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

APR 09 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

VERIFICATION OF CORRECTIVE ACTION AND CLOSURE OF DEFICIENCY REPORT (DR) YMQAD-96-D027 RESULTING FROM YUCCA MOUNTAIN QUALITY ASSURANCE DIVISION'S (YMQAD) AUDIT YM-ARC-96-03 OF KIEWIT/PARSON'S BRINCKERHOFF (SCPB: N/A)

The YMQAD staff has verified the corrective action to DR YMQAD-96-D027 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 794-7945 or Donald J. Harris at 794-7356.

Richard E. Spence, Director
Yucca Mountain Quality Assurance Division

YMQAD:RBC-1515

Enclosure:
DR YMQAD-96-D027

cc w/encl:
T. A. Wood, 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. P. Ruth, M&O, 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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NH03

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PERFORMANCE/DEFICIENCY REPORT

1 Controlling Document:	2 Related Report No.
Quality Assurance Requirements and Description (QARD), DOE/RW-0333P, Rev. 5	
3 Responsible Organization:	**4 Discussed With:**
Kiewit/Parsons Brinckerhoff	Jon Christensen

5 Requirement/Measurement Criteria:
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 2.0, Paragraph 2.2.1B states: "Affected Organizations shall establish implementing documents applicable to their scope of work that translate QARD requirements into work processes."

6 Description of Condition:
Contrary to the above cited QARD requirements:

1) MCP-4.0, "Procurement," Revision 12, fails to provide the required methodology and proper sequence. In addition, omissions or errors were identified as follows:

a) Section 3.2.5 Does not include review criteria for Engineering.
b) Section 3.2.6 Does not include review criteria for Construction Management.
c) Section 3.3.1 Only provides limited QE review criteria.
d) Section 3.4.7 Only parrots the QARD requirement for bid/proposal evaluations; there are no criteria or methodology.
e) Section 3.6.1 Requires a technical and quality review of the purchase order; this section addresses QE functions but nothing for the technical review.

(Continued on Page 3)

7 Initiator	9 QA Review
Donald J. Harris Date 12-21-95	QAR Donald J. Harris Date 12-21-95
10 Response Due Date	**11 QA Issuance Approval**
20 Working Days from Issuance	QAR (PR)/AOQAM (DR) Date 12-21-95

12 Remedial Actions:
ITEMS 1 AND 2 - SEE PAGE 6
ITEM 3 - NONE

13 Remedial Action Response By:	14 Remedial Action Due Date
Jon D Christensen 1/24/96 Date	SEE PAGE 6 Date
15 Remedial Action Response Acceptance	**16 PR Verification/Closure**
QAR D. J. Harris Date 1/31/96	QAR N/A Date

Exhibit AP-16.1Q.1

Enclosure

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DEFICIENCY REPORT

17 Recommended Actions:

1) Revise MCP-4.0, MCP-7.1, and VTP-001; provide methodology, proper sequence, acceptance criteria, and correct errors and omissions.

18 Investigative Actions:

SEE PAGES 4, 5, & 6

19 Root Cause Determination:

NONE REQUIRED. ROOT CAUSE FOR PROCEDURAL ERRORS IS BEING ADDRESSED IN YMQAD 96-D020

20 Action to Preclude Recurrence:

TO BE ADDRESSED IN YMQAD 96-D020

21 Response by: [signature] Date 1/24/96	22 Corrective Action Completion Due Date: SEE YMQAD 96-D020
23 Response Accepted QAR [signature] Date 1/31/96	24 Response Accepted AOQAM [signature] Date 2-5-96
25 Amended Response Accepted QAR Date	26 Amended Response Accepted AOQAM Date
27 Corrective Actions Verified QAR [signature] Date 4/2/96	28 Closure Approved by: AOQAM [signature] Date 4.8.96

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BLOCK 6: (Continued)

f) Section 3.6.3C Needs to address purchase orders.
g) Section 3.6.3 The procedure does not address any procurement action when the design documents require a change to existing procurement documents.
h) Section 3.7.5 Reference 2.6 is incorrect; it should be 2.4 and maybe 2.6.
i) Section 3.9 Supplier certification requirements appear to be out of sequence, especially if required to be in a PR (Section 3.2), purchase order (Section 3.5), and RIP (Section 3.2.10).
j) Section 3.10B Reference 2.4 should be 2.5.
k) Section 3.10D Reference 2.5 should be 2.4.
l) Section 4.2 Records turnover in conflict with YAP 17.1Q, ICN #1, Attachment 9.6 records submittals.

