

U.S. DEPARTMENT OF ENERGY
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT
OFFICE OF QUALITY ASSURANCE

AUDIT REPORT

OF

CIVILIAN RADIOACTIVE WASTE MANAGEMENT SYSTEM
MANAGEMENT AND OPERATING CONTRACTOR

AT

KIEWIT/PARSONS BRINCKERHOFF

LAS VEGAS, NEVADA

K/PB-ARC-97-06

NOVEMBER 18-22, 1996

Prepared by:

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Date: 12-5-96

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1.0 EXECUTIVE SUMMARY

As a result of Quality Assurance (QA) Audit K/PB-ARC-97-06, the audit team determined that Kiewit/Parsons Brinckerhoff (Kiewit/PB) is satisfactorily implementing an adequate and effective QA Program, with the exception of those areas where deficiencies existed, in accordance with the U.S. Department of Energy (DOE) Office of Civilian Radioactive Waste Management (OCRWM) Quality Assurance Requirements and Description (QARD), DOE/RW-0333P, Revision 5 and Kiewit/PB's implementing procedures for QA Program Elements 1.0, 2.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0, 10.0, 11.0, 12.0, 13.0, 14.0, 15.0, 16.0, 17.0, Supplement I, Supplement IV, and Supplement V.

The audit team observed that considerable improvement in QA Program effectiveness has been made over the last year.

The audit team identified four conditions adverse to quality during the audit that resulted in the issuance of three Deficiency Reports (DR) described in Section 5.5.2, and one Performance Report (PR) described in Section 5.5.3. There were 13 conditions adverse to quality identified by the audit team and corrected prior to the postaudit meeting. These conditions are described in Section 5.5.4 of this report. Additionally, there were five recommendations resulting from the audit, which are detailed in Section 6.0 of this report.

2.0 SCOPE

The audit was conducted to evaluate the adequacy of, compliance to, and the effectiveness of Kiewit/PB's implementation of the OCRWM QA Program as described in the QARD and Kiewit/PB implementing procedures.

The following QA program elements/requirements were evaluated during the audit, in accordance with the approved audit plan.

QA PROGRAM ELEMENTS/REQUIREMENTS

- 1.0 Organization
- 2.0 Quality Assurance Program
- 4.0 Procurement Document Control
- 5.0 Implementing Documents
- 6.0 Document Control
- 7.0 Control of Purchased Items and Services
- 8.0 Identification and Control of Items
- 9.0 Control of Special Processes
- 10.0 Inspection
- 11.0 Test Control
- 12.0 Control of Measuring and Test Equipment
- 13.0 Handling, Shipping, and Storage

14.0 Inspection, Test and Operating Status
15.0 Nonconformances
16.0 Corrective Action
17.0 Quality Assurance Records
Supplement I, Software
Supplement IV, Field Surveying
Supplement V, Control of the Electronic Management of Data

The following QA program elements/requirements were not reviewed during the audit because they were found to be not applicable, since Kiewit/PB currently has no activities to which these elements apply:

3.0 Design Control
18.0 Audits
Supplement II, Sample Control
Supplement III, Scientific Investigation

3.0 AUDIT TEAM AND OBSERVERS

The following is a list of audit team members, their assigned areas of responsibility, and observers:

<u>Name/Title/Organization</u>	<u>QA Program Elements Requirements</u>
Patrick V. Auer, Audit Team Leader, Office of Quality Assurance (OQA)	1.0, 9.0, 10.0, 11.0, 14.0
John R. Doyle, Auditor, OQA	10.0, 12.0, 13.0, Supplement IV
Stephen D. Harris, Auditor, OQA	2.0, 15.0, 17.0, Supplements I & V
Kristi A. Hodges, Auditor, OQA	2.0, 9.0, 16.0
Franklin B. Smith, Auditor, OQA	4.0, 5.0, 6.0, 7.0, 8.0
Dave Hackbert, Observer, M&O	

4.0 AUDIT MEETINGS AND PERSONNEL CONTACTED

The preaudit meeting was held on November 18, 1996, at Kiewit/PB offices in Las Vegas, Nevada. Daily debriefing and coordination meetings were held with Kiewit/PB management and staff, and daily audit team meetings were held to discuss audit status. The audit was concluded with a postaudit meeting held on November 22, 1996, at Kiewit/PB's offices in Las Vegas, Nevada. Personnel contacted during the audit are listed in Attachment 1. The list includes those who attended the preaudit and postaudit meetings.

