



Department of Energy

Washington, DC 20585

MAR 06 1997

QA: L

L. D. Foust, Technical Project Officer
for Yucca Mountain Site
Characterization Project
TRW Environmental Safety Systems, Inc.
1180 Town Center Drive, M/S 423
Las Vegas, NV 89134

EVALUATION OF AMENDED RESPONSE AND VERIFICATION OF CORRECTIVE ACTION AND CLOSURE OF DEFICIENCY REPORT (DR) YM-97-D-014 RESULTING FROM OFFICE OF QUALITY ASSURANCE (OQA) AUDIT K/PB-ARC-97-06 OF KIEWIT/PARSONS BRINCKERHOFF

The OQA staff has evaluated the amended response and verified the corrective action to DR YM-97-D-014 and determined the results to be satisfactory. As a result, the DR is considered closed.

If you have any questions, please contact either James Blaylock at (702) 794-1420 or John R. Doyle at (702) 794-1465.

Donald G. Horton, Director
Office of Quality Assurance

OQA:JB-1062

Enclosure:
DR YM-97-D-014

cc w/encl:
T. A. Wood, DOE/HQ (RW-55) FORS
J. O. Thoma, NRC, Washington, DC
S. W. Zimmerman, NWPO, Carson City, NV
B. R. Justice, M&O, Las Vegas, NV
R. A. Morgan, M&O, Las Vegas, NV
R. E. Armstrong, M&O, Las Vegas, NV
Records Processing Center

cc w/o encl:
W. L. Belke, NRC, Las Vegas, NV
J. R. Doyle, OQA/QATSS, Las Vegas, NV
D. G. Sult, OQA/QATSS, Las Vegas, NV
R. W. Clark, DOE/OQA, Las Vegas, NV

9703120137 970306
PDR WASTE PDR
WM-11

120076



Printed with soy ink on recycled paper



NH33 1/1
wm-11
102.7

**OFFICE OF CIVILIAN
RADIOACTIVE WASTE MANAGEMENT
U.S. DEPARTMENT OF ENERGY
WASHINGTON, D.C.**

THIS IS A RED STAMP
 Performance Report
 Deficiency Report
 NO. YM-97-D-014
 PAGE 1 OF 2
 QA: L

PERFORMANCE/DEFICIENCY REPORT

1 Controlling Document: Administrative Procedure (AP) 16.1Q, Revision 1	2 Related Report No. K/PB-ARC-97-06
3 Responsible Organization: Kiewit/Parsons Brinckerhoff	4 Discussed With: H. Cox, B. Armstrong

5 Requirement/Measurement Criteria:
 AP 16.1Q, "Performance/Deficiency Reporting," Revision 1, Paragraph 2.0, "Applicability," states in part:
 "...This procedure applies to performance conditions on deficiencies identified in activities subject to quality assurance (QA) program controls and shall be used by Affected Organizations to document and resolve performance conditions or deficiencies..."

6 Description of Condition:
 Contrary to the above requirement, Work Package 2.25.4 B Section E, contains a Deficiency Document List and gives reference to Quality Control Inspection Reports (QCIRs), which are generated from QCP-009, "Tracking and Acceptance of Incomplete Construction Items," Revision 4, during the period of September 27, 1996 through October 16, 1996. The following QCIRs appear to address adverse conditions to quality that are not documented on project recognized deficiency documents.

QCIR No.	Adverse Condition
96-0065	Item 2, as per Technical Control Procedure (TCP) Section 3.3.3, and Plan -012, Revision 1, Section 3.2.2, changes to the approved sketch require Architect/Engineer (A/E) approval in the field. This hold point requires A/E approval.
96-0072	Item 1, drill bit sizes and depth of blast holes not shown beside sketch as per TCP-2.17, Paragraph 3.4.4
96-0073	Item 1, drill bit size(s) and depth of round is not noted as required per TCP-2.17, Revision 8, Section 3.4.4
96-0075	Item 6, depth of round is not noted as required per TCP-2.17, Revision 8, Section 3.4.4
96-0076	Item 2, references D&B Plan Sketch Attachment #1, Revision 1..., there is no D&B Plan in the Work Package, nor was it attached to the D&B Record Form.
96-0078, 96-0079, 96-0080	Item 1, references D&B Plan Sketch Attachment #1, Revision 1..., there is not D&B Plan in the Work Package, nor was it attached to the D&B Record Form.

