III	00	92/082	06/15/92	EDD	NO
YMP/CM-0017	Yucca Mountain Mined Geologic Disposal System Description*****	01	92/106	07/15/92	EDD	N/A
YMP/CM-0018	Yucca Mountain Mined Geologic Disposal Repository Design Requirements*****	00	92/105	07/15/92	EDD	NO
YMP/CM-0019	Yucca Mountain MGDS Exploratory Studies Facility Design Requirements*****	01	92/103	07/15/92	EDD	YES
YMP/CM-0020	Yucca Mountain MGDS System Requirements Document*****	01	92/132	09/21/92	EDD	NO
<i>OCB Controlled</i>						
<del>YMP/CC-0001</del>	<del>Work Breakdown Structure, Index and Dictionary - Annex II to the Project Management Plan *</del>	<del>N/A</del>	<del>93/033</del>	<del>10/28/92</del>	<del>M&amp;O</del>	
<del>YMP/CC-0002</del>	<del>Reference Information Base, Version 4.000</del>	<del>06</del>	<del>92/079</del>	<del>07/09/92</del>	<del>RSED</del>	
<del>YMP/CC-0004</del>	<del>Yucca Mountain Project Quality Assurance Level Assignment (QALA) Records</del>	<del>02</del>	<del>00</del>	<del>06/21/89</del>	<del>RSED</del>	
<del>YMP/CC-0006</del>	<del>Environmental Management Plan</del>	<del>00</del>	<del>91/027</del>	<del>01/18/91</del>	<del>P&amp;OCD</del>	
<del>YMP/CC-0007</del>	<del>Systems Engineering Management Plan</del>	<del>03</del>	<del>91/042</del>	<del>04/10/91</del>	<del>EDD</del>	



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

WBS 1.2.11  
QA: N/A

DEC 11 1992

Carl P. Gertz, Project Manager, YMP, NV

EVALUATION OF RESPONSES TO CORRECTIVE ACTION REQUESTS (CAR) YM-93-001, YM-93-002, AND YM-93-003 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION (YMQAD) AUDIT YMP-92-24

Reference: Ltr, Spence to Gertz, dtd 11/20/92

This letter supersedes the referenced letter.

The YMQAD staff has evaluated the responses to CARs YM-93-001 through YM-93-003. The responses have been determined to be unsatisfactory for the following reasons:

1.0 Corrective Action Response for CAR YM-93-001

- B. First line - Need to explain why investigations were made since July 1991 (i.e., explain the significance of that date).

Second sentence - Since there were only 15 Field Change Requests (FCR) identified, they should be specifically identified with a status matrix of each and this should be included in this CAR.

Next to last sentence - Need to clarify the difference between urgent and minor. Urgent FCRs do not necessarily waiver the requirement for a technical evaluation.

- D. This section should state that the FCRs identified in Section B above will be technically evaluated. Copies of these evaluations shall be completed and maintained with the corresponding FCR. An impact of those implemented FCRs that had no technical evaluation will also be performed. If impacts exist, the extent and disposition of these impacts shall be identified in this CAR.

1.0 Corrective Action Response for CAR YM-93-002

- A. At the end of this paragraph, a statement should be made to provide an attachment to this CAR to show this action has been or will be completed.
- D. Fourth line, delete the phrase starting with the word "submits . . . baseline," and insert, "notifies the CCB in writing of document acceptance, (d) CCB updates the technical baseline. Also, in the old (d), delete the phrase "After CCB approval" and make the rest of the statement item (e).

DEC 11 1992

Note: The CCB should not be accepting technical documents. Its function is to update the technical baseline after acceptance by the Yucca Mountain Site Characterization Project Engineering & Development Division.

1.0 Corrective Action Response for CAR YM-93-003

- D. (b) A statement should be added to take into consideration what to do in case the Office of Civilian Radioactive Waste Management does not agree.

The next to last sentence should be clarified as to where will schedule information be officially shown (proceduralized).

Amended responses are required to be submitted to this office within ten working days of the date of this letter. Send the original of your responses to Nita J. Brogan, Science Applications International Corporation, Las Vegas, Nevada. If an extension to the due date is necessary, it must be requested in writing, with appropriate justification, prior to that date.