2) MCP-7.1, "Acceptance of Procured Items and Services"

a) Section 3.3.1C Technical verification of product produced. This requirement is also referenced in 3.3.6 and 3.9; however, the procedure does not provide any criteria or methodology.
b) Section 3.4.13 Beside the RIP there are other required documents; i.e., test reports, certifications, deficiency documents, etc.
c) Section 3.5.2A Fails to provide any methodology.
d) Section 3.7.6 QC should obtain Exhibit 5.2 from the QE and include it and the certifications with the procurement package.
e) Section 3.11.3 Established QC instructions are not identified.
f) Section 3.13.1 Material Dedication Plan; the procedure fails to provide any criteria or methodology for the development of the dedication plan. Reference 2.9 is the QARD, which is only a requirements document; it does not provide any methodology.
g) Section 3.13.2C Inspection is performed to the RIP, not to the dedication plan. Inspection should not have anything to do with that document.
h) Section 4.1C This should include the supplier's documentation.
i) The Receiving Inspector Level II uses a red ink stamp for QC review of the Level I processed documents (RIPs). The Level II stated that this stamp is for the verification of the documented entries on the RIP by the Level I. The use of this stamp is not defined or explained in this procedure.

3) VTP-001, "Verification Testing of Rockbolts"

a) Section 3.6.2 Specifies the test methods of ASTMF432 and states the acceptance of the test shall be based on meeting the manufacturer's minimum published requirements. The published requirements are not a controlled document or immediately available. The quantitative or qualitative acceptance criteria should be in the VTP so the material test lab can flag discrepancies or incorporated into the RIP (or both).

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Kiewit/PB response to DOE DR YMQAD-96-D027

The following are responses to the DOE comments regarding MCP-4.0 rev 12:

Item 1(a)
Par. 3.2.5 will be revised to include review criteria for engineering review of PR's.

Item 1(b)
Since the review of PR's by construction management is basically a financial and quantity review and is not quality affecting, review criteria is not applicable, however, procedure will be modified to reflect this position.

Item 1(c)
The review criteria for QE is considered sufficient, however, Par. 3.3.1.A is somewhat unclear and will be modified for clarity.

Item 1(d)
The DR states that there are no criteria or methodology for bid/proposal evaluation. Although the Kiewit/PB procedure essentially repeats the evaluation criteria contained in the QARD, we believe that this is adequate for the following reasons:

- A very limited number of proposals for quality-related procurements are conducted. There are currently no plans for additional procurements to be made from qualified suppliers.

- The Kiewit/PB staff involved in proposal evaluations is very small. The personnel conducting these evaluations are experienced, which results in adequate and properly documented evaluations.

Item 1(e)
The procedure will be revised to more adequately address the technical review of PO's.

Item 1(f)
DR states that paragraph 3.6.3.C needs to address PO's. Procedure will be modified to address actions taken regarding the impact on outstanding PO's due to design changes.

Item 1(g)
DR states that the procedure does not address any procurement action when design documents require a change to procurement documents. Kiewit/PB disagrees with this opinion. Paragraph 3.6.3.C requires QE to notify procurement when changes to existing PO's are required and paragraph 3.6.3.A requires all revisions to PO's be processed the same as the original PO. No deficiency exists.

Item 1(h)
Procedure typographical error will be corrected.

Item 1(i)
The DR states that this section appears to be out of sequence. Kiewit/PB disagrees with this opinion. Paragraph 3.2.3.E states that the PR shall include the requirements for supplier documentation as required by the applicable specification and further instructs the PR originator to refer to paragraph 3.9 (the paragraph in question) for additional information. No deficiency exists.

Items 1(j) and 1(k)
Procedure typographical errors will be corrected.

Item 1(l)
The DR states that the procedure is in conflict with YAP 17.1Q in terms of records turnover. Although Kiewit/PB disagrees with this opinion, we are going to make some changes to the turnover process. Paragraph 4.2 of our procedure states that procurement records will be retained by the procurement department until the end of the fiscal year following the year of PO closeout. At that time procurement prepares the table of contents, as required by YAP 17.1Q, and either "authenticates" for Q orders or "submits" for non-Q. The package is then turned over within 20 days of this authentication date. This practice complies with the requirements of the YAP.

After investigating this process, Kiewit/PB has concluded that we do not need to keep these records as long as originally thought and will revise our procedure to state that procurement will prepare the Table of Contents for authentication or submittal no later that 30 days from closure of the order. The authenticated or submitted packages will then be turned over to the M&O within 20 days from that date. It will still be at the discretion of the procurement department as to when a procurement file is considered closed.