7 Initiator <i>John R. Doyle</i> John R. Doyle Date 11/22/96	9 Is condition an isolated occurrence? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown; Must be Yes if PR
--	---

- 10 Recommended Action: (Not required for PR)
- 1) Investigate extent of condition.
 - 2) Identify deficient conditions and document on appropriate deficiency document (PR, DR, or CAR).
 - 3) Continue management/QA/QC meetings on bi-weekly basis.

11 QA Review: QAR <i>John R. Doyle</i> Date <u>11/23/96</u>	12 Response Due Date 20 working days from issuance
--	---

13 Affected Organization QA manager Issuance Approval: (QAR for PR) Printed Name DONALD E HORTON Signature <i>[Signature]</i> Date <u>12/4/96</u>

22 Corrective Action Verified QAR <i>John R. Doyle</i> Date <u>2/20/97</u>	23 Closure Approved by: (N/A for PR) <i>[Signature]</i> Date <u>3/5/97</u>
---	---

PERFORMANCE/DEFICIENCY REPORT RESPONSE

14 Remedial Actions:

NOT REQUIRED

15 Extent of Condition: (Not required for PR)

SEE ATTACHED MEMO QC 97-034

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:

NOT REQUIRED

19 Response by:

Initial

Amended

Date 1/2/97 Phone 5-5652

20 Response Accepted

QAR

N/A

Date

21 Response Accepted (N/A for PR):

AOQAM

N/A

Date

OFFICE OF CIVILIAN
RADIOACTIVE WASTE MANAGEMENT
U.S. DEPARTMENT OF ENERGY
WASHINGTON, D.C.

PR/DR NO. YM 97-D014
PAGE OF
QA: L

PERFORMANCE/DEFICIENCY REPORT RESPONSE

14 Remedial Actions:

Not required. See revised response on continuation pages.

15 Extent of Condition: (Not required for PR)

See revised response on continuation pages.

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:

SEE ATTACHED

19 Response by: R. E. ARMSTRONG

Initial

Amended

RE. Armstrong
Date 02/07/97

Phone 4-7344

20 Response Accepted

QAR

John Doyle

Date

2/14/97

21 Response Accepted (N/A for PR)

ROUAMM

Response Accepted

Date

3/5/97

OFFICE OF CIVILIAN
RADIOACTIVE WASTE MANAGEMENT
U.S. DEPARTMENT OF ENERGY
WASHINGTON, D.C.

8 Performance Report
 Deficiency Report

NO. YM 97-D014

PAGE OF

QA: L

PR/DR CONTINUATION PAGE

REVISED RESPONSE

Report of investigation (revised) - continued

QCIR 96-0079 & 0080

These QCIRs and investigation results are identical to QCIRs 0076 & 0078 above except that the correct attachment reference is "attachment 3". These documents were corrected 10/23/96 (see attachment 6 & 7).

Report Summary

The results of the investigation revealed that conditions adverse to quality that should have been documented on Project level deficiency documents have been recorded on appropriate Project level deficiency documents. It also confirmed that K/PB QC's in-house methods of recording, tracking and closing minor in-process documentation errors provides adequate control, violates no QARD or programmatic requirement, is in conformance with good industry practice, and is geared toward providing accurate, complete records of construction activities. In addition, generation of documentation errors as well as any other problem area discovered during the process of construction is, and has been, monitored by QC and evaluated at special QA/QC/Construction management meetings as deemed necessary.

QC will provide additional supportive documentation for closure/verification by February 17, 1997.

Pg 5 of 41 is a

Blank Page left in
document by mistake.

OFFICE OF CIVILIAN
RADIOACTIVE WASTE MANAGEMENT
U.S. DEPARTMENT OF ENERGY
WASHINGTON, D.C.

8 Performance Report
 Deficiency Report

NO. YM-97-D-014

PAGE OF
QA: L

PR/DR CONTINUATION PAGE

Verification of Closure Actions for Deficiency Report YM-97-D-014

A. Remedial Action

None Required.