5.0 SUMMARY OF AUDIT RESULTS

5.1 Program Effectiveness

The audit team concluded that, overall, the Kiewit/PB QA Program is adequate and is being satisfactorily implemented for the scope of this audit. The results for each program element evaluated are contained in Attachment 2, Summary Table of Audit Results. The audit team observed that considerable improvement in QA Program effectiveness has been made over the past year. Personnel interviewed during the course of the audit were knowledgeable in their respective areas and were very professional in their level of cooperation.

5.2 Stop Work or Immediate Corrective Action Taken

There were no Stop Work Orders, immediate corrective actions, or related additional items resulting from this audit.

5.3 QA Program Audit Activities

A summary table of audit results is provided in Attachment 2. The audit checklists contain the details of the audit evaluation along with identification of the objective evidence reviewed. The checklists are kept and maintained as QA Records.

5.4 Technical Audit Activities

There were no technical areas evaluated during this audit.

5.5 Summary of Deficiencies

The audit team identified four conditions adverse to quality during the audit for which three DRs and one PR have been issued. Thirteen additional conditions adverse to quality were identified. However, they were considered isolated in nature and were corrected prior to the postaudit meeting.

Synopses of conditions adverse to quality documented as DRs, PRs, and those corrected during the audit are detailed below. The DRs and PRs have been transmitted under a separate letter.

5.5.1 Corrective Action Requests

None.

5.5.2 Deficiency Reports

DR YM-97-D012

Documented evidence of technical reviews of purchase requisitions required by Kiewit/PB procedure was not available.

DR YM-97-D013

Non-Conformance Report (NCR) continuation pages which describe changes and delta identification marks were not included or indicated on revised NCRs as required by project procedure.

DR YM-97-D014

Deficient conditions identified during record package reviews were documented on Quality Control Inspection Reports instead of on Performance/Deficiency Reports as required by project procedures.

5.5.3 Performance Reports

PR YM-97-P002

Kiewit/PB procedure requires an individual comparing manually collected data and downloaded input data to verify accuracy of the input data against the original data. Collected data sheets were not signed to provide objective evidence of the verification review.

5.5.4 Deficiencies Corrected During the Audit

Deficiencies considered isolated in nature and only requiring remedial action can be corrected during the audit. The following deficiencies were identified as such and corrected during the audit:

1. The following corrections were made to Work Package 2.25.4B: two omitted entries on a Traveler were added; Work Package Inventory forms were updated to reflect the accurate status of a listed NCR, and to include reference to the DR that replaced that NCR; and the deficiency document list was updated to include the closed status of the listed NCR and inclusion of the associated DR.

2. Contrary to the requirements of QARD Section 2.2.12.H, one individual had inadequate justification for post-effective date training. A review of work performed by that individual and adequate justification was provided prior to the postaudit meeting.
3. Contrary to the requirements of Section 3.4 of MCP-2.4, Revision 11, "Indoctrination, Training, and Qualification," one instructor had a training waiver prepared, but not approved. Approval was obtained prior to the postaudit meeting.
4. Contrary to the requirements of Section 3.5 of MCP-2.6, Revision 8, "Project Training," one trainer had no qualification form available and his name was not on the trainer list. It was verified that the trainer was qualified and these deficiencies were corrected prior to the postaudit meeting.
5. Initial General Education Training exams were not being held in training files as implied by Section 3.1.3.C of MCP-2.6, Revision 8, "Project Training." The intent of the procedure was to only retain Kiewit/PB training exams. This was clarified in MCP-2.6 and prepared for issue prior to the postaudit meeting.
6. Contrary to the requirements of Section 3.1.7 of TCP-2.6, Revision 5, "Materials Handling Procedure," Swellex rockbolts in the "issued for construction" yard were uncovered. They were immediately covered by Kiewit/PB personnel.
7. Contrary to the requirements of Section 3.4.3 of MCP-15.0, Revision 11, "Control of Nonconforming Items," two NCRs issued by Kiewit/PB were not submitted for information to M&O QA and the Architect/Engineer. Information copies of the two NCRs were submitted to the required parties prior to the postaudit meeting.
8. Contrary to the requirements of Section 5.1.1.d of YAP-15.1Q, Revision 2, ICN 1, "Control of Nonconformances," hold tags had been placed on two items, but were not found in place during the audit. The hold tags were replaced prior to the postaudit meeting.
9. Contrary to the requirements of Section 5.1.1.e of YAP-15.1Q, Revision 2, ICN 1, "Control of Nonconformances," one non-conforming steel set was marked with a hold tag, but was left in a group of acceptable steel sets. The nonconforming steel set was segregated from the acceptable steel sets prior to the postaudit meeting.