If you have any questions, please contact either Robert B. Constable at 794-7945 or Sam H. Horton at 794-7399.



Richard E. Spence, Director  
Yucca Mountain Quality Assurance Division

YMQAD:RBC-1326

Enclosures:

1. CAR YM-93-001
2. CAR YM-93-002
3. CAR YM-93-003

cc w/encls:

K. R. Hooks, NRC, Washington, DC  
S. W. Zimmerman, NWPO, Carson City, NV  
S. D. Johnson, PSDO/REECO, Las Vegas, NV  
J. W. Estella, SAIC, Las Vegas, NV  
J. H. Rusk, MACTEC, Las Vegas, NV  
A. V. Gil, YMP, NV  
B. J. Verna, YMP, NV

cc w/o encls:

J. W. Gilray, NRC, Las Vegas, NV  
~~N. J. Brogan, SAIC, Las Vegas, NV~~  
S. H. Horton, SAIC, Las Vegas, NV

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

CAR NO. YMP-93-003  
DATE: 12/15/92  
PAGE: 1 OF 4  
QA

**CORRECTIVE ACTION REQUEST (Continuation Page)**

1. Corrective Action Response for CAR # YM-93-003

A. Remedial Action

No remedial action is to be taken regarding the requirements documents in the current document hierarchy. These documents are shown in Attachment 1 (an annotated version of the CCB Register Report) under the "Level 2-CCB Baseline" portion of the Report. The annotations indicate applicability and status of logs. Five of the annotated documents do not include the TBD/TBV logs: ESF Subsystem Design Requirements Document, Waste Package Design Basis, SCP Exploratory Studies Facility-Vols I & III, Mined Geologic Disposal Respository Design Requirements and MGDS System Requirements. These five documents will be superceded by others currently in preparation for the new MGDS document hierarchy, as noted below in Paragraph D. The new OCRWM Document Hierarchy of requirements documents at the program and project levels have notations throughout the document indicating data that is of TBD nature. Based on notations within these documents, the requirement for these documents to have TBD logs should not be required.

B. Investigative Action

Investigation has shown that 5 of the 8 documents of a requirements or configuration data nature noted in Attachment 1 do not include the TBD/TBV logs. The status is annotated on the right hand margin of Attachment 1. The need for TBD/TBV logs is not specified in an existing procedure that pertains to document preparation such as OCRWM QAP 3.5 procedure, Technical Document Preparation. The requirement for logs should be stated in this procedure for preparing technical documents, and the responsibility for updating and maintenance of the log should be assigned to the document custodian. The need for TBD/TBV data in design documents such as drawings and design specification is addressed in the design input process to reflect flow-down from the respective requirements documents or conditions of submittal of design documents into the YMP technical baseline.

*Lts dcl 12/21/92 - EDD: BDH-1552*

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

CAR NO.	YMP-93-003
DATE:	12/15/92
PAGE:	2 OF 4
	QA

**CORRECTIVE ACTION REQUEST (Continuation Page)**

CAR# YM-93-003 (continuation)

**C. Root Cause Determination**

Not Applicable

**D. Corrective Action to Preclude Recurrence**

The corrective action is in three parts: (a) A DAR regarding AP-3.6Q will be submitted to delete TBD/TBV logs, for the reasons noted in paragraphs 1.A and 1.B above. (b) A DAR regarding OCRWM QAP-3-5, Preparation of Technical Documents, will be submitted to add the need of TBD/TBV/TBR logs for OCRWM requirement documents. The logs will take the form of summary tables that show section numbers and TBD/TBV/TBR entries. Since these are requirements documents and TBD/TBV/THR data will be annotated in the body of the requirements document, the schedule or responsibility data is not necessary. (c) Project level documents for the new MGDS document hierarchy will include TBD/TBV/TBR log, whether the DAR of paragraph (b) herein is approved or rejected. These documents are the Repository Design Requirements, Site Design and Test Requirements, Engineered Barrier Design Requirements, ESF Design Requirements and Surface Based Test Facility Design Requirements.