B. Investigative Action

K/PB, through additional document investigations, has provided satisfactory information that reveals that the "appeared conditions adverse to quality" identified during Audit K/PB-ARC-97-06 are changes that are made during the Quality Control (QC) records review of construction records. K/PB approved Management Control Procedure (MCP) MCP-17.0 "Records Management" Rev. 11, Para. 3.3.3 and Rev. 12 Para. 3.6.3 allows for these corrections. In addition, Quality Control Procedure (QCP) QCP-009 "Tracking and Acceptance of Incomplete Construction Items" Rev. 4 describes in detail this process.

During the course of the audit, the auditor expressed concern that conditions adverse to quality were captured via QCIRs and that recognized Project Level deficiency documents (NCRs, DRs, etc.) were not generated. Further investigation of QC Inspection Report Log reveals that Nonconformance Report (YMSCO-96-0035) has been initiated and validated. An additional review of the Internal K/PB QA Deficiency Report Log reveals that Project Level Deficiency Reports (K-96-D-019, 023, 033, 034, 043, 044, 046, 048, 050, 051, 062, and K-97-D-001) have been generated. as a result QC inspections and QC records review. (See Attachments 1 and 2)

K/PB Surveillance SR-96-33 dated. 6/10/96 had also identified that deficient conditions may not be captured through the corrective action systems. As a result of this surveillance, one condition adverse to quality was identified and corrected during the course of the surveillance which addresses this condition (See SR-96-33, CDS Number 1, Attachment 3). This surveillance also documented that QCP-009 was revised to more clearly define documentation problems to preclude recurrence.

C. Root Cause Determination

None Required

D. Action to Preclude Recurrence

None Required

OFFICE OF CIVILIAN
RADIOACTIVE WASTE MANAGEMENT
U.S. DEPARTMENT OF ENERGY
WASHINGTON, D.C.

8 Performance Report
 Deficiency Report

NO. YM-97-D-014

PAGE OF

QA: L

PR/DR CONTINUATION PAGE

E. Discussion

Based on the review of objective evidence noted in section B and subsequent interviews with responsible management, indicates that K/PB is in compliance with established controls and that identified adverse conditions to quality are reported and corrected in accordance with Project procedures.

Verification of Actions to this DR are considered Complete

This DR is considered closed

QAR: John R. Doyle
John R. Doyle

Date: 2/24/97.

QC INSPECTION REPORT LOG

QC INSPECTION REPORT NO.	DATE WRITTEN	ACTIVITIES REVIEWED	WP NO	DATE COMPLETED	CHECKED BY
QCIR-96-0001	6-10-96	DRILLING/BLAST RECORDS ID # 5-01	2.25.4 LINE 4		
QCIR-96-0002	6-10-96	DRILLING/BLAST RECORDS ID # 5-02	2.25.4 LINE 4		
QCIR-96-0003	6-10-96	DRILLING/BLAST RECORDS ID # 5- (NCR-96-0035) ⁰³	2.25.4 LINE 4		
QCIR-96-0004	6-10-96	DRILLING/BLAST RECORDS ID # 5-04	2.25.4 LINE 4		
QCIR-96-0005	6-10-96	DRILLING/BLAST RECORDS ID # 5-05	2.25.4 LINE 4		
QCIR-96-0006	6-19-96	DRILLING/BLAST RECORDS ID # 5- 05A	2.25.4 LINE 4		
QCIR-96-0007	6-19-96	DRILLING/BLAST RECORDS ID # 5-07	2.25.4 LINE 4		
QCIR-96-0008	6-19-96	DRILLING/BLAST RECORDS ID # 5-09	2.25.4 LINE 4		
QCIR-96-0009	6-19-96	DRILLING/BLAST RECORDS ID # 5-10	2.25.4 LINE 4		
QCIR-96-0010	6-19-96	DRILLING/BLAST RECORDS ID # 5-11	2.25.4 LINE 4		
QCIR-96-0011	6-19-96	DRILLING/BLAST RECORDS ID # 5-12	2.25.4 LINE 4		
QCIR-96-0012	6-19-96	DRILLING/BLAST RECORDS ID # 5-13	2.25.4 LINE 4		