10. Contrary to the requirements of AP-16.3Q, Revision 0, "Trend Evaluation and Reporting," one Deficiency Document Encoding Form (DDEF) resulting from a Corrected During the Surveillance (CDS) deficiency had not been entered into the Trend Database. The entry was made prior to the postaudit meeting.
11. Two DDEFs resulting from Kiewit/PB supplier surveillance CDSs had not been generated. During the audit, Kiewit/PB generated two DDEFs for the CDS's and entered them into the Trend Database.
12. Contrary to the requirements of Section 3.2.2 of TCP-2.33, Revision 1, "Control of Electronic Management of Survey Data," data packages did not reference the electronic data collector on data packages, but rather the data file obtained, which was the intent of the procedure. The procedure was revised and prepared for issue prior to the postaudit meeting.
13. Contrary to the requirements of Section 3.1.1 of TCP-2.34, Revision 1, "Control of Survey Equipment," traceability to calibration standards and reference to the current revision of the procedure used was not in one of the data packages reviewed. The material was placed in the data package prior to the postaudit meeting.

6.0 RECOMMENDATIONS

The following recommendations resulted from the audit and are presented for consideration by Kiewit/PB management.

1. Increase scrutinizing of Kiewit/PB generated surveillance reports to ensure that recommendations and CDSs included therein do not meet the criteria for generating a deficiency document.
2. CDSs should be written to require only a single DDEF be generated. CDSs should only be combined if the issues are closely related with a likelihood of the same trend codes.
3. Omit any Kiewit/PB surveillance report headings that are not recognized in the Kiewit/PB surveillance procedure. Subheadings such as "Observations" and "Concerns" should be avoided.
4. Include in the Measuring and Test Equipment (M&TE) usage log where M&TE is located to ease NCR/deficiency document investigative action or locate M&TE.

5. Kiewit/PB should evaluate all NCRs dispositioned Use-As-Is for annotation of affected specifications and drawings. Two NCRs dispositioned Use-As-Is were noted where the affected specification was not annotated with the NCR number. This situation had been discovered during a previous surveillance and two DRs remain open (YMQAD-96-D060 and YMQAD-96-D061).

7.0 LIST OF ATTACHMENTS

Attachment 1: Personnel Contacted During the Audit

Attachment 2: Summary Table of Audit Results

ATTACHMENT 1

Personnel Contacted During the Audit

<u>Name</u>	<u>Organization/Title</u>	<u>Preaudit Meeting</u>	<u>Contacted During Audit</u>	<u>Postaudit Meeting</u>
Bob Armstrong	K/PB QA Manager	X	X	X
Vic Barish	K/PB QA Engineer	X	X	X
Greg Bates	K/PB Surveyor		X	
Ron Berlien	M&O Surveillance Lead	X		X
Jim Blaylock	DOE Engineer			X
Teresa Brookeson	K/PB Document Control		X	
Mary Lou Brown	K/PB Training Supervisor		X	X
Toni Caselli	K/PB Records		X	
Howard Cox	K/PB QC Manager		X	X
Terry Dixon	K/PB QC Supervisor		X	
Lyman File	K/PB Construction Manager		X	
William Glasser	M&O Field QA			X
Dave Haas	K/PB Quality Engineer		X	
Dave Hackbert	M&O Observer	X		X
Forbie Harper	K/PB Receipt Inspector		X	
Tom Healy	K/PB Procurement		X	
Kevin Krank	K/PB Quality Control		X	
Tina Limon	K/PB Deputy Manager	X	X	
Dave Osborne	K/PB QA Engineer		X	
Augustin Passalacqua	M&O Title III Engineer		X	
Tim Pearia	K/PB Chief Surveyor		X	
Carol Rixford	K/PB Records Manager		X	X
Steve Schuermann	K/PB QE Manager	X	X	X
Gayln Schumacher	K/PB Quality Control		X	
Tom Tomek	K/PB Welding Engineer		X	
Charlie Warren	OQA Audit Lead			X
Toby Wightman	K/PB Project Manager	X	X	
Perry Wilson	K/PB Quality Engineer		X	

ATTACHMENT 2
Summary Table of Audit Results
For Procedural Compliance Evaluations

ELEMENT	IMPLEMENTING DOCUMENTS	DETAILS (Checklist)	DEFICIENCIES	RECOMMENDATIONS	PROGRAM ADEQUACY	PROCED COMPLIANCE	OVERALL
1	MCP-1.0, R9	pgs. 1-2			SAT	SAT	SAT
2	MCP-2.0, R18	pgs. 3-9	CDA # 1		SAT	SAT	SAT
	MCP-2.1, R7	pgs. 10-13		REC # 1,2,3	SAT	SAT	
	MCP-2.4, R11	pgs. 14-17	CDA # 2,3		SAT	SAT	
	MCP-2.6, R8	pgs. 18-20	CDA # 4,5		SAT	SAT	
	MCP-2.7, R1	pg. 21			SAT	SAT	
4	MCP-4.0, R13	pgs. 23-24	YM-97-D012		SAT	SAT	SAT
5	MCP-5.0, R14	pgs. 25-28			SAT	SAT	SAT
6	MCP-6.0, R9	pgs. 29-32			SAT	SAT	SAT
	MCP-6.1, R5	pg. 33			SAT	SAT	
	MCP-6.2, R3	pg. 34			SAT	SAT	
	TCP-2.27, R0	pgs. 35-36			SAT	SAT	
7	MCP-7.1, R9	pgs. 37-39			SAT	SAT	SAT
	MCP-7.2, R0	pgs. 40-42			SAT	SAT	
8	MCP-8.0, R8	pgs. 43-45			SAT	SAT	SAT
9	MCP-9.0, R6	pgs. 46-48			SAT	SAT	SAT
	MCP-9.1, R5	pgs. 49-51			SAT	SAT	
	MCP-9.2, R5	pgs. 52-54			SAT	SAT	
10	MCP-10.0, R12	pgs. 55-63			SAT	SAT	SAT
	MCP-10.1, R8	pgs. 64-68			SAT	SAT	
	QCP-003, R3	pg. 69			SAT	SAT	
	VTP-005, R0	pg. 70			SAT	SAT	
11	MCP-11.0, R3	pgs. 71-72			SAT	SAT	SAT
12	MCP-12.0, R12	pgs. 73-78		REC # 4	SAT	SAT	SAT
	TCP-2.34, R1	pgs. 79-82	CDA # 13		SAT	SAT	
13	MCP-13.0, R4	pg. 83			SAT	SAT	SAT
	TCP-2.6, R5	pgs. 84-86	CDA # 6		SAT	SAT	
14	MCP-14.0, R3	pg. 87			SAT	SAT	SAT

ELEMENT	IMPLEMENTING DOCUMENTS	DETAILS (Checklist)	DEFICIENCIES	RECOMMENDATIONS	PROGRAM ADEQUACY	PROCED COMPLIANCE	OVERALL
15	YAP-15.1Q, R2, ICN1	pgs. 89-93	YM-97-D013 CDA # 8,9	REC # 5	SAT	SAT	SAT
	MCP-15.0, R11	pg. 88	CDA # 7		SAT	SAT	
16	AP-16.1Q, R1	pgs. 95-98	YM-97-D014 CDA # 11		SAT	SAT	SAT
	AP-16.2Q, R1	pgs. 99-101			SAT	SAT	
	AP-16.3Q, R0	pgs. 102-104	CDA # 10		SAT	SAT	
	AP-16.4Q, R0	pgs. 105-106			SAT	SAT	
	MCP-16.0, R6	pg. 94			SAT	SAT	
	TCP-2.18, R3	pg. 22			SAT	SAT	
17	MCP-17.0, R11	pgs. 107-111			SAT	SAT	SAT
Supp. I	TCP-2.33, R1	pgs. 125-128	CDA # 12		SAT	SAT	SAT
Supp. IV	TCP-2.3, R5	pgs. 120-121			SAT	SAT	SAT
	TCP-2.19, R1	pgs. 112-119			SAT	SAT	
	TCP-2.31, R0	pgs. 122-124			SAT	SAT	
Supp. V	TCP-2.33, R1	pgs. 125-128	YM-97-P002		SAT	SAT	SAT