The following are responses to DOE comments regarding MCP 7.1 Rev.7:

Item 2(a)
The DR states that there is no criteria or methodology for implementing the "Technical Verification of Product Produced" method of acceptance. This is a true statement, however, as stated in paragraph 3.9 of the procedure, Kiewit/PB does not anticipate utilizing this method for acceptance of items. This method of acceptance is referenced in the procedure to show that Kiewit/PB has considered all of the acceptance methods as identified in the QARD. Should it become appropriate, in the future, to use this method of acceptance, the procedure will be revised to include applicable criteria and methodology. No deficiency exists.

Item 2(b)
The DR states that, in addition to the RIP, there are other required documents to be placed in the FFP. This is a true statement, however, the procedure section in question (section 3.4) covers RIP development and processing. The content of the FFP is addressed in MCP 4.0. No deficiency exists.

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Item 2(c)
The DR states that there is no methodology for arranging an independent inspection and/or test of the item when the C of C method of acceptance is used. Kiewit/PB disagrees with this opinion. A requirement to "arrange an independent inspection and/or test" is adequately clear and no more detail is required. It should be understood that Kiewit/PB does not use the C of C method of acceptance of Q items. The method is referenced in the procedure to show that all of the acceptance methods as identified in the QARD have been considered. No deficiency exists.

Item 2(d)
Verbal confirmation is obtained by QC from QE of the acceptance of supplier certifications prior to release of the items by QC. A copy of the QE review (exhibit 5.2) is then forwarded to QC for record purposes and another copy along, with the actual supplier certifications, is forwarded procurement for inclusion into the procurement package. Although no deficiency exists, paragraph 3.7.6 will be revised to better define the actual process.

Item 2(e)
Procedure will be revised to include reference to QCP-002 for placement of "Hold" tags.

Item 2(f)
Since the requirements and criteria for the development of a Material Dedication Plan are unique to each specific case, the Dedication Plans will be based on the requirements provided by the design specifications. Procedure will be modified to reflect this position.

Item 2(g)
The statement that "Inspection is performed to the RIP, not to the dedication plan" is true and that is exactly what we do. Any other interpretation of paragraph 3.13.2C is a mis-interpretation. No deficiency exists.

Item 2(h)
The DR states that this paragraph should include supplier's documentation as Lifetime QA Records. This section of the procedure identifies only those Lifetime QA Records which are generated by the procedure. Supplier documentation is not generated by this procedure, however, MCP-4.0 will be revised to include supplier documentation as QA records.

Item 2(i)
The requirement is that the Level II inspector review for acceptability, the entries on the RIP performed by a Level I inspector. The Level II inspector has elected to use a stamp to track the entries of the Level I which he has verified. Since we don't agree that procedures should be reduced to this level of detail, the use of the stamp for this purpose will be discontinued.

Remedial Action response to YMQAD-96-D027

All revisions to MCP-4.0 and MCP-7.1, identified in investigative actions, will be completed by 2/29/96

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Response to YMQAD-96-D027 ITEM 3A

K/PB disagrees that the stated deficiencies exist.

The finding alleges that the manufacturer's published requirements are not controlled. There are two reasons that K/PB disagrees with this statement:

- The manufacturer's requirements are "published" for general description and use as supplier catalogs. These are generally available to the public and, normally, do not require "control".

- In this case the manufacturer's requirements were a submittal item (02165-VD-04) and are controlled by the submittal process as a specification requirement.

The finding alleges that the published requirements were not "immediately available". Although the finding does not specify where the requirements were not immediately available, a copy is, and has been, immediately available in the K/PB QC Coordinator's office. The QC Coordinator is the person responsible for determining that the test results, reported by the Test Lab, are acceptable.

The finding states that the acceptance criteria "should" have been provided to the Test Lab and/or incorporated into the RIP (Receipt Inspection Plan). Although previous data has been properly reviewed and accepted, we agree to incorporate the acceptance criteria into the applicable RIP for future work. RIP's are in process of being revised and will be completed by 2/15/96.