17 20 8

YM-97-D-014
ATTACHMENT 2

WP 2.25.4 1 LINE ITEM 4

YMP-006-R4
07/03/95

YUCCA MOUNTAIN SITE CHARACTERIZATION PROJECT NONCONFORMANCE REPORT

NCR. No. YMSC-96-0035

Page 1 of

1. Initiator Name: Richard L. Noel #22 Organization: K/PB Date: 5/15/96

2. Description of Non-Conformance:
WP 2.25.4 Supplemental Traveler Number 2.25.4-4.1, Rev. 0 Line Item No. 4 Specification 2313 Rev. 01 Section 3.01 states "Drilling and blasting operations shall be in accordance with the accepted Contractor's Controlled Drilling and Blasting Plan".

Hold Tag Applied No. of Hold Tags Applied N/A Job Package! Test Planning Package No. 96-01

3. Validation Invalidation O Non-O
Name: Richard Beaver Organization: MFOQA Date: 5/8/96

4. Disposition Evaluation

- Rework Repair Use-As-Is Conditional Release
- Reject/Scrap Limited Use Discard

Justification/Comments:

ORIGINAL
red

5. Disposition by:

Name: _____ Organization: _____ Date: _____

6. QA Concurrence with Disposition:

Corrective Action: No Yes No. _____
 Reportable Non-Reportable

Name: _____ Organization: _____ Date: _____

7. Completion of Disposition:

Hold Tag Removed No. of Hold Tags Removed _____

Name: _____ Organization: _____ Date: _____

QA/QC Concurrence:

Name: _____ Organization: _____ Date: _____

8. Final Review:

Name: _____ Organization: _____ Date: _____

90641

TCP-2.17 Rev. 6 Section 3.2.3 states in part "Changes to the approved sketches in AIE approved Drilling and Blasting Plans maybe made with approval of the AIE in accordance with Spec. 02313. The KIPB Shift Tunnel Superintendent is responsible for proposing required changes and KIPB Field Engineers are responsible for preparing sketches of actual blast plans. The changes will be recorded on the controlled Drilling and Blasting Record Form".

ORIGINAL

red

Contrary to the referenced requirements during monitoring of Drill and Blast Operations in Alcove No. 5 on 5/15/96, Blast I.D. No. 5-03, the following listed items were not in accordance with Plan-005 and the changes were not recorded on the Controlled Drill and Blasting Record Form:

- 1) Plan-005 specifies 1.2 or 1.8 m Round Loading. The blast hole drilled lengths measured 8ft. (2.4m).
- 2) Perimeter holes were loaded with one stick Geldyne and three sticks of Xactex. This is not in accordance with Plan-005 Exhibit D-Section C.
- 3) Remainder holes were loaded with ten sticks of Geldyne except for bottom right rib Delay #9 was loaded with one stick Geldyne and three sticks of Xactex. This is not in accordance with Plan-005 Exhibit D-Section C.
- 4) Plan-005 Exhibit A Burn Pattern 2 delay changes were made as follows: Delay #2 changed to Delay #1, Delay #3 changed to Delay #2, and Delay #1 changed to Delay #2.

5) The top expansion hole shown on Plan-005 Exhibit A Burn Pattern 2 was loaded with Delay #1.

6) Plan-005 Exhibit D-Section C the bottom left and right rib Delay #11 was changed to Delay #12.

ORIGINAL
red

KIEWIT/PB
YUCCA MOUNTAIN PROJECT
CONTROLLED DRILLING AND BLASTING RECORD FORM
 Sheet 1 of 3

General Data

Date Blast Fired: 5-15-96 Time Blast Fired: 3:40
 Blast Identification Number: 5-03 Blast Location: 0+90⁰⁹ (ALCOVE 5)
 Blast Station Location: 08+90+09 Reference D&B Plan Sketch: EXHIBIT D-SECTION C

Approval for Blast Plan Change - Reason - (Overbreak) (Vibration) (Other)
 (HOLD POINT)

KEI QUINTANA
 Print Name of K/PB Tunnel Superintendent

ARTHUR WATKINS 5/15/96
 Print Name of A/E Representative

[Signature]
 Signature of K/PB Tunnel Superintendent/Date

[Signature] 5/15/96
 Signature of A/E Representative/Date

Drilling

Blast Hole Drilled Length: 1.8m 2.4m Length of Round Filled: 1.7m 2.3m
 Total Drilled Holes: 72 Total Loaded Holes: 76
 Diameter of Loaded Holes: 51mm Rock Formation: TSWZ

