



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

JUL 24 1996

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

ISSUANCE OF DEFICIENCY REPORT (DR) YM-96-D-075 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION'S (YMQAD) SURVEILLANCE YMP-SR-96-019 (SCP: N/A)

Enclosed is DR YM-96-D-075 generated as a result of YMQAD Surveillance YMP-SR-96-019.

Please identify the corrective action to be taken and implemented to correct the deficiency. A DR Continuation Page has been provided. Send the original of your response to Deborah Sult, YMQAD/QATSS, P.O. Box 98608, Mail Stop 455, Las Vegas, Nevada 89193-8608. Response to the DR is due 20 working days from the date of this letter. Any extension to the due date must be requested in writing, with appropriate justification, prior to that date.

If you have any questions, please contact either Robert B. Constable at (702) 794-5580 or Patout H. Cotter at (702) 794-1332.

Richard E. Spence, Director  
Yucca Mountain Quality Assurance Division

YMQAD:RBC-2259

Enclosures:

1. DR YM-96-D-075
2. PR/DR Continuation Page

cc w/encls:

T. A. Wood, DOE/HQ (RW-14) FORS  
J. G. Spraul, NRC, Washington, DC  
S. W. Zimmerman, NWPO, Carson City, NV  
R. L. Strickler, M&O, Vienna, VA  
R. B. Justice, M&O, Las Vegas, NV  
R. P. Ruth, M&O, Las Vegas, NV  
Records Processing Center

cc w/o encls:

W. L. Belke, NRC, Las Vegas, NV  
D. G. Horton, OQA, NV  
P. H. Cotter, YMQAD/QATSS, 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  Performance Report  
 Deficiency Report  
NO. YM-96-D-075  
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**PERFORMANCE/DEFICIENCY REPORT**

1 Controlling Document: Quality Assurance Requirements and Description document (QARD), Revision 5	2 Related Report No. YMP-SR-96-019
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3 Responsible Organization: CRWMS M&O/Design	4 Discussed With: A. Segrest
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5 Requirement/Measurement Criteria:

1. QARD, Section 5.0, Paragraph 5.2.2, states in part, "Implementing documents shall include the following information as appropriate to the work to be performed:

- B. Technical and regulatory requirements.
- D. Quantitative or qualitative acceptance criteria sufficient for determining that activities were satisfactorily accomplished."/

Specification "Subsurface Drilling and Blasting," BABEA0000-01717-6300-02313, Revision 1, Paragraph 3.05, "Field Quality Control," states in part:

- "E. QA Control: Blasting shall conform to a design goal of not exceeding 300 mm average overbreak outside the "C" line. This shall be determined by visual inspection or spot measurement, as directed by the A/E."

6 Description of Condition:

1. Contrary to requirement #1 above, neither the Kiewit/Parsons Brinckerhoff (Kiewit/PB) drill and blast plan, "Subsurface Controlled Drilling and Blasting Plan for TS Main Drift Thermal Test Alcove," Revision 0 (BABEA0000-01717-6300-02313-CD-04-0) or the Kiewit/PB Technical Control Procedure (TCP)-2.17, "Subsurface ESF Drill and Blast Operation," Revision 7 include technical requirements or quantitative or qualitative acceptance criteria to determine that the blast was satisfactorily accomplished. An example of this is that the specification requires the design criteria for 300 mm average overbreak outside the "C" line.

The Kiewit/PB Quality Control Procedure (QCP)-011, Revision 2, "Inspection of Subsurface Drill and Blast Operations," includes this requirement; however, this examination is only performed if requested by the Architect/Engineer.

This examination is required to be performed and documented by Kiewit/PB to meet specification requirements.

7 Initiator Patout H. Cotter <i>P.H. Cotter</i> Date 7/17/96	9 Is condition an isolated occurrence? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown; Must be Yes if PR
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10 Recommended Actions: (Not required for PR)

Evaluate the deficiency, perform remedial action, investigate the extent of deficiency, and perform root cause analysis to determine how the condition came about.

11 QA Review QAR <i>P.H. Cotter</i> Date 7/17/96	12 Response Due Date 20 working days from issuance
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13 Affected Organization QA Manager Issuance Approval: (QAR for PR)

Printed Name Richard E. Spence Signature *R.E. Spence* Date 7/19/96

22 Corrective Actions Verified QAR Date	23 Closure Approved by: (N/A for PR) AOQAM Date
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PERFORMANCE/DEFICIENCY REPORT RESPONSE

14 Remedial Actions:

15 Extent of Condition: (Not required for PR)

16 Root Cause Determination: (Not required for PR)

Required  Yes  No

17 Action to Preclude Recurrence: (Not required for PR)

Required  Yes  No

18 Corrective Action Completion Due Date:

19 Response by:

Initial

Amended

Date

Phone

20 Response Accepted

QAR

Date

21 Response Accepted (N/A for PR):

AOQAM

Date

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PR/DR CONTINUATION PAGE

Block 5, Requirements: (continued)

2. QARD, Section 3.0, Paragraph 3.2.2.I, states, "Drawings, specifications, and other design output documents shall contain appropriate inspection and testing acceptance criteria."

Block 6, Description of Condition: (continued)

2. Contrary to requirement #2 above, specification "Subsurface Drilling and Blasting," BABEA0000-01717-6300-02313, Revision 1, Paragraph 3.0.5.E does not provide appropriate inspection and testing acceptance criteria for drill and blast excavation. It does provide a design goal of 300 mm over break for two consecutive rounds. The specification does not provide upper limits or true accept/reject criteria.

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