



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

OCT 19 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

EVALUATION OF AMENDED RESPONSE TO CORRECTIVE ACTION REQUEST (CAR)
 YM-94-052 RESULTING FROM U.S. DEPARTMENT OF ENERGY/HEADQUARTER'S
 QUALITY ASSURANCE DIVISION (HQAD) AUDIT HQ-94-02 OF CIVILIAN
 RADIOACTIVE WASTE MANAGEMENT SYSTEM MANAGEMENT AND OPERATING
 CONTRACTOR (SCPB: N/A)

The YMQAD staff has evaluated the amended response to CAR
 YM-94-052. The amended 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 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 Robert L. Howard at 794-7820.

R.E. Spence

Richard E. Spence, Acting Director
 Yucca Mountain Quality Assurance Division

YMQAD:RBC-355

Enclosure:
 CAR YM-94-052

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

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

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CORRECTIVE ACTION REQUEST

¹ Controlling Document
M&O QAP-3-1, Technical Document Review, Rev. 4 P01

² Related Report No.
HQ-94-02

³ Responsible Organization
CRWMS M&O

⁴ Discussed With
M. DeLeone, F. Arth, J. Cassidy, J. Willis

⁵ Requirement:

Paragraph 5.4.3 requires that the Lead Document Preparer ensures that all responses to mandatory comments have been accepted and that all concurrence signatures for the updated document have been obtained.

Also the Lead Document Preparer must ensure that all DRRs are completed with mandatory comments (initiated and dated or with resolution memorandum attached) and that Block 9 (concurrence with updated document) has been signed and dated. Finally, the Lead Document Preparer must update the records package for the document to reflect the resolutions and submit to LRC.

⁶ Adverse Condition:

The Document Review Record for the Design Verification (Design Review) conducted in relation to Design Package 1B, that was presented to the audit team contains numerous examples of the following:

1. Comment number missing
2. Section/paragraph reference missing
3. Accept/Reject by the reviewer is missing
4. Resolution of the reviewers rejected comment.
5. Indication as to whether or not it is quality affecting, (i.e., yes or no) is missing
6. "Reviewed by" signatures and dates are missing
7. "Response by" signatures and dates are missing

⁹ Does a significant condition adverse to quality exist? Yes x No
If Yes, Circle One: A (B) C D E

¹⁰ Does a stop work condition exist? Yes No x ; If Yes - Attach copy of SWC
If Yes, Circle One: A B C

¹³ Response Due Date:
20 working days
from issuance

¹¹ Required Actions: Remedial Extent of Deficiency Preclude Recurrence Root Cause Determination

¹² Recommended Actions:

1. Review the Documentation Review Record and correct the discrepancies.
2. Determine any potential impact concerning the resolution of comments.
3. Train all responsible personnel in the proper implementation of the procedure.
4. Review all other Design Review packages for the incorporation of all procedural requirements.

⁷ Initiator Richard G. Peck Date 6/30/94	¹⁴ Issuance Approved by: QADD <i>[Signature]</i> Date 7/12/94
¹⁵ Response Accepted QAR Date	¹⁶ Response Accepted QADD Date
¹⁷ Amended Response Accepted QAR <i>[Signature]</i> Date 10/17/94	¹⁸ Amended Response Accepted QADD <i>[Signature]</i> Date 10/19/94
¹⁹ Corrective Actions Verified QAR Date	²⁰ Closure Approved by: QADD Date

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CORRECTIVE ACTION REQUEST (CONTINUATION PAGE)

A. REMEDIAL ACTION:

- Review the Design Verification Document review records for Design Package 1B for all discrepancies and make required corrections.

Responsible Individual: Matthew Gomez
Completion Date: 10/15/94

- Determine any potential impacts to Design Package 1B based in the resolution of comments and make required corrections.

Responsible Individual: Matthew Gomez
Completion Date: 10/15/94

B. EXTENT OF DEFICIENCY:

- Review ESF Surface Design Packages that required design verification for similar discrepancies.

Responsible Individual: Matthew Gomez
Completion Date: 10/15/94

C. ROOT CAUSE DETERMINATION:

- Document Review Records (DRRs) were handled by several individuals during the review process. There was not an individual assigned to ensure that the documents were complete nor that they complied with procedural requirements. In addition, attention to specific procedural requirements by individuals completing the forms was not sufficient despite self-study training.

D. CORRECTIVE ACTION TO PRECLUDE RECURRENCE:

- QAP-3-2 has been revised. Rev 05 does not use QAP-3-1 for performing design verification by design review. The Document Review Record (DRR) has been replaced by the Design Verification Record (DVR). Paragraph 3.6 defines the Design Verification Leader as "The individual assigned to ensure that the design verification is completed in accordance with this procedure. Throughout the procedure the Design Verification leader is given responsibility to initiate/compile/develop/complete various elements of the required forms and documentation in accordance with procedural requirements, and is the focal point for coordinating these documents in the development stage.
- The discrepancies identified will be corrected by the reviewing ESF Surface Design. Extent of Deficiencies and evaluating impact of discrepancies on packages.