Approval for Round Loading - Must be signed prior to begin loading
 (HOLD POINT)

KEI QUINTANA JK
 Print Name of K/PB Blast Supervisor 5/20/96

ARTHUR WATKINS JK
 Print Name of A/E Representative 5/20/96

[Signature] 5/15/96
 Signature of K/PB Blast Supervisor/Date

[Signature] 5/15/96
 Signature of A/E Representative/Date

Blasting

Total Explosives Used: 99.26 (Kilograms) Excavated Volume: 54.0 (Cubic Meters)
 Powder Factor: 1.84 (Kilograms/Cubic Meter)

Explosives	Manufacturer	Brand Name
Trim Explosive	ICI	XACTEX
Nitroglycerin	ICI	GELDYNS
Primacord. 50 grain	—	—
Primacord. grain	ICI	CORDTEX
Trunk Line w/Detonator	ICI	EXCEL
Long Period Delays	ICI	EXCEL
Millisecond Delays	—	—

CONTROLLED DRILLING AND BLASTING RECORD FORM

Sheet 2 of 3

Blast Identification Number: _____

Regular Delays Used

Delay Number	#0	#1	#2	#3	#4	#5	#6	#7
Delays Used	NA	2	1	1	2	2	8	6
Explosives Used (kg)	NA	4	2	2	4	4	16	11 12 ^{kg}
Explosives Used Per Delay (kg)	NA	-						
Delay Number	#8	#9	#10	#11	#12	#13	#14	#15
Delays Used	10-	3	1	23	11	N/A	N/A	N/A
Explosives Used (kg)	19 ^{kg} 20	5 ^{kg} 6	2	20.47	9.99	↓	↓	↓
Explosives Used Per Delay (kg)	2				JK 5/20/96	↓	↓	↓

Note: If millisecond delays are used instead of regular delays, the column headings shall be modified to reflect the delays used.

Approval for Round Firing - To be signed prior to firing

(WITNESS POINT)