**2. Assigned Responsibility**

Action	Individual	Completion
1.A	N/A	
1.B	T. C. Geer	Completed October 30, 1992
1.C	N/A	
1.D (a)	T. C. Geer	Submit DAR by January 15, 1993
1.D (b)	T. C. Geer	Submit DAR recommendation to OCRWM Hq. by January 15, 1993
1.D (c)	T. C. Geer	Complete logs by March 31, 1993

3. Response Approved: WBSimecka Date: 12/15/92  
W. B. Simecka

anges Thru 04-Nov-1992

## OCB REGISTER REPORT

DOCUMENT NUMBER	DOCUMENT TITLE	REV. NUMBER	CHANGE NUMBER	EFFECTIVE DATE	RESPONSIBLE ORGANIZATION
<b>FOCB - Level 1 - INFO ACCEPTED</b>					
FE/RM-0043	OCFOM Program Management System Manual	04	DCP-037	07/31/91	PCB
FE/RM-0223	Program Change Control Procedure (PCCP)	04	DCP-037	03/31/92	PCB
FE/RM-0313P	YMP Site Characterization Project Plan	00	DCP-041	01/28/92	PCB
FE/RM-0334	Physical System Requirements - Overall System	00	DCP-044	01/17/92	EDO
FE/RM-0319	Physical System Requirements - Store Waste for SCP Conceptual Design	00	DCP-046	01/17/92	EDO
FE/RM-0253	Program Cost and Schedule Baseline (PCSB)	02	DCP-050	01/14/92	PCB
FE/RM-0335	Interim Approach to MRS Facility Design	00	DCP-051	01/22/92	PCB
FE/RM-0270P	Waste Management System Description (WMSD)	01	DCP-056	02/06/92	EDO
FE/RM-0264	Waste Management System Requirements (WMSR) Vol. 1	02	DCP-056	02/06/92	EDO
FE/RM-0268P	Waste Management System Requirements (WMSR) Vol. IV	02	DCP-056	02/06/92	EDO

**Level 2 - OCB Baseline****LOGS EXIST (?)**

MP/CM-0006	Exploratory Shaft Facility Subsystem Design Requirements Document (ESF SDRD) for Title II ***	02	90/023	10/24/90	EDO	NO
MP/CM-0007	Technical Requirements for the Yuoca Mountain Site Characterization Project Surface - Based Testing	07	92/088	06/15/92	EDO	YES
MP/CM-0008	Yuoca Mountain Site Description (Basis for SCP Chapter 8)	00	91/015	04/10/91	RSED	N/A
MP/CM-0009	Conceptual Design of a Repository (Basis for SCP Chapter 8)	00	91/016	04/10/91	EDO	N/A
MP/CM-0010	Waste Package Design Basis (Basis for SCP Chapter 8)	00	91/017	04/10/91	EDO	NO

Changes Thru 04-Nov-1992

Attachment I  
CAR YM 93-003

Page 2 of 2

## OCB REGISTER REPORT

DOCUMENT NUMBER	DOCUMENT TITLE	REV. NUMBER	CHANGE NUMBER	EFFECTIVE DATE	RESPONSIBLE ORGANIZATION	
<u>Level 2 - OCB Baseline</u>						<u>LOGS EXIST (?)</u>
YMP/CM-0011	Yucca Mountain Site Characterization Program Baseline	09	92/140	09/12/92	M&O	YES
YMP/CM-0015	YMP Cost and Schedule Baseline	03	92/031	02/26/92	PCB	N/A
YMP/CM-0016	Yucca Mountain Site Characterization Project Exploratory Studies Facility - Title I Technical Baseline. **** Vols I and III	00	92/082	06/15/92	EDD	NO
YMP/CM-0017	Yucca Mountain Mined Geologic Disposal System Description*****	01	92/106	07/15/92	EDD	N/A
YMP/CM-0018	Yucca Mountain Mined Geologic Disposal Repository Design Requirements*****	00	92/105	07/15/92	EDD	NO
YMP/CM-0019	Yucca Mountain MGDS Exploratory Studies Facility Design Requirements*****	01	92/103	07/14/92 <sup>22</sup>	EDD	YES
YMP/CM-0020	Yucca Mountain MGDS System Requirements Document*****	01	92/132	09/21/92	EDD	NO
<u>CCB Controlled</u>						
<del>YMP/CC-0001</del>	<del>Work Breakdown Structure, Index and Dictionary - Annex II to the Project Management Plan *</del>	<del>N/A</del>	<del>93/033</del>	<del>10/28/92</del>	<del>M&amp;O</del>	
<del>YMP/CC-0002</del>	<del>Reference Information Base, Version 4.000</del>	<del>06</del>	<del>92/079</del>	<del>07/09/92</del>	<del>RSED</del>	
<del>YMP/CC-0004</del>	<del>Yucca Mountain Project Quality Assurance Level Assignments (QALA) Records</del>	<del>02</del>	<del>00</del>	<del>06/21/89</del>	<del>RSED</del>	
<del>YMP/CC-0006</del>	<del>Environmental Management Plan</del>	<del>00</del>	<del>91/027</del>	<del>01/18/91</del>	<del>P&amp;OCD</del>	
<del>YMP/CC-0007</del>	<del>Systems Engineering Management Plan</del>	<del>03</del>	<del>91/042</del>	<del>04/10/91</del>	<del>EDD</del>	



