



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

OCT 12 1993

Robert F. Pritchett
 Technical Project Officer
 for Yucca Mountain
 Site Characterization Project
 Reynolds Electrical & Engineering Co., Inc.
 P.O. Box 98521
 Las Vegas, NV 89193-8521

EVALUATION OF AMENDED RESPONSE TO CORRECTIVE ACTION REQUEST (CAR) YM-93-058
 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION (YMQAD) AUDIT
 YMP-93-12 OF REYNOLDS ELECTRICAL & ENGINEERING CO., INC. (SCP: N/A)

The YMQAD staff has evaluated the amended response to CAR YM-93-058. 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 Nita J. Brogan, 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 Gerard Heaney at 794-7826.

R. E. Spence

Richard E. Spence, Director
 Yucca Mountain Quality Assurance Division

YMQAD:RBC-238

Enclosure:
 CAR YM-93-058

cc w/encl:
 K. R. Hooks, NRC, Washington, DC
 S. W. Zimmerman, NWPO, Carson City, NV
 W. J. Glasser, REECO, Las Vegas, NV
 J. C. de la Garza, YMP, NV

cc w/o encl:
 J. W. Gilray, NRC, Las Vegas, NV
 N. J. Brogan, YMQAD/QATSS, Las Vegas, NV

Add: Ken Hooks to encl
NHOB 11
WM-11
102-11

9310190122 931012
 PDR WASTE
 WM-11

PDR

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

8 CAR NO.: YM-93-058
DATE: 07/02/93
SHEET: 1 OF 1
QA

CORRECTIVE ACTION REQUEST

1 Controlling Document REECO QAPP, 568-DCO-115, Revision 8	2 Related Report No. YMP-93-12
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3 Responsible Organization REECO Construction	4 Discussed With T. Leonard/D. Koss
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5 Requirement:
REECO QAPP, Section II, "Quality Assurance Program," Paragraph 1.2 states, "The Quality Assurance Program of REECO consists of the QAPP plus appropriate implementing procedures required to provide and implement control over activities affecting quality."

6 Adverse Condition:
Contrary to the above, survey activities of quality-affecting items are being performed in accordance with procedures that are not part of the REECO Yucca Mountain QA Program.

9 Does a significant condition adverse to quality exist? Yes <u>X</u> No ___ If Yes, Circle One: A B <u>C</u>	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
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12 Required Actions: Remedial Extent of Deficiency Preclude Recurrence Root Cause Determination

13 Recommended Actions:
1) Bring present procedures for survey activities under the REECO QA Program.

7 Initiator Gerard Heaney <i>Gerard Heaney</i> Date <u>7-1-93</u>	14 Issuance Approved by: QADD <i>[Signature]</i> for Date <u>07-07-93</u>
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15 Response Accepted QAR <u>N/A</u> Date	16 Response Accepted QADD Date
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17 Amended Response Accepted QAR <i>Gerard Heaney</i> Date <u>8-31-93</u>	18 Amended Response Accepted QADD <i>R.C. Spruce</i> Date <u>9/1/93</u>
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19 Corrective Actions Verified QAR Date	20 Closure Approved by. QADD Date
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DATE: 08/04/93
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CORRECTIVE ACTION REQUEST (Continuation Page)

CORRECTIVE ACTION RESPONSE for CAR # YM-93-058

A. Remedial Action:

A starter tunnel "check survey" has been performed by Raytheon Services Nevada (RSN) to ensure that line, grade, and profile at "B line" are correct. Although the "check survey" report has not been issued, no deficiencies have been reported.

Responsible Individual: T. M. Leonard
Estimated completion date: August 30, 1993

B. Investigative Action:

Extent of Deficiency: The quality affecting survey work performed by REECO Engineering applies only to the establishment of line, grade, and profile within the starter tunnel.

Responsible Individual: T. M. Leonard
Estimated completion date: Completed

C. Root Cause Determination:

The intent of the REECO Quality Assurance Program Plan was misinterpreted. Surveying of line and grade (for marking the drill face center line and grade) is shot from control points set by a QA qualified organization (RSN). Our interpretation that surveying line and grade was not a QA activity was deemed incorrect.

D. Corrective Action to Preclude Recurrence:

The REECO matrixed surveyors, supervision, and party chief will be qualified to perform quality affecting survey work in accordance with the YMP QA program.

The instruments (total station and level) will be calibrated at a QA qualified calibration facility at an interval established by the manufacturer.

ltd dtd 8/4/93 - 580-01-587

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DATE: 08/30/93

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CORRECTIVE ACTION REQUEST (Continuation Page)

AMENDED CORRECTIVE ACTION RESPONSE for CAR # YM-93-058

A. Remedial Action:

A starter tunnel "check survey" has been performed by Raytheon Services Nevada (RSN) to ensure that line, grade, and nominal size at "B line" are correct. Although the "check survey" report has not been issued, no deficiencies have been reported.

Responsible Individual: T. M. Leonard
Estimated completion date: August 30, 1993

B. Investigative Action:

Extent of Deficiency: The quality affecting survey work performed by REECo Engineering applies only to the establishment of line, grade, and nominal size within the starter tunnel.

Responsible Individual: T. M. Leonard
Estimated completion date: Completed

C. Root Cause Determination:

The intent of the REECo Quality Assurance Program Plan was misinterpreted. Surveying of line and grade (for marking the drill face center line and grade) is shot from control points set by a QA qualified organization (RSN). Our interpretation that surveying line, grade and nominal size was not a QA activity was deemed incorrect.

D. Corrective Action to Preclude Recurrence:

The REECo matrixed surveyors, supervision, and party chief will be qualified to perform quality affecting survey work in accordance with the YMP QA program.

The instruments (total station and level) will be calibrated at a QA qualified calibration facility at an interval established by the manufacturer.

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CORRECTIVE ACTION REQUEST (Continuation Page)

AMENDED CORRECTIVE ACTION RESPONSE for CAR # YM-93-058

D. Corrective Action to Preclude Recurrence: - Continued

A Technical Control Procedure designated as "QA" will be written per MC-05.2 that describes the QA activity of surveying line, grade, and nominal size in the tunnel. Personnel will be trained to this procedure prior to implementation.

Responsible Individual: T. M. Leonard
Estimated completion date: September 30, 1993.

Response Approved: *RJ Sritchert* Date: 8/31/93

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WASHINGTON, D.C.

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CORRECTIVE ACTION REQUEST (Continuation Page)

AMENDED CORRECTIVE ACTION RESPONSE AND EXTENSION REQUEST for CAR # YM-93-058

D. Corrective Action to Preclude Recurrence:

The REECo matrixed personnel are in the process of being qualified. Additional time is necessary to complete their qualifications. Revised estimated completion date is October 22, 1993.

The calibration facility was surveyed and has been determined to be unacceptable and does not meet REECo/YMP requirements. Additional time is necessary to identify and qualify another survey instrument calibration facility. A report will be provided by October 29, 1993, documenting the status of qualifying a calibration facility.

The "QA" Technical Control Procedure has been written and has been through the "Draft" procedure review process. Comments are presently being resolved and the procedure should be approved by October 8, 1993.

Responsible Individuals: T. M. Leonard/W. J. Glasser

Response Approved:

RJ Pritchett

Date:

9/30/93

Ltr dtd 9/30/93 - 580-01-715