KEN MONTANA JK 5/20/96
Print Name of K/PB Blast Supervisor

ARTHUR WATERNS JK 5/20/96
Print Name of A/E Representative

[Signature] 5-15-96
Signature of K/PB Blast Supervisor/Date

[Signature] 5/15/96
Signature of A/E Representative/Date

Drilling Operation Comments N/A

Blasting Operation Comments N/A

RUFINO G. ORIZ 15.96
Print Name/Signature of Shift Engineer/Date

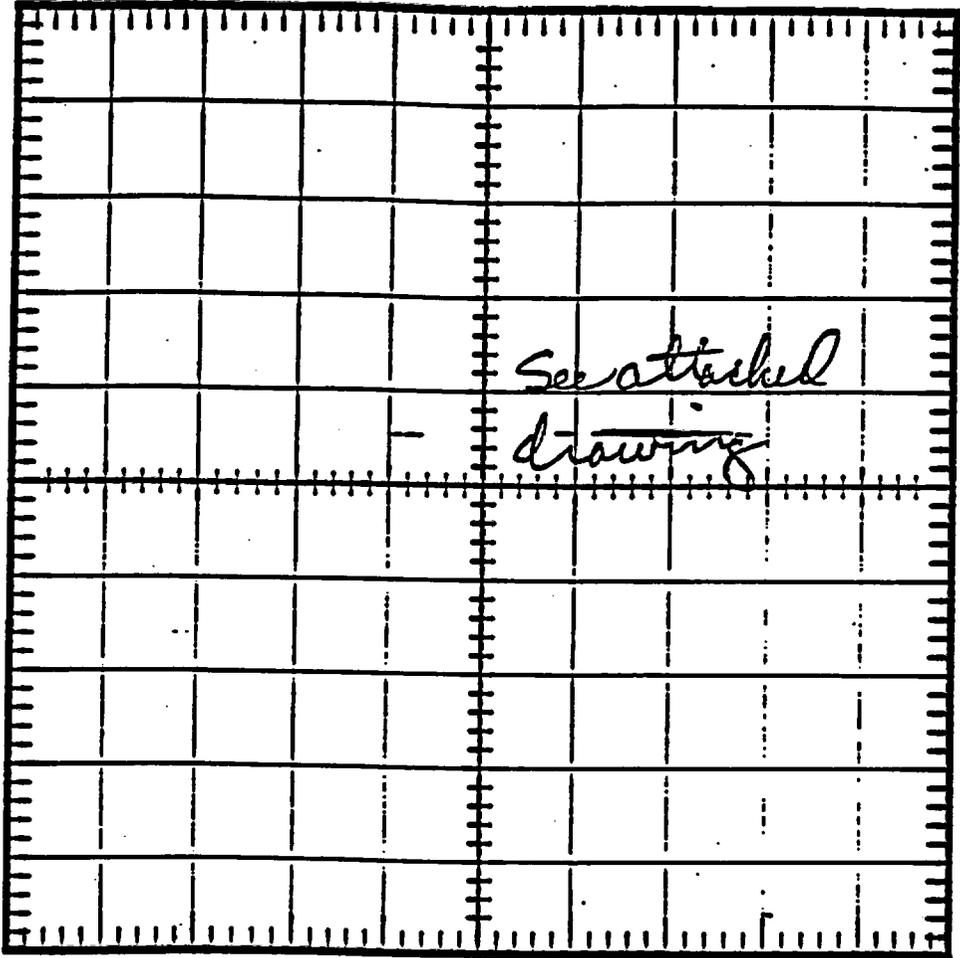
KEN MONTANA [Signature]
Print Name/Signature of Blasting Supervisor/Date

CONTROLLED DRILLING AND BLASTING RECORD FORM

Sheet 3 of 3

Blast Identification Number: 5-03

SKETCH OF ACTUAL ROUND AS DRILLED AND BLASTED



Description of Variations from the Base Drill & Blast Design

Burn Hole (Top Hole) loaded with one stick by mistake. MN

KEN DUTANANA JK 5/20/96
Print Name of K/PB Tunnel Superintendent

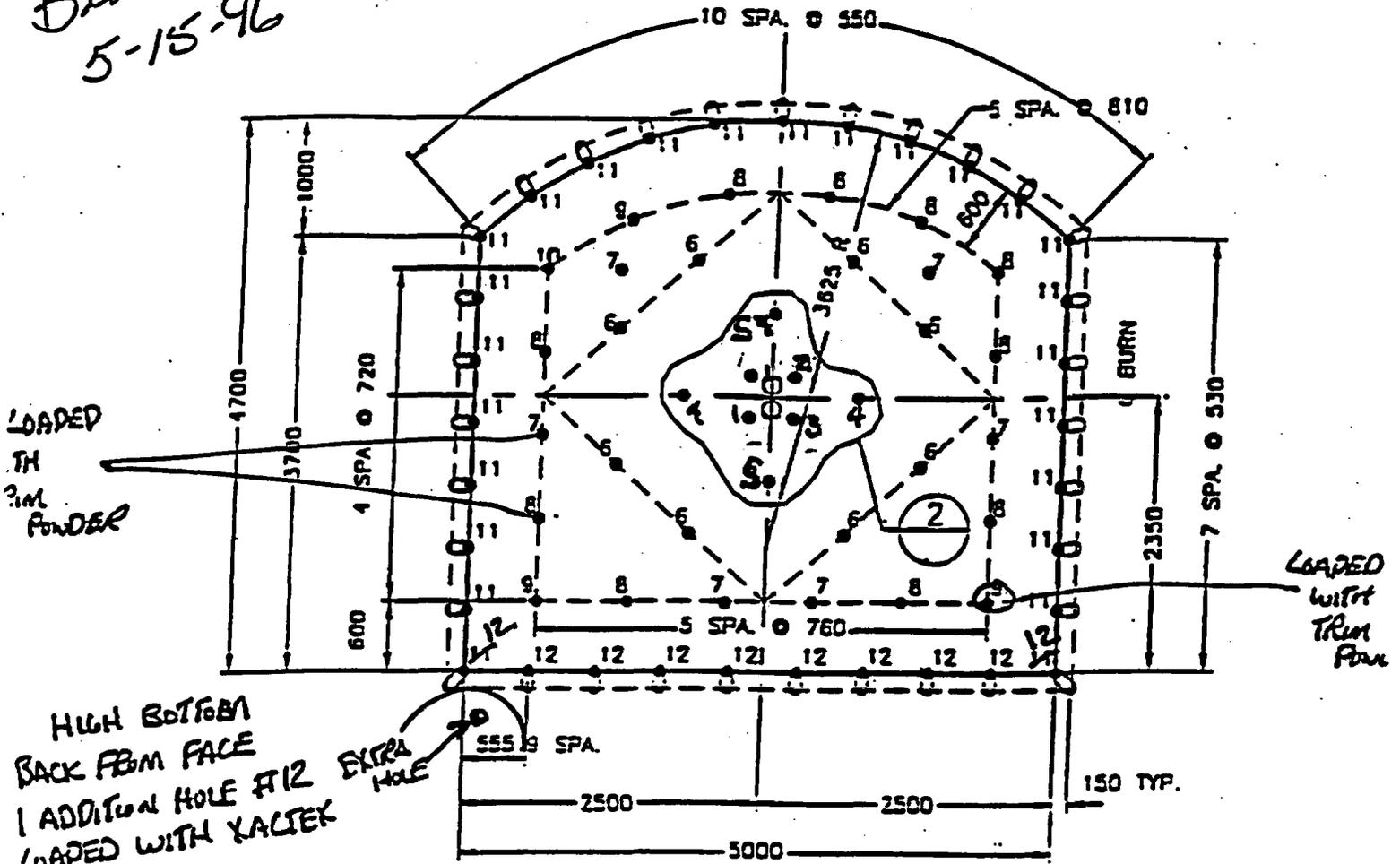
[Signature] 5/15/96
Signature of K/PB Tunnel Superintendent/Date