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WBS 1.2.11  
QA: N/A

JAN 0 5 1993

Carl P. Gertz, Project Manager, YMP, NV

EVALUATION OF RESPONSE TO CORRECTIVE ACTION REQUEST (CAR) YM-93-003 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION (YMQAD) AUDIT YMP-92-24

The YMQAD staff has evaluated the response to CAR YM-93-003. The response has been determined to be unsatisfactory because in Section D, "Corrective Action to Preclude Recurrence," the proposed corrective action is to revise Office of Civilian Radioactive Waste Management (OCRWM) procedure Quality Assurance Procedure (QAP) 3-5, to add the need for To Be Determined/To Be Verified/To Be Resolved (TBD/TBV/TBR) logs for OCRWM requirements documents. However, QAP 3-5 is internal to OCRWM and is not applicable to the design organizations that are required to identify TBD/TBV/TBR data in design documents generated by them. The corrective action for this CAR should also address how the design organizations (Raytheon Services Nevada and Management and Operating Contractor) will identify TBD/TBV/TBR data under their program. This may be accomplished by having the Yucca Mountain Site Characterization Project Office direct the design organizations to ensure that controls for the identification of TBD/TBV/TBR data be included in their applicable procedures.

An amended response is required to be submitted to this office within ten working days of the date of this letter. Send the original of your response to Nita J. Brogan, Science Applications International Corporation, Las Vegas, Nevada. If an extension to the due date is necessary, it must be requested in writing, with appropriate justification, prior to that date.

If you have any questions, please contact either Robert B. Constable at 794-7945 or Sam H. Horton at 794-7399.

Richard E. Spence, Director  
Yucca Mountain Quality Assurance Division

YMQAD:RBC-1744

Enclosure:  
CAR YM-93-003

cc w/encl:  
K. R. Hooks, NRC, Washington, DC  
S. W. Zimmerman, NWPO, Carson City, NV  
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R. L. Maudlin, MACTEC, Las Vegas, NV  
A. V. Gil, YMP, NV  
B. J. Verna, YMP, NV

JAN 0 5 1993

Carl P. Gertz

-2-

cc w/o encl:

J. W. Gilray, NRC, Las Vegas, NV

N. J. Brogan, SAIC, Las Vegas, NV

S. H. Horton, SAIC, Las Vegas, NV

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

CAR NO. YM-93-003

DATE:

PAGE: 1 of 3

QA

**CORRECTIVE ACTION REQUEST (Continuation Page)**

1. Corrective Action Response for CAR # YM-93-003

A. Remedial Action

No remedial action is to be taken regarding the requirements documents in the current document hierarchy. These documents are shown in Attachment 1 (an annotated version of the CCB Register Report) under the "Level 2-CCB Baseline" portion of the Report. The annotations indicate applicability and status of logs. Five of the annotated documents do not include the TBD/TBV logs: ESF Subsystem Design Requirements Document, Waste Package Design Basis, SCP Exploratory Studies Facility-Vols I & III, Mined Geologic Disposal Repository Design Requirements and MGDS System Requirements. These five documents will be superseded by others currently in preparation for the new MGDS document hierarchy, as noted below in Paragraph D. The new OCRWM Document Hierarchy of requirements documents at the Program and Project levels have notations throughout the document indicating data that is of TBD nature.

