



**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

**MAR 22 1993**

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

VERIFICATION OF CORRECTIVE ACTION AND CLOSURE OF CORRECTIVE ACTION REQUEST  
 (CAR) YM-93-013 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION  
 (YMQAD) AUDIT YMP-93-01 OF U.S. GEOLOGICAL SURVEY

The YMQAD staff has verified the corrective action to CAR YM-93-013 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 Cynthia H. Prater at 794-7742.

Richard E. Spence, Director  
 Yucca Mountain Quality Assurance Division

YMQAD:RBC-3181

Enclosure:  
 CAR YM-93-013

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

- cc w/o encl:
- J. W. Gilray, NRC, Las Vegas, NV
  - N. J. Brogan, SAIC, Las Vegas, NV
  - D. D. Porter, SAIC, Golden, CO

*Add: K.R. Hooks 4/1 Encl  
 NH16/11  
 102.7  
 WM-11*

930039  
 9303290229 930322  
 PDR WASTE  
 WM-11 PDR

**ORIGINAL**  
THIS IS A RED STAMP

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

8 CAR NO.: YM-93-013  
DATE: 10-23-92  
SHEET: 1 OF 1  
QA

**CORRECTIVE ACTION REQUEST**

1 Controlling Document YMP-USGS-QMP-7.01 Rev. 4		2 Related Report No. YMP-93-01	
3 Responsible Organization USGS		4 Discussed With W. Causseaux	
5 Requirement: QMP-7.01 R4, M2 Paragraph 5.1.3 states in part "An approved vendors list will be initiated, maintained, updated, and distributed by the QA Office. The list shall include... "a detailed description of the service or item..."  QMP-12-01, R5 Paragraph 5.22 require calibration service be provided by vendors on the Approved Vendors List in accordance with QMP-7.01.			
6 Adverse Condition: Contrary to the above  LI-COR provided calibration services on April 29, 1992, after being removed from the Approved Vendor List on April 21, 1992.			
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 type="checkbox"/> Extent of Deficiency <input checked="" type="checkbox"/> Preclude Recurrence <input checked="" type="checkbox"/> Root Cause Determination			
13 Recommended Actions:			
7 Initiator J. Blaylock and C. Prater		14 Issuance Approved by: QADD <u>R.C. Spence</u> Date <u>11/3/92</u>	
15 Response Accepted QAR _____ Date _____		16 Response Accepted QADD _____ Date _____	
17 Amended Response Accepted QAR <u>C. Prater</u> Date <u>2/16/93</u>		18 Amended Response Accepted QADD <u>R.C. Spence</u> Date <u>2/22/93</u>	
19 Corrective Actions Verified QAR <u>C. Prater</u> Date <u>3/16/93</u>		20 Closure Approved by: QADD <u>R.C. Spence</u> Date <u>3/19/93</u>	

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

CAR NO. YM-93-013

DATE: \_\_\_\_\_

SHEET: \_\_\_\_\_ OF \_\_\_\_\_

**CORRECTIVE ACTION REQUEST**  
(continuation sheet)

1. CORRECTIVE ACTION RESPONSE FOR CAR No. YM-93-013:

- A. **Remedial Action:** Incomplete calibration documentation was the reason that the vendor had been suspended from the Approved Vendors List. Therefore, calibration documentation for all calibrations performed on 4/29/92 are being evaluated. The results of this evaluation and additional remedial actions, if any, will be outlined in a supplemental response.
- B. **Investigative Action:** Not requested.
- C. **Root Cause Determination:** The intent of the suspension was to stop further authorizations for using Li-Cor for equipment calibrations. There was a valid Purchase Order (PO) in effect, and the vendor was already authorized by the QA Office to perform the required calibrations upon receipt of the equipment.
- D. **Corrective Action to Preclude Recurrence:** Future notices of suspensions or deletion of a vendor from the AVL will be more explicit regarding actions for procurements in various stages of processing.

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

A. Remedial Action:

12-16-92 -- K.W.Causseaux will be responsible for completion of the evaluation of calibration documentation and the determination of impact.

12-23-92 -- T.H.Chaney and L.R.Hayes will be responsible for providing a supplemental response to YMQAD.

D. Corrective Action to Preclude Recurrence:

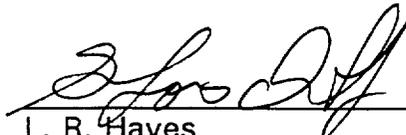
Effective immediately, A.E.Lykins and T.H.Chaney will be responsible for assuring that QA correspondence will be more explicit concerning the effects on procurements when AVL vendor authorizations are suspended or deleted.

