



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

QA: L

SEP 27 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

PARTIAL VERIFICATION OF CORRECTIVE ACTION FOR CORRECTIVE ACTION
REQUEST (CAR) YM-94-069 RESULTING FROM YUCCA MOUNTAIN QUALITY
ASSURANCE DIVISION (YMQAD) AUDIT YMP-94-01 OF THE CIVILIAN
RADIOACTIVE WASTE MANAGEMENT SYSTEM MANAGEMENT AND OPERATING
CONTRACTOR (SCPB: N/A)

The YMQAD staff has partially verified the corrective action to
CAR YM-94-069 and determined the results to be satisfactory for
completion of remedial actions associated with the 2C "Early
Release" package. However, the CAR will not be closed until all
corrective actions are complete. Verification of completion of
the remaining corrective actions will be performed after the
effective dates provided.

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

YMQAD:RBC-5210

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

Enclosure:
CAR YM-94-069

cc w/encl:
T. A. Wood, HQ (RW-10) FORS
R. L. Johnson, 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/TRW, 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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**OFFICE OF CIVILIAN
RADIOACTIVE WASTE MANAGEMENT
U.S. DEPARTMENT OF ENERGY
WASHINGTON, D.C.**

8 CAR NO.: YM-94-069
PAGE: 1 OF 2
QA

CORRECTIVE ACTION REQUEST

1 Controlling Document OCRWM QARD, DOE/RW-0333P, Revision 01		2 Related Report No: YMP-94-01	
3 Responsible Organization M&O		4 Discussed With P. Hastings/R. Saunders	
5 Requirement: QARD, Section 3.2.1.A states: "Design inputs shall be identified and documented, and their selection reviewed and approved by those responsible for the design." (Continued on next page)			
6 Adverse Condition: CTS TEM proposal and CTS Operations and maintenance Manual are used as design input and are not being controlled. Additionally, the changes to the manual are not controlled.			
9 Does a Significant Condition Adverse to Quality exist? Yes <u> </u> 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 <u> </u> 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			
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:			
7 Initiator Robert L. Howard <i>Robert L. Howard</i> 8/3/94		14 Issuance Approved by: <i>[Signature]</i> QADD <i>[Signature]</i> Date 8.5.94	
15 Response Accepted QAR <i>Robert L. Howard</i> Date 8/22/94		16 Response Accepted QADD <i>[Signature]</i> Date 8-24-94	
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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WASHINGTON, D.C.

8 CAR NO.: YM-94-069
PAGE: 2 OF 2
QA

CORRECTIVE ACTION REQUEST (CONTINUATION PAGE)

5 Requirements (continued)

QARD, Section 3.2.8.F states: "Design changes that impact related implementing documents or training programs shall be communicated to affected organizations."

QARD, Section 6 requires the distribution and use of documents that specify technical requirements, quality requirements, or prescribe work be controlled.

RESPONSE TO CAR NO. YM-94-069

Remedial Action:

- 1). Properly reference the CTS Operating and Service Manual, Yucca Mountain Tunnel Boring Machine Model 760.8 (CTS Manual) in the DIE and Specification 01501.
- 2). Make revision to other hydraulic equipment procurement specifications as required to capture manufacturers' operating and maintenance manuals in the submittal process.

< **NOTE:** The CTS Manual is placed under Document Control by the constructor.

Item 1 Responsible Individuals: Robert Saunders
Peter Hastings

Date of Completion: 9/1/94

Item 2 Responsible Individual: Robert Saunders
Date of Completion: 9/30/94

Investigative Action:

Investigative action will consist of reviewing hydraulic equipment procurement specifications to determine if the manufacturers' operating and maintenance manuals are captured in the submittal process. This investigative action will determine the extent of the condition and consider other documents that might reference the CTS Manual.

For the early release of design package 2C, (2 specifications and 4 drawings), the extent of the use of reference to the CTS Manual is only within Specification 01501 titled "Subsurface General Construction", BAB000000-01717-6300-01501.

Submittals such as the CTS Manual and subsequent revisions are reviewed by MGDS for impact on design requirements. However, the impact on design requirements should be minimal. The requirements listed within the DIE (Requirement 3, Section 11.4) and Specification 1501 are generic in nature (i.e., provide a maintenance procedure, use spill and mitigation procedures, etc.). The A/E does not require design input sources to develop Requirement 3. Requirement 3 is placed in the A/E specifications as a requirement to the constructor. The constructor would use the CTS Manual more specifically to provide detail within the procedures required by the specifications.

The CTS Manual is not considered a design input to the DIE since the requirement derived for maintenance (Requirement 3) and placed in design specifications is

8/17/94 LV.ESSB.GH.8/94-735

generic. It is agreed that the text of the DIE does describe in some detail, items that were in the CTS proposal. However, this text is not considered design input as the DIE Requirement 3 is generic and not specific. If Requirement 3 contained the specific detail as contained in the DIE text, then the CTS Manual would be treated as design input.

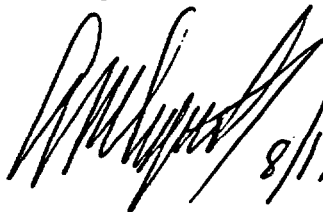
Root Cause Analysis:

The root cause is the failure to capture the manufacturers' operating and maintenance manuals in the submittal process. The CTS Manual has been improperly identified as a design input where it is in fact used as a reference in both cases cited. The intent is to ensure that manufacturers' operating and maintenance manuals for hydraulic equipment are captured during the submittal process (MGP-7-1). The submittals were not adequately identified within the specifications.

Corrective Action to Preclude Recurrence:

- 1). Revise the appropriate specifications to ensure the manufacturers' operating and maintenance manuals are captured by the submittal process. The specific specifications reviewed and revised will be documented upon completion of the investigative action.
- 2). Provide training to specification originators to clarify requirements for submittal identification.

Responsible Individual: Robert Saunders
Date of Completion: 9/30/94 (Anticipated release of 2C)



8/17/94

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B.
CAR NO. YM-94-069
PAGE 1 OF 1
QA

CORRECTIVE ACTION REQUEST (CONTINUATION PAGE)

Partial Verification of CAR YM-94-069

The following Remedial Action Commitments have been verified:

- 1) Properly reference the CTS Operating and Service Manual, Yucca Mountain Tunnel Boring Machine Model 760.8 (CTS Manual) in the DIE and Specification 01501.

YMQAD staff reviewed Specification Section BAB000000-01717-6300-01501 "Subsurface General Construction Specification" Specification Inputs List dated 8/31/94. The Specification Input List properly identifies the CTS Operating and Service Manual, Yucca Mountain Tunnel Boring Machine Model 760-8, Rev B, dated July 27, 1994 as an input.

YMQAD staff reviewed Determination of Importance Evaluation for Package 2C DI# BAB000000-01717-2200-00005 Revision 2, approved 9/04/94. The DIE Reference 8.11 identifies CTS Proposal No. 5078 as a reference document. Based on a discussion with the DIE Manager, the proposal was referenced instead of the actual manual because the manual was the document used by the DIE preparer.

YMQAD staff verified that the CTS Operating and Service Manual, Yucca Mountain Tunnel Boring Machine Model 760-8, Rev B, dated July 27, 1994 is under document control.


Robert L. Howard, QAR


Date