



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

DEC 28 1994

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

VERIFICATION OF CORRECTIVE ACTION AND CLOSURE OF CORRECTIVE ACTION REQUEST (CAR) YM-94-068 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION'S (YMQAD) AUDIT YMP-94-01 OF THE CIVILIAN RADIOACTIVE WASTE MANAGEMENT SYSTEM MANAGEMENT AND OPERATING CONTRACTOR (SCPB: N/A)

The YMQAD staff has verified the corrective action to CAR YM-94-068 and determined the results to be satisfactory. As a result, the CAR is considered closed.

If you have any questions, please contact either Robert B. Constable at 794-7945 or Robert L. Howard at 794-7820.

Richard E. Spence, Director
Yucca Mountain Quality Assurance Division

YMQAD:RBC-1525

Enclosure:
CAR YM-94-068

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

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

YMP-5

9501040184 941228
PDR WASTE
WM-11 PDR

102.7
WM-11
MHD3

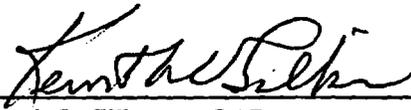
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CORRECTIVE ACTION REQUEST (CONTINUATION PAGE)

VERIFICATION OF REMEDIAL ACTION FOR DESIGN PACKAGE 2C CAR YM-94-068

On 9/15/94, corrective actions were verified to have been implemented for CAR YM-94-068 relative to Phase I of Design Package 2C by K. O. Gilkerson (Senior QA Specialist for QATSS). The information in WIE BAB00000-01717-2200-00004 necessary to support Determination of Importance Evaluations for Design Package 2C was removed and incorporated in Revision 3 of BABE00000-01717-2200-00007 in accordance with M&O procedures. Both the Phase I DIE and this WIE were examined to determine that these changes had occurred. Albin Brandstetter, Srikanta Mishra, and Jean Younger (Performance Assurance) and Peter Hastings (Systems Engineering) were contacted during this verification assessment. The documents reviewed are found in the Phase I 2C Design Package and were also reviewed during the YMQAD QAP 6.2 review. The remedial action for Phase II & III requires the WIE BAB00000-1717-2200-00004 will be reissued as a technical report by 10/31/94 per QAP-3-5 which will be verified at that time.



Kenneth O. Gilkerson, QAR

9/22/94

Date

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CORRECTIVE ACTION REQUEST (CONTINUATION PAGE)

1. Corrective Action Response for CAR YM-94-068

A. Remedial: There was no request for a WIE on the topic of this document and should not have been issued as a WIE. Because we no longer anticipate the need for a separate QA document on this subject, the proposed remedial action is to withdraw the document. Information concerning the relative effects of drill and blast versus TBM excavation needed for Package 2C has been included as part of a revised WIE (DI:BABE00000-01717-2200-00007 Rev. 03) submitted in the revised design package.

B. Extent of Deficiency:

1. The deficiency is isolated to the document identified in the CAR. This document is the only WIE that has been prepared at the M&O Vienna office and was unusually long in its preparation in comparison with all other WIEs.
2. No other technical documents related to 2C have been found to be non-compliant with QAP-3-5.
3. Because the existing QAP-3-5 procedures were not followed, the adequacy of the document preparation and review are in question.
4. Training for the individuals signing the document were not up-to-date for the existing QAP-3-5.
5. This document was transmitted per QAP-3-12 to the Determination of Importance Group for inclusion in Design Package 2C and to the Local Records Center per QAP-17-1. There have been no other QA transmittals of this document.

C. Preclude Recurrence: Training, with emphasis on training maintenance. QAP-3-5 was revised, effective 3/11/94, and classroom training was provided. Classroom training will be verified for all Regulatory and Technical Evaluation Staff prior to assignment to prepare a technical document per QAP-3-5, and if missing, classroom training will be provided.

D. Root Cause Determination: This document had been prepared over a long period, having been initiated in 1991 and completed in February, 1994. The majority of the work on the document was complete by September 1993 when QAP-3-5 Rev. 02 was still in effect. The document preparation followed this procedure, which then went through two revisions and some procedure change notices between October, 1993 and February, 1994. We were deficient in checking the final document against existing procedures when issued.

2. Response Actions

Withdraw document.

Responsible: Frank C. Tsai

Anticipated Completion: October 31, 1994 [Note: Information concerning the relative effects of drill and blast versus TBM excavation needed for Package 2C has been included as part of a revised WIE (DI:BABE00000-01717-2200-00007 Rev. 03) submitted in the revised design package.]

3. Response Approved:

Jean L. Younker
Regulatory and Technical Evaluation Manager

Date: 10-24-94

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CORRECTIVE ACTION REQUEST

1 Controlling Document OCRWM QARD, DOE/RW-0333P, Revision 01	2 Related Report No. YMP-94-01
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3 Responsible Organization M&O	4 Discussed With F. Tsai/J. Houseworth
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5 Requirement:
QARD, Section 5.2 states: "Work shall be performed according to controlled implementing documents."