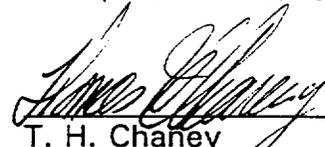
OFFICE OF CIVILIAN  
RADIOACTIVE WASTE MANAGEMENT  
U.S. DEPARTMENT OF ENERGY  
WASHINGTON, D.C.

CAR NO. YM-93-013  
DATE: \_\_\_\_\_  
SHEET: \_\_\_\_\_ OF \_\_\_\_\_

**CORRECTIVE ACTION REQUEST**  
(continuation sheet)

3. Response Approved:

  
\_\_\_\_\_  
L. R. Hayes  
Date 12/1/92

*For*   
\_\_\_\_\_  
T. H. Chaney  
YMP-USGS Quality Assurance Manager  
Date 12/1/92

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

CAR NO. YM-93-013

DATE: 1/6/93

SHEET:      OF     

**CORRECTIVE ACTION REQUEST**  
(continuation sheet)

1. CORRECTIVE ACTION RESPONSE FOR CAR No. YM-93-013:

- A. **Remedial Action:** Incomplete calibration documentation was the reason that the vendor had been suspended from the Approved Vendors List. Therefore, calibration documentation for all calibrations performed on 4/29/92 was evaluated and found acceptable.
- B. **Investigative Action:** Not requested.
- C. **Root Cause Determination:** Upon determination that Li Cor was not providing appropriate calibration documentation, notice was submitted to users of Li Cor's services. However, prior to receipt of the notice, some equipment had been shipped to Li Cor for calibration. The user was not aware of Li Cor's "suspension".
- D. **Corrective Action to Preclude Recurrence:** Future notices of deletion of a vendor from the AVL will be more explicit regarding actions for procurements in various stages of processing. Those notices will be forwarded to all users of the AVL and the Contracting Officer immediately upon receipt of the determination that the vendor no longer qualifies for the AVL. The notices will advise users that any QA purchases of items and/or services already in process from the referenced vendor shall be halted until the matter is resolved. The users will also be advised to contact the YMPB Administration Officer to coordinate resolution of procurements in process. If the matter cannot be solved in a time frame satisfactory to the needs of the user, another vendor will be used.

The QA staff will be responsible for submitting the notices and following-up with the user to ensure that the project's needs and QA requirements are met.

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

A. Remedial Action:

Completed 12-31-92 by Dan Valega.

D. Corrective Action to Preclude Recurrence:

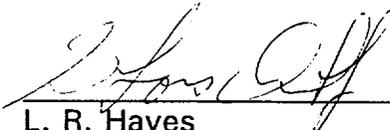
Effective immediately, A.E.Lykins and T.H.Chaney will be responsible for assuring that QA correspondence will be more explicit concerning the effects on procurements when AVL vendor authorizations are suspended or deleted.

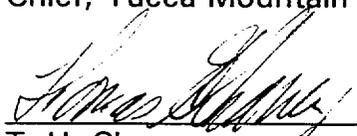
OFFICE OF CIVILIAN  
RADIOACTIVE WASTE MANAGEMENT  
U.S. DEPARTMENT OF ENERGY  
WASHINGTON, D.C.

CAR NO. YM-93-013  
DATE: 1/6/93  
SHEET: \_\_\_ OF \_\_\_

**CORRECTIVE ACTION REQUEST**  
(continuation sheet)

3. Response Approved:

  
\_\_\_\_\_  
L. R. Hayes  
for Chief, Yucca Mountain Project Branch  
1/6/93  
Date

  
\_\_\_\_\_  
T. H. Chaney  
YMP-USGS Quality Assurance Manager  
1/6/93  
Date



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 26 1993

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 AMENDED RESPONSE TO CORRECTIVE ACTION REQUEST (CAR) YM-93-013  
RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION (YMQAD) AUDIT  
YMP-93-01 OF U.S. GEOLOGICAL SURVEY

The YMQAD staff has evaluated the amended response to CAR YM-93-013. The response has been determined to be unsatisfactory because it does not commit to the revision of the applicable administrative procedure to incorporate the corrective action identified in Section D.

A 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 Cynthia H. Prater at 794-7742.

*RBC Constable for*

Richard E. Spence, Director  
Yucca Mountain Quality Assurance Division

YMQAD:RBC-2162

Enclosure:  
CAR YM-93-013

cc w/encl:

K. R. Hooks, NRC, Washington, DC  
S. W. Zimmerman, NWPO, Carson City, NV  
T. H. Chaney, USGS, Denver, CO  
R. W. Craig, USGS, Las Vegas, NV  
R. L. Maudlin, MACTEC, Las Vegas, NV  
B. J. Verna, YMP, NV  
A. V. Gil, YMP, NV

cc w/o encl:

J. W. Gilray, NRC, Las Vegas, NV  
N. J. Brogan, SAIC, Las Vegas, NV  
D. D. Porter, SAIC, Golden, CO

93-2162  
1/26/93

Larry R. Hayes

-2-

JAN 26 1993

bcc w/o encl:  
S. D. Johnson, PSDO/REEC0, Las Vegas, NV  
C. H. Prater, SAIC, Las Vegas, NV

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

CAR NO. YM-93-013  
DATE: \_\_\_\_\_  
SHEET: \_\_\_\_\_ OF \_\_\_\_\_

**CORRECTIVE ACTION REQUEST**  
**(Continuation Page)**

1. **CORRECTIVE ACTION RESPONSE FOR CAR No. YM-93-013:**

- A. **Remedial Action:** Incomplete calibration documentation was the reason that the vendor had been suspended from the Approved Vendors List. Therefore, calibration documentation for all calibration performed on 4/29/92 was evaluated and found acceptable.
- B. **Investigative Action:** Not requested.
- C. **Root Cause Determination:** Upon determination that Li Cor was not providing appropriate calibration documentation, notice was submitted to users of LiCor's services. However, prior to receipt of the notice, some equipment had been shipped to Li Cor for calibration. The user was not aware of Li Cor's "suspension".
- D. **Corrective Action to Preclude Recurrence:** Future notices of deletion of a vendor from the AVL will be more explicit regarding actions for procurements in various stages of processing. Those notices will be forwarded to all users of the AVL and the Contracting Officer immediately upon receipt of the determination that the vendor no longer qualifies for the AVL. The notices will advise users that any QA purchases of items and/or services already in process from the referenced vendor shall be halted until the matter is resolved. The users will also be advised to contact the YMPB Administration Officer to coordinate resolution of procurements in process. If the matter cannot be solved in a time frame satisfactory to the needs of the user, another vendor will be used.

The QA staff will be responsible for submitting the notices and following-up with the user to ensure that the project's needs and QA requirements are met.

QMP 7.04 draft has been modified to include the above.

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

- A. **Remedial Action:**  
Completed 12-31-92 by Dan Valega.
- D. **Corrective Action to Preclude Recurrence:**  
Effective immediately, A.E. Lykins and T.H. Chaney will be responsible for assuring that QA correspondence will be more explicit concerning the effects on procurements when AVL vendor authorizations are suspended or deleted.

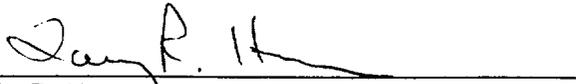
A.E. Lykins has already drafted QMP 7.04 with expected approval by February 26, 1993.

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

CAR NO. YM-93-013  
DATE: \_\_\_\_\_  
SHEET: \_\_\_\_\_ OF \_\_\_\_\_

**CORRECTIVE ACTION REQUEST**  
(Continuation Page)

3. Response Approved:



L. R. Hayes,  
Chief, Yucca Mountain Project Branch

2/8/93  
Date



T. H. Chaney  
YMP-USGS Quality Assurance Manager

2/8/93  
Date

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

<sup>8</sup> CAR NO. YM-93-013  
DATE: 03-16-93  
PAGE: \_\_\_\_\_ OF \_\_\_\_\_  
QA

**CORRECTIVE ACTION REQUEST (Continuation Page)**

VERIFICATION OF CAR NO. YM-93-013

Verification of CAR YM-93-013 was performed on March 16, 1993.

REMEDIAL:

USGS determined that incomplete calibration documentation was the reason that the vendor had been suspended from the AVL; calibration documentation for all calibrations performed on 4/29/92 was evaluated and found acceptable. This review was completed 12/31/92 by USGS.

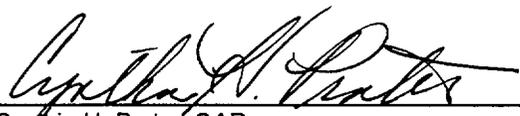
EXTENT OF DEFICIENCY:

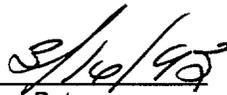
Not requested

CORRECTIVE ACTION TO PRECLUDE RECURRENCE:

Completion of the following corrective action commitments was verified:

Upon review of YMP-USGS-QMP-7.04, Revision 0, Section 5.2, the QAR has determined that the revised requirements included in the aforementioned procedure is satisfactory to preclude recurrence.

  
Cynthia H. Prater, QAR

  
Date