B. Investigative Action

Investigation has shown that 5 of the 8 documents of a requirements or configuration data nature noted in Attachment 1 do not include the TBD/TBV logs. The status is annotated on the right hand margin of Attachment 1. The need for TBD/TBV logs is not specified in an existing document that pertains to technical document preparation such as OCRWM QAP 3.5 procedure, Technical Document Preparation. The requirement for logs should be stated in this procedure for preparing technical documents, and the responsibility for updating and maintenance of the log should be assigned to the document custodian. The need for TBD/TBV data in design documents such as drawings and design specification should apply to the design input process to reflect a flow-down from the respective Project level requirements documents.

*ltr. dtd. 4/19/93 - EPD:BDH-2046*

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C. Root Cause Determination

Not Applicable

D. Corrective Action to Preclude Recurrence

The corrective action is in three parts:

(1) A DAR regarding OCRWM procedure QAP 3.5, Preparation of Technical Documents, will be submitted to add the need of TBD/TBV logs for OCRWM requirement documents. The logs will take the form of summary tables that show section numbers and TBD/TBV entries. Since these are requirements documents and TBD/TBV data will be annotated in the body of the requirements document, the schedule or responsibility data is not necessary.

(2) Project level requirements documents for the new MGDS document hierarchy will include TBD/TBV data, whether the DAR noted above is approved or rejected. Project level requirements documents will also specify that design organizations incorporate the requirements for control of TBD/TBV data in their design process. The Project level documents are the Repository Design Requirements, Site Design and Test requirements, Engineered Barrier Design Requirements, ESF Design Requirements and Surface Based Test Facility Design Requirements.

(3,a) A DAR regarding AP-3.6Q will be submitted to revise paragraph 5.1.3, Requirements Traceability Identification, to delete the requirement of organizational responsibility and schedule resolution data. (3,b) After the above Project level documents have incorporated TBD/TBV data and are approved, another DAR regarding AP-3.6Q will be submitted to: delete reference to TBD/TBV logs for the reasons noted in paragraph 1.B; and clarify that the existence of such logs is verified in the CM process as complying with the Project level requirements noted in (1) above, but that TBD/TBV data is maintained by the document custodian.

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2. Assigned Responsibility

Action	Individual	Completion
1.A	N/A	
1.B	T. C. Geer	Completed October 30, 1992
1.C	N/A	
1.D (1)	T. C. Geer	Submit DAR recommendation to OCRWM by February 28, 1993
1.D (2)	T. C. Geer	Complete by April 30, 1993
1.D (3,a)	B. G. Cruz	Submit DAR by Feb 28, 1993
1.D (3,b)	B. G. Cruz	Submit DAR by May 31, 1993