Arthur Watkins JK 5/20/96
Print Name of A/E Representative

[Signature] 5-15-96
Signature of A/E Representative/Date

Blast ID # 5-03
 5-15-96

EXHIBIT D - SECTION C



EXPLOSIVE LOADING DATA

2.4 Meter Round Loading

Perimeter Holes (33) One 32x203 mm stick geldyne and three 19x610 mm sticks of Xactex/hole

Remainder Holes (36) Ten 32x203 mm sticks of geldyne per hole including primer

Xactex detonation velocity 2600 m/sec and 0.23 kg/stick

Geldyne detonation velocity 3400 m/sec and 0.20 kg/stick

Internal KPB QA Deficiency Report Log

Number	Status	Organ	Condition/Activity/Comments	Date Issued	Response Due Date	QA ACC Date	Est Comp Date	Closed Date
			to QAM for action on 12/13/95 with response due 01/12/96 (no issuance memo sent). Revision 1 issued to add the following description of condition in Block 6 of the DR "In addition, certain procedures refer to specification sections for inspection or work criteria and it can be difficult or impossible to determine what criteria were used to inspect or perform work." Response received 1/12/96. Remedial action due 2/28/96. Corrective action due 2/12/96. Remedial and Actions to Preclude Recurrence actions were verified to be completed on 2/23/96. Closed 2/23/96.					
K-96-D-019	C	REC	<p>QAR V. J. Barish, Jr. During a QC inspection performed by Richard L. Noel on 1/3/96 it was identified that contrary to the requirements of MCP-2.0, Rev. 14, para 3.3.4 (All Construction activities shall be performed to controlled documents.....) and 3.3.1 (Each work package controlled copy shall be maintained with current information.....) out-of-date procedures were in TBM cab Work Package, control copy 13, : Procedures were TCP-2.23, Rev 2 which was superceded by Rev 3 on 12/12/95 and TCP-2.39, Rev. 0 which was superceded by Rev. 1 on 1/3/96. It was determined that TCP-2.23 Rev 3 was receipted by Construction on 12/13/95 (Document Transmittal attached) but not placed in the work package and TCP-2.39, Rev 1 was not placed in the work package because the Site Document Analyst did not distribute procedures until their effective date which did not permit Construction sufficient time to get the procedure into the work package. