



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

SEP 16 1996

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Technical Project Officer  
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Site Characterization Project  
TRW Environmental Safety Systems, Inc.  
Bank of America Center, Suite P-110  
101 Convention Center Drive  
Las Vegas, NV 89109

**VERIFICATION OF CORRECTIVE ACTION AND CLOSURE OF DEFICIENCY REPORT  
(DR) YM-96-D-028 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE  
DIVISION'S (YMQAD) AUDIT YM-ARC-96-03 OF KIEWIT/PARSONS BRINCKERHOFF**

The YMQAD staff has verified the corrective action to DR YM-96-D-028 and determined the results to be satisfactory. As a result, the DR is considered closed.

If you have any questions, please contact either Robert B. Constable at (702) 794-5580 or Kristi A. Hodges at (702) 794-1464.

Richard E. Spence, Director  
Yucca Mountain Quality Assurance Division

YMQAD:RBC-2614

Enclosure:  
DR YM-96-D-028

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**PERFORMANCE/DEFICIENCY REPORT**

1 Controlling Document: Quality Assurance Requirements and Description (QARD), DOE/RW-0333P, Rev. 5  
 2 Related Report No. YM-ARC-96-03

3 Responsible Organization: Kiewit/Parsons Brinckerhoff (Kiewit/PB)  
 4 Discussed With: Jon Christensen

5 Requirement/Measurement Criteria:  
 Section 2.0, Paragraph 2.2.1, QA Program Documents, states in part:  
 B. "AOs shall establish implementing documents applicable to their scope of work that translate QARD requirements into work processes."  
 Section 5.0, Paragraph 5.2.2, states in part: "Implementing documents shall include:  
 C. a sequential description of the work to be performed including controls for altering the sequence of required inspection, test, and other operations.  
 D. Quantitative or qualitative acceptance criteria sufficient for determining that activities were satisfactorily accomplished."  
 Section 10.0, Paragraph 10.2.9D.3, states: "Level-III personnel shall have Level-II capabilities for the corresponding category or class (which includes supervisory and certifying lower level personnel, Section 10.0, Paragraph 10.2.9D.2) (contd. Page 3)

6 Description of Condition:  
 Contrary to the cited QARD requirements:  
 1. MCP-10.1, "Qualification and Certification of Inspection and Test Personnel," Revision 7, fails to translate the QARD requirements into work processes that provide the methodology to accomplish the requirements as follows:  
 a) 3.1.1B The section does not provide the methodology or basis for determining if the candidates for Level II and III Inspectors have the required capabilities identified in 3.1.1B, items 1 through 5.  
 b) 3.1.1D states in part: "The Certifying Agent (CA) shall be designated by the QA Manager. the CA shall be responsible for preparation, administration, testing, and certification of K/PB Inspection and Test Personnel." 3.5.1 states: "Testing not required for CA."  
 (Contd. on Page 3)

7 Initiator Donald J. Harris Date 12/21/95	9 QA Review Date 1/4/96
10 Response Due Date 20 Working Days from Issuance	11 QA Issuance Approval Date 2-21-96

12 Remedial Actions:  
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13 Remedial Action Response By: Date 1/23/96	14 Remedial Action Due Date SEE PAGE 4 Date
15 Remedial Action Response Acceptance Date 1/31/96	16 PR Verification/Closure Date N/A

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**17 Recommended Actions:**

1. Provide the methodology and the basis for satisfying the QARD requirements into the work process.
2. Review the Kiewit/PB Inspectors (Level-I, Level-II, and Level-III) certifications to ensure the CA, in fact has the education, experience, and/or required training in accordance with MCP-10.1, Section 3.1.5 and was tested and certified as a Level-III in each NDE method (RT, PT, MT, UT) or Inspection discipline (civil, construction, welding, mechanical, electrical) that the CA certified personnel in.

**18 Investigative Actions:**

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**19 Root Cause Determination:**

NONE REQUIRED

**20 Action to Preclude Recurrence:**

SEE PAGE 5

21 Response by: <i>D. Christ</i> Date <i>1/23/96</i>	22 Corrective Action Completion Due Date: <i>MAR 16, 1996</i>
23 Response Accepted QAR <i>Al Morris</i> Date <i>1/31/96</i>	24 Response Accepted AOQAM <i>[Signature]</i> Date <i>2-15-96</i>
25 Amended Response Accepted QAR <i>N/A</i> Date	26 Amended Response Accepted AOQAM <i>N/A</i> Date
27 Corrective Actions Verified QAR <i>[Signature]</i> Date <i>9/6/96</i>	28 Closure Approved by: AOQAM <i>[Signature]</i> Date <i>9/13/96</i>

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Block 5 continued

In addition, the Level-III personnel shall also be capable of evaluating the adequacy of specific programs used to train, qualify, and certify the personnel."