8/31/94 LV.MG.PGJ.8/94-234

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CORRECTIVE ACTION REQUEST (CONTINUATION PAGE)

Amended Response

A. REMEDIAL ACTION:

1. Review the Document Review Records (DRRs) for Design Verification of Design Package 1B, for all discrepancies and make required corrections.

Responsible Individual: Matthew Gomez

Completion Date: 11/30/94

2. Determine any potential impacts to Design Package 1B and to any work done to 1B, based on the resolution of comments and make required corrections.

Responsible Individual: Matthew Gomez

Completion Date: 11/30/94

3. Continue investigation to determine the extent of the deficiency as follows:

- Review Design Review DRRs for Design Packages 1C, 2B & 2C on a sheet by sheet basis (100%) for any discrepancies. Determine any potential impacts based on the review, and resolve all resulting discrepancies. Amend CAR response.

Responsible Individual: Matthew Gomez

Completion Date: 11/30/94

- Since no other Design Packages conducted Design Verifications using this QAP-3-2, Rev 4, no further review related to Design Verification is required.

B. EXTENT OF DEFICIENCY:

The DRRs for the Package 1B Design Verification have been reviewed on a sheet by sheet basis to ensure that comments have been resolved and to determine what documentation discrepancies existed. A listing has been generated which includes the DRR comment number, responsible individual, and corrections to be made (Attachment I). It was confirmed that all comments were resolved. The resulting documentation discrepancies found were determined to have no impact on Package 1B nor any work done to 1B.

Neither the Vienna office nor the Charlotte office have conducted Design Verification, and therefore have not utilized QAP-3-2.

The Vienna office has reviewed a sampling of packages which performed reviews using QAP-3-1, Rev. 4. This review did not identify the existence of similar deficiencies with the records. Based upon this sampling, review packages for MRS-SRD Rev.1 and Trans SRD Rev. 1, we conclude that the extent of deficiency does not include Vienna.

The Charlotte office has instituted an administrative control by assigning a Conformance Verification Individual to ensure similar problems do not occur there. Because of this, a separate review at the Charlotte office was not conducted.

Similar investigations will be conducted for Design Review DRRs to further identify the extent of the deficiencies.

10/11/94 LV.MG.PGJ. 10/94-267

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CORRECTIVE ACTION REQUEST (CONTINUATION PAGE)

Amended Response (Continued)

C. ROOT CAUSE DETERMINATION:

1. The Design Verification process was governed by three processes: QAP-3-2, Rev 4; QAP-3-2, Rev 4, ATTACHMENT I; and QAP-3-1, Rev 4. Each of these processes had separate allocations of responsibilities and activities. For Design Package 1B, assignments were made for a Verification Chairperson and a Design Review Secretary per QAP-3-2 and QAP-3-2 ATTACHMENT I respectively. Apparently, there was no assignment made for a Lead Document Preparer (LDP) per QAP-3-1, Rev 4. The Design Review Secretary used QAP-3-1 only as a source of producing DRRs. QAP-3-1 Section 5.4.3 assigns the LDP the activity and responsibility of assuring that the Design Review Records (DRRs) are complete and that the required signatures have been obtained. Neither the Verification Chairperson nor the Design Review Secretary followed QAP-3-1 for completing the forms. Root Cause: The Design Verification was governed by two procedures, and three separate processes. QAP-3-2 was followed, QAP-3-1 was not. Therefore, no LDP assigned and there was no individual directly tracking the status of the DRRs.
2. A contributing cause was that attention to specific procedural requirements by individuals completing the forms was not sufficient despite self-study training.

D. CORRECTIVE ACTION TO PRECLUDE RECURRENCE:

1. The current Design Verification Procedure (QAP-3-2, Rev 5) provides clear responsibility to the Lead Document Preparer to assure that the Design Review Records (DRRs) are complete and that the required signatures have been obtained. The process is now governed by a single procedure, with all activities and responsibilities clearly defined. The Design Verification Leader has the activity of and responsibility for ensuring that the comment sheets (DVRs) are complete and that the required signatures have been obtained. No corrective action related to QAP-3-1 is required.
2. Training briefings were held for all M&O personnel who perform work to QAP-3-1, Rev.5, and QAP-3-2, Rev.5. The training was held in May and June of 1994 and covered the procedural requirements and a practice session for completing the required forms.

No further corrective actions are considered necessary. All remedial actions will be completed by 11/30/94.