Deficiency Report (DR) YMQAD-96-D027

Block 27	Corrective Action Verification
Item 1(a)	MCP-4.0, Revision 13, effective 03/20/96 - Incorporates review criteria for Engineering (Technical) in paragraph 3.1.4 and 3.5.1C.
Item 1(b)	MCP-4.0 - Incorporates Review Criteria for Construction Management for financial and quantity of Items in paragraph 3.1.6.
Item 1(c)	MCP-4.0 - QE Review Criteria was modified and the reference to the OCRWM QARD to add requirements was deleted from the procedure. Paragraph 3.2 now address the methodology for the QE review.
Item 1(d)	MCP-4.0, paragraph 3.3.7 only parrots the QARD requirements and fails to provide the methodology for bid\proposal evaluation; however, the YMQAD Director reviewed the bid package for the Steel Sets and felt it was documented in a satisfactory manner and since there would be a very limited number of RFP/RFO evaluation of Q Items in the future, there was no need to revise the procedure. In addition, paragraph 3.3.4 was revised to reflect that when a RFP/RFQ is to be generated in lieu of reflecting a requirement for all procurements.
Item 1(e/f)	MCP-4.0 - Provide direction to verify supplies are on the OCRWM Qualified Suppliers list in paragraph 3.5.1. In addition, paragraph 3.5.1C requires engineering documented reviews, paragraph 3.5.1D, requires QE document reviews and paragraph 3.5.1E requires written notification to procurement for changes to Technical or Quality requirements.
Item 1(g)	MCP-4.0 - Provides direction when Reviews of Amendments to PO's and contracts that affect Technical and Quality requirements are required in paragraph 3.5.1E and when revisions to Specification that require changes to Continuing Use PO's and PO's that would impact the acceptability of items in paragraph 3.5.1F.
Item 1(h)	MCP-4.0 - Procedure Typographical error was corrected in new paragraph 3.7.1
Item (i)	This deficiency description was incorrectly documented on the DR YMQAD-96-D027. The Kiewit/PB statement of no deficiency exists is correct. Therefore, their response is satisfactory.
Item 1(j/k)	MCP-4.0 - The references in Requirements for Commercial Grade Material procured for a Q List use or Application were corrected in paragraph 3.9.1C.
Item 1(l)	MCP-4.0 - Section 4.0 Records, was revised to delete the potentially 2 year turn

over of completed procurement records. Deficiency Document YMQAD-96-D042 has resulted in the M&O issuance of a Document Action Request (DAR) to clarify when a document becomes a Record in YAP17.1Q.

Item 2(a) MCP-7.1, Revision 8, effective 3/20/96 - The procedure revision states that Technical Verification Method of Accepting Q-listed Items and Services is not being utilized by K/P13 in paragraph 3.8.

Item 2(b) MCP-7.1, Procedure paragraph 3.3.1.2 was revised and addresses that "prior to final acceptance of the RIP, the Inspector shall review each line items to ensure all required information and inspection attributes have been completed, NCR resolved, and documentation not previously examined for adequacy and completeness have been reviewed and accepted." Paragraph 3.3.13 requires submittal of the completed RIP to the Purchasing Agent.

Item 2(c) MCP-7.1, Revisions 8, paragraph 3.4 deleted the requirement for the QE to verify the validity of the Suppliers C of C. K/PB does not use this method of acceptance.

Item 2(d) MCP-7.1, Revision 8, paragraph 3.11.2 requires the QE review of the Suppliers Certifications to be documented on Exhibit 5.2 and paragraph 3.11.3 requires the QE to provide a copy of the review for QC to determine acceptability of the RIP.

Item 2(e) MCP-7.1, Revision 8 - Procedure paragraph 3.10.3 was revised to include reference to QCP-002 in lieu of unidentified QC instructions.

Item 2(f) MCP-7.1, Revision 8, paragraph 3.12.1 requires the dedication requirements to be included in the RIP. K/PB deleted the Dedication Plan as a document from the procedure.

Item 2(g) MCP-7.1, Revision 8, paragraph 3.12.1 was revised to delete the Document identified as a Dedication Plan. The RIP incorporates the dedication information from the Specification into the RIP.

Item 2(h) MCP-7.1, Revision 8, paragraph 4.1C was revised to include completed Suppliers documentation and K/PB review results which includes the Suppliers documentation.

Item 2(i) The Level II Inspectors have been notified not to use the unidentified stamp to track the entries of the Level I, which the Level II has verified.

Item 3(a) The quantitative/qualitative acceptance criteria was incorporated into the VTP's as follows:

VTP-001, Revision 3, effective 3/18/96 Testing Williams Rockbolts, paragraph 3.2A Test Rockbolts & Nuts, 80,000 lbs. minimum ultimate strength. B Couplers Tested 91,000 lbs. minimum strength.

VTP-002, Revision 3, effective 3/8/96 Rockbolt Grout Cube Sampling, Handling and Compressive Strength Test Procedure. Paragraph 3.6.2 Test Specimens - a minimum compressive strength of 3,000 PSI.

VTP-003, Revision 2, effective 3/18/96, Verification Testing of Atlas-CoPCo Super Swellex Rockbolts. Paragraph 3.2.2C breaking strength 44,000 lbs.

Conclusion: Based on the above verifications this DR's corrective action is acceptable.

QAR A J Morris Date: 4/2/96