3. Response Approved: W.B. Simecka Date: 1/19/93  
W. B. Simecka

OCB REGISTER REPORT

ELEMENT NUMBER	DOCUMENT TITLE	REV. NUMBER	CHANGE NUMBER	EFFECTIVE DATE	RESPONSIBLE ORGANIZATION	
<b>FOCB - Level 1 - YMFO ACCEPTED</b>						
<del>E/RM-0043</del>	<del>OCROM Program Management System Manual</del>	<del>04</del>	<del>DCP-037</del>	<del>07/31/91</del>	<del>FCB</del>	
<del>E/RM-0223</del>	<del>Program Change Control Procedure (PCCP)</del>	<del>04</del>	<del>DCP-037</del>	<del>03/31/92</del>	<del>FCB</del>	
<del>E/RM-0313P</del>	<del>YMF Site Characterization Project Plan</del>	<del>00</del>	<del>DCP-041</del>	<del>01/28/92</del>	<del>FCB</del>	
<del>E/RM-0334</del>	<del>Physical System Requirements - Overall System</del>	<del>00</del>	<del>DCP-044</del>	<del>01/17/92</del>	<del>EDO</del>	
<del>E/RM-0319</del>	<del>Physical System Requirements - Store Waste for SCP Conceptual Design</del>	<del>00</del>	<del>DCP-046</del>	<del>01/17/92</del>	<del>EDO</del>	
<del>E/RM-0253</del>	<del>Program Cost and Schedule Baseline (PCSB)</del>	<del>02</del>	<del>DCP-050</del>	<del>01/14/92</del>	<del>FCB</del>	
<del>E/RM-0335</del>	<del>Interim Approach to MRS Facility Design</del>	<del>00</del>	<del>DCP-051</del>	<del>01/22/92</del>	<del>FCB</del>	
<del>E/RM-0270P</del>	<del>Waste Management System Description (WMSD)</del>	<del>01</del>	<del>DCP-056</del>	<del>02/06/92</del>	<del>EDO</del>	
<del>E/RM-0264</del>	<del>Waste Management System Requirements (WMSR) Vol. 1</del>	<del>02</del>	<del>DCP-056</del>	<del>02/06/92</del>	<del>EDO</del>	
<del>E/RM-0268P</del>	<del>Waste Management System Requirements (WMSR) Vol. IV</del>	<del>02</del>	<del>DCP-056</del>	<del>02/06/92</del>	<del>EDO</del>	
<b>Level 2 - OCB Baseline</b>						
MP/CM-0006	Exploratory Shaft Facility Subsystem Design Requirements Document (ESF SORD) for Title II ***	02	90/023	10/24/90	EDO	<u>LOGS EXIST:</u> NO
MP/CM-0007	Technical Requirements for the Yuoca Mountain Site Characterization Project Surface - Based Testing	07	92/088	06/15/92	EDO	YES
MP/CM-0008	Yuoca Mountain Site Description (Basis for SCP Chapter 8)	00	91/015	04/10/91	RSED	N/A
MP/CM-0009	Conceptual Design of a Repository (Basis for SCP Chapter 8)	00	91/016	04/10/91	EDO	N/A
MP/CM-0010	Waste Package Design Basis (Basis for SCP Chapter 8)	00	91/017	04/10/91	EDO	NO

OCB REGISTER REPORT

DOCUMENT NUMBER	DOCUMENT TITLE	REV. NUMBER	CHANGE NUMBER	EFFECTIVE DATE	RESPONSIBLE ORGANIZATION	
Level 2 - OCB Baseline						<u>LOGS EXIST(?)</u>
MP/CH-0011	Yucca Mountain Site Characterization Program Baseline	09	92/140	09/12/92	M&O	YES
MP/CH-0015	MP Cost and Schedule Baseline	03	92/031	02/26/92	PCB	N/A
MP/CH-0016	Yucca Mountain Site Characterization Project Exploratory Studies Facility - Title I Technical Baseline. **** Vols I and III	00	92/082	06/15/92	EDO	NO
MP/CH-0017	Yucca Mountain Mined Geologic Disposal System Description*****	01	92/106	07/15/92	EDO	N/A
MP/CH-0018	Yucca Mountain Mined Geologic Disposal Repository Design Requirements*****	00	92/105	07/15/92	EDO	NO
MP/CH-0019	Yucca Mountain MGDS Exploratory Studies Facility Design Requirements*****	01	92/103	07/16/92	EDO	YES
MP/CH-0020	Yucca Mountain MGDS System Requirements Document*****	01	92/132	09/21/92	EDO	NO
<u>CCB Controlled</u>						
<del>MP/CC-0001</del>	<del>Work Breakdown Structure, Index and Dictionary - Annex II to the Project Management Plan *</del>	<del>N/A</del>	<del>93/033</del>	<del>10/28/92</del>	<del>M&amp;O</del>	
<del>MP/CC-0002</del>	<del>Reference Information Base, Version 4.000</del>	<del>06</del>	<del>92/079</del>	<del>07/09/92</del>	<del>RSED</del>	
<del>MP/CC-0004</del>	<del>Yucca Mountain Project Quality Assurance Level Assignment (QALA) Records</del>	<del>02</del>	<del>00</del>	<del>06/21/89</del>	<del>RSED</del>	
<del>MP/CC-0006</del>	<del>Environmental Management Plan</del>	<del>00</del>	<del>91/027</del>	<del>01/18/91</del>	<del>P&amp;OCD</del>	
<del>MP/CC-0007</del>	<del>Systems Engineering Management Plan</del>	<del>03</del>	<del>91/042</del>	<del>04/10/91</del>	<del>EDO</del>	