PACKAGE 1B DESIGN VERIFICATION
DRR CORRECTIONS
CIVIL

<u>Comment #</u>	<u>Req'd By</u>	<u>Correction</u>
0-005	R. Clark	Strike-out, initial & date "disagree" comment
0-008	R. Clark	Strike-out, initial & date "disagree" comment
0-014	R. Clark	Strike-out, initial & date "disagree" comment
0-015	R. Clark	Strike-out, initial & date "disagree" comment
0-016	R. Clark	Strike-out, initial & date "disagree" comment
0-021	R. Clark	Strike-out, initial & date "disagree" comment
0-023	R. Clark	Strike-out, initial & date "disagree" comment
0-024	R. Clark	Strike-out, initial & date "disagree" comment
0-026	R. Clark	Strike-out, initial & date "disagree" comment
0-029	R. Clark	Strike-out, initial & date "disagree" comment
0-030	R. Clark	Strike-out, initial & date "disagree" comment <i>MD 9/30/94</i>
0-031	R. Clark	Strike-out, initial & date "disagree" comment
0-033	A. Pakzad	Date strike-out over "Rejected"
0-034	R. Clark A. Pakzad	Strike-out, initial & date "disagree" comment Strike-out, initial & date "Rejected". Accept & initial final response.
0-038	A. Pakzad	Accept & initial
0-040	A. Pakzad	Accept & initial
0-041	A. Pakzad	Sign & date at bottom
0-042	A. Pakzad	Sign & date at bottom
0-043	A. Pakzad	Accept & initial

PACKAGE 1B DESIGN VERIFICATION
DRR CORRECTIONS
CIVIL

<u>Comment #</u>	<u>Req'd By</u>	<u>Correction</u>
0-044	A. Pakzad	Accept & initial
0-045	A. Pakzad	Accept & initial
0-046	A. Pakzad	Accept & initial
0-048	A. Pakzad	Accept & initial
0-049	A. Pakzad	Accept & initial
0-050	A. Pakzad	Accept & initial
0-057	A. Pakzad	Sign & date at bottom
0-063	A. Pakzad R. Clark	Sign & date at bottom. Accept & initial Sign & date at bottom
0-071	A. Pakzad	Accept & initial
0-084	A. Pakzad	Accept & initial
0-087	A. Pakzad	Accept & initial
0-088	A. Pakzad	Accept & initial
0-089	A. Pakzad	Accept & initial
0-090	A. Pakzad	Accept & initial
0-091	A. Pakzad	Accept & initial
0-092	A. Pakzad	Accept & initial
0-093	A. Pakzad	Accept & initial
0-094	A. Pakzad	Accept & initial
0-095	A. Pakzad	Accept & initial
0-096	A. Pakzad	Accept & initial

PACKAGE 1B DESIGN VERIFICATION
DRR CORRECTIONS
CIVIL

<u>Comment #</u>	<u>Req'd By</u>	<u>Correction</u>
0-097	A. Pakzad	Accept & initial
0-098	A. Pakzad	Accept & initial
0-099	A. Pakzad	Accept & initial
0-100	A. Pakzad	Accept & initial
0-101	A. Pakzad	Sign & date at bottom
0-102	A. Pakzad	Accept & initial
0-103	A. Pakzad	Accept & initial
0-104	A. Pakzad	Sign & date at bottom
0-105	A. Pakzad	Accept & initial

PACKAGE 1B DESIGN VERIFICATION
DRR CORRECTIONS
STRUCTURAL

<u>Comment #</u>	<u>Req'd By</u>	<u>Correction</u>
1-007	L. Engwall	Sign & date at bottom

PACKAGE 1B DESIGN VERIFICATION
DRR CORRECTIONS
ARCHITECTURAL

<u>Comment #</u>	<u>Req'd By</u>	<u>Correction</u>
2-005	D. Lumanlan	Sign & date at bottom
2-006	D. Lumanlan	Sign & date at bottom
2-007	D. Lumanlan	Sign & date at bottom
2-011	T. Sauer	Date along side initials
2-013	F. White	Provide response "See attached response page". Sign & date at bottom

PACKAGE 1B DESIGN VERIFICATION
DRR CORRECTIONS
ELECTRICAL

<u>Comment #</u>	<u>Req'd By</u>	<u>Correction</u>
4-004	W. French D. Barreres	Provide response. Sign & date at bottom. Initial acceptance block
4-005	W. French D. Barreres	Provide response. Sign & date at bottom. Initial acceptance block

PACKAGE 1B DESIGN VERIFICATION
DRR CORRECTIONS
MECHANICAL

<u>Comment #</u>	<u>Req'd By</u>	<u>Correction</u>
5-062	N.Rounavaara	Sign & date at bottom
5-063	N.Rounavaara	Sign & date at bottom
5-064	N.Rounavaara	Sign & date at bottom