Block 6 continued

- e) 3.2.6 Does not provide the methodology of documenting additional education, training , and/or experience.
- f) 3.5.1 CA is not tested or certified (see b above)
- g) 3.5.7 Agree with no general test being required when associated with a National recognized Certification ASNT TC.1A or AWS D.1.1, Weld Inspection. The Inspector; however, needs to be knowledgeable of YMP specification, drawings, and Kiewit/PB implementing documents.

NOTE: Kiewit/PB has certified Level-I inspectors, the program does not provide for on-the-job training under the direct supervision of a qualified person.

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Remedial Actions:

Item 1.a)

MCP-10.1, Paragraph 3.1.1B is not intended to provide the methodology nor basis for determining a candidate's capabilities. It simply lists the capability requirements for Level II inspectors. Paragraph 3.1.2 and Section 3.2 provide the methodology for determining that individuals meet the requirements of Paragraph 3.1.1B. However, to resolve this concern, Section 3.2 will be revised to clearly indicate that the education, experience, and the results of the examination or capability demonstration shall be reviewed and evaluated to determine that the candidate for certification has demonstrated capabilities as defined by Paragraphs 3.1.1A., B., or C. as applicable.

Items 1. b) and f)

MCP-10.1 will be revised to indicate that the Certifying Agent is responsible for the overall control and administration of the Kiewit/PB program for the qualification and certification of inspection and testing personnel. It will further require that persons certifying inspectors shall be themselves certified Level III in the discipline of the person being certified.

It should be noted that the Kiewit/PB Certifying Agent is Certified Level III in RT, UT, MT, PT, Welding Inspection, Civil Inspection, and Construction Inspection. A review has been conducted and it has been verified that all Kiewit/PB inspectors that have conducted QARD-related inspections have been certified by individuals who were properly certified Level III in the applicable disciplines. Also, Kiewit/PB will assure that no QARD related inspections will be performed by individuals who have not been certified by an appropriately certified Level III. No further evaluation or remedial actions are required.

Item 1.e)

MCP-10.1, Paragraph 3.2.6 states "Should a candidate fail an examination, additional education, training and/or experience, as determined by the Certifying Agent, shall be completed and documented prior to re-examination." MCP-10.1 will be modified to address the method of documenting the additional education, training and/or experience prior to re-examination as determined by the CA.

Item 1.g)

Kiewit/PB agrees that the inspector needs to be knowledgeable in the use of specifications and implementing documents. This is why MCP-10.1, Paragraph 3.5.7B requires the administration of a specific examination in accordance with paragraph 3.2.2B. This, along with the indoctrination and training accomplished in accordance with MCP-2.4, ensures these inspectors are knowledgeable of YMP specifications, drawings, and Kiewit/PB implementing documents.

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Revisions to MCP-10.1 will be completed by February 16, 1996.

Action to Preclude Recurrence:

Personnel responsible for implementing MCP-10.1 requirements will be trained in its new requirements after revision.

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YM-96-D028 Corrective Action Verification

Remedial Action:

As committed in the approved response, MCP-10.1, "Qualification and Certification of Inspection and Test Personnel," Revision 8, was issued, effective February 20, 1996.

Item 1.a)

Section 3.2 was revised to state that the appropriate discipline Level III shall review the candidate's education, training, and experience to determine qualification.

Items 1.b and f)

Section 3.0 was revised to state that the Certifying Agent (CA) is responsible for the administration of the K/PB qualification and certification program for inspection and test personnel. Also stated is that the CA shall ensure that inspection and test personnel are certified by a Level III in the appropriate discipline.

All K/PB inspectors overseeing QA activities have been certified by a Level III in the appropriate discipline.

Item 1.e)

Section 3.2.6 was revised to require additional education, training, and/or experience when a candidate fails an examination. This is to be documented in an Inter Office Memorandum of Record (IOMR) by the applicable discipline Level III and placed in the certification file along with any training records and the re-examination results.

Item 1.g)

Based upon the approved response, there was an apparent misunderstanding of the procedure in regards to inspection and test candidate familiarity with Project specifications and implementing documents. Although Section 3.5.7 exempts candidates with A.W.S. certifications from taking the general examination, the specific examination is still required and includes questions on applicable specifications/procedures.

Action to Preclude Recurrence:

Inspection and test personnel training records were reviewed and verified to include documentation of training to MCP-10.1, Revision 8.

Based upon satisfactory completion of corrective action, this DR is closed.

Verified By: K. A. Hodges

Date: 9/6/96