6 Adverse Condition:
There is no objective evidence that Waste Isolation Evaluation Comparing Drill and Blast with Mechanical Excavation Techniques, Document ID #EAB000000-01717-2200-00004, approved 3/9/94, was prepared, reviewed or approved in accordance with specified procedures.

9 Does a Significant Condition Adverse to Quality exist? Yes ___ No <u>X</u> If Yes, Check One: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E	10 Does a stop work condition exist? Yes ___ No <u>X</u> ; If Yes - Attach copy of SWO If Yes, Check One: <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C	3 Response Due Date: 20 Working Days From Issuance
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11 Required Actions: Remedial Extent of Deficiency Preclude Recurrence Root Cause Determination

12 Recommended Actions:

7 Initiator Robert L. Howard <i>Robert Howard</i> 8/3/94	14 Issuance Approved by: QADD <i>Robert Howard</i> Date 8.5.94
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15 Response Accepted QAR <i>Robert Howard</i> Date 8/17/94	16 Response Accepted QADD <i>Robert Howard</i> Date 8.26.94
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17 Amended Response Accepted QAR <i>Robert Howard</i> Date 11/08/94	18 Amended Response Accepted QADD <i>Robert Howard</i> Date 11.10.94
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19 Corrective Actions Verified QAR <i>Robert Howard</i> Date 12/22/94	20 Closure Approved by: QADD <i>Robert Howard</i> Date 12/28/94
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CORRECTIVE ACTION REQUEST (CONTINUATION PAGE)

1. Corrective Action Response for CAR YM-94-068

A. Remedial: Re-issue revised version compliant with existing QAP-3-5 procedures as a general technical report, not a Waste Isolation Evaluation (WIE). There was no request for a WIE on the topic of this document. It should not have been issued as a WIE.

B. Extent of Deficiency:

1. The deficiency is isolated to the document identified in the CAR. This document is the only WIE that has been prepared at the M&O Vienna office and was unusually long in its preparation in comparison with all other WIEs.
2. No other technical documents related to 2C have been found to be non-compliant with QAP-3-5.
3. Because the existing QAP-3-5 procedures were not followed, the adequacy of the document preparation and review are in question.
4. Training for the individuals signing the document were not up-to-date for the existing QAP-3-5.
5. This document was transmitted per QAP-3-12 to the Determination of Importance Group for inclusion in Design Package 2C and to the Local Records Center per QAP-17-1. There have been no other QA transmittals of this document.

C. Preclude Recurrence: Training, with emphasis on training maintenance. QAP-3-5 was revised, effective 3/11/94, and classroom training was provided. Classroom training will be verified for all Regulatory and Technical Evaluation Staff prior to assignment to prepare a technical document per QAP-3-5, and if missing, classroom training will be provided.

D. Root Cause Determination: This document had been prepared over a long period, having been initiated in 1991 and completed in February, 1994. The majority of the work on the document was complete by September 1993 when QAP-3-5 Rev. 02 was still in effect. The document preparation followed this procedure, which then went through two revisions and some procedure change notices between October, 1993 and February, 1994. We were deficient in checking the final document against existing procedures when issued.

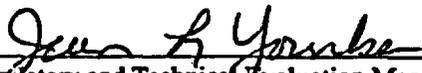
2. Response Actions

Revise document according to applicable QAP-3-5 procedures, not as a WIE.

Responsible: Frank C. Tsai

Anticipated Completion: October 31, 1994 [Note: This revised document will not be included in the revised Design Package 2C, but the information contained this document that is needed for Package 2C will be included as part of the revised WIEs to be submitted in the revised design package.]

3. Response Approved:


Regulatory and Technical Evaluation Manager

Date: 8-16-94

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CORRECTIVE ACTION REQUEST (CONTINUATION PAGE)

VERIFICATION OF CORRECTIVE ACTION YM-94-068

The amended response commitment dated 10/24/94 was to withdraw the Waste Isolation Evaluation (WIE) Comparing Drill and Blast with Mechanical Excavation Techniques, Document ID #BAB000000-01717-2200-00004. YMQAD staff reviewed M&O QAP-3-12 Design Input Transmittal from Robert Andrews to Peter Hastings dated 10/26/94. The transmittal identifies the WIE Comparing Drill and Blast With Mechanical Excavation Techniques DI# BAB000000-01717-2200-00004 Rev 00 as not suitable for design input. YMQAD staff interviewed Peter Hastings and confirmed that the document was no longer being used as design input. (See also CAR YM-94-068 verification statement by Kenneth Gilkerson, dated 9/24/94).

YMQAD staff interviewed James Houseworth (M&O Performance Assessment) and confirmed that no more Waste Isolation Evaluations had been prepared under QAP-3-5 to date.

This action completes the corrective action verification for CAR YM-94-068.


Robert L. Howard, QAR

12/22/94
Date