



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

AUG 22 1994

Larry R. Hayes
 Technical Project Officer
 for Yucca Mountain
 Site Characterization Project
 U.S. Geological Survey
 101 Convention Center Drive
 Suite 860
 Las Vegas, NV 89109

EVALUATION OF RESPONSE TO CORRECTIVE ACTION REQUEST (CAR)
 YM-94-047 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE
 DIVISION (YMQAD) AUDIT YMP-94-06 OF U.S. GEOLOGICAL SURVEY
 (SCP: N/A)

The YMQAD staff has evaluated the response to CAR YM-94-047. 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 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 Charles C. Warren at 794-7248.

Richard E. Spence, Director
 Yucca Mountain Quality Assurance Division

YMQAD:RBC-4760

Enclosure:
 CAR YM-94-047

cc w/encl:

- ~~S. D. Johnson~~, NRC, Washington, DC
- S. W. Zimmerman, NWPO, Carson City, NV
- T. H. Chaney, USGS, Denver, CO
- R. W. Craig, USGS, Las Vegas, NV
- D. D. Porter, SAIC, Golden, CO

cc w/o encl:

- W. L. Belke, NRC, Las Vegas, NV
- D. G. Sult, YMQAD/QATSS, Las Vegas, NV

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

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CORRECTIVE ACTION REQUEST

1 Controlling Document QARD, Rev. 0		2 Related Report No. YMP-94-06	
3 Responsible Organization USGS		4 Discussed With T. CHANEY	
5 Requirement: DOE/RW/0333P QARD, Section 2.2.9c, states for Document Review: "The review shall be performed by individuals other than the originator." QARD Section 2.2.9f states: "Mandatory comments resulting from the review shall be documented and resolved before approving the document." QARD Supplement III, Section III 2.2.4 states: "The reviewer shall be independent from the collector."			
6 Adverse Condition: 1. Contrary to the QARD Requirements, QMP-3.04 does not require review comment resolution with the independent technical reviewer. QMP-3.04, para. 5.4.3.2 and 5.4.4.4 requires the YMPB Program Chief to resolve comments. The YMPB Program Chief responsibilities of directing the work defeats the independence of the review. 2. Contrary to QARD an independent data review was not performed for Geologic Data DTN #G5920708314221.003: - The reviewer changed data without an independent review. - The Acting Program Chief GSP approved the review.			
9 Does a Significant Condition Adverse to Quality exist? Yes ___ No <u>X</u> If Yes, Circle One: A B C D E		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	
3 Response Due Date: 20 Working Days from Issuance			
11 Required Actions: <input checked="" type="checkbox"/> Remedial <input checked="" type="checkbox"/> Extent of Deficiency <input checked="" type="checkbox"/> Preclude Recurrence <input checked="" type="checkbox"/> Root Cause Determination			
12 Recommended Actions: 1. Revised QMP 3.04 to be consistent with QMP 3.07 and meet QARD requirements. 2. Perform the actions indicated in block 11.			
7 Initiator T. SWIFT <i>C.C. Warner for</i> <i>6-30-94</i>		14 Issuance Approved by: QADD <i>[Signature]</i> <i>for</i> Date <i>7.4.94</i>	
15 Response Accepted QAR <i>C.C. Warner</i> Date <i>8-11-94</i>		16 Response Accepted QADD <i>[Signature]</i> <i>for</i> Date <i>8.19.94</i>	
17 Amended Response Accepted QAR _____ Date _____		18 Amended Response Accepted QADD _____ Date _____	
19 Corrective Actions Verified QAR _____ Date _____		20 Closure Approved by: QADD _____ Date _____	

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CORRECTIVE ACTION REQUEST (Continuation Page)

1. CORRECTIVE ACTION RESPONSE FOR ITEM 1 OF CAR No. YM-94-047

- A. **REMEDIAL ACTION:** Reviewed YMP-USGS QMP-3.04, R5 as it applies to QARD requirements cited.
- B. **EXTENT OF THE DEFICIENCY:** Existing requirements were investigated. The requirements of QARD Supplement III.2.4.A.3 and Section 2.2.9F are met with existing YMP-USGS-QMP-3.04 R5-M1 requirements but may be enhanced by including the independent technical reviewer in the comment resolution process. The Program Chiefs are generally independent of the data collection, therefore it is appropriate for responsible YMPB-USGS Program Chiefs to determine satisfactory resolution of review comments and provide independent judgement between scientific opinions and evaluate comments and responses to assure that appropriate resolution actions are taken.
- C. **ROOT CAUSE DETERMINATION:** YMP-USGS-QMP-3.04, R5 did not provide for the participation of the independent technical reviewer in the comment resolution process nor did it stipulate independence of the Program Chief from the actual work under review.
- D. **CORRECTIVE ACTION TO PRECLUDE RECURRENCE:** YMP-USGS-QMP-3.04, R5 will be modified to include the independent technical reviewer in the comment resolution process and to ensure independence (as defined in QARD Supplement III.2.4A.3) of responsible management for instances when the author and reviewer cannot come to resolution.

2. For each action above, identify the name of the individual assigned responsibility for completion of the action and the anticipated (or actual, if complete) completion date.

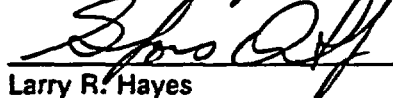
- 1.A., B., & C. M.H.Mustard, YMP-USGS Quality Assurance Specialist 7-22-94
A.M.White side, YMPB QA Implementation Advisor
- 1.D. R. Scavuzzo, Quality Assurance Specialist 08/31/94
A.M. Whiteside, YMPB QA Implementation Advisor

3. RESPONSE APPROVED



Thomas H. Chaney
YMP-USGS Quality Assurance Manager

8/1/94
Date



Larry R. Hayes
Chief, Yucca Mountain Project Branch

8/1/94
Date

8/9/94 Lt. Hayes to Spence

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CORRECTIVE ACTION REQUEST (Continuation Page)

1. CORRECTIVE ACTION RESPONSE FOR ITEM 2 OF CAR No. YM-94-047

- A. **REMEDIAL ACTION:** Geologic data for cited DTN GS920708314221.003 are being re-reviewed by an independent reviewer as required by YMP-USGS-QMP-3.04.
- B. **EXTENT OF DEFICIENCY:** An investigation will consist of sampling other reviewed data to determine if problems are noted with reviewer independence.
- C. **ROOT CAUSE DETERMINATION:** To be determined based upon completion of investigative actions noted in 1.B above.
- D. **CORRECTIVE ACTION TO PRECLUDE RECURRENCE:** To be determined based upon completion of root cause determination.

2. For each action above, identify the name of the individual assigned responsibility for completion of the action and the anticipated (or actual, if complete) completion date.

- 1.A. J.S.Stuckless, GSP Chief to assure completion of review. 10/03/94
- 1.B. T.M.Mendez-Vigo, GSP QA Implementation Specialist to complete sampling and present results to GSP Chief. 10/03/94
- 1.C. & D. J.S.Stuckless and T.M.Mendez-Vigo to provide supplemental CAR response to outline results and remaining actions. 10/17/94

3. RESPONSE APPROVED:



Thomas H. Chaney
YMP-USGS Quality Assurance Manager

8/11/94
Date



Larry R. Hayes
Chief, Yucca Mountain Project Branch

8/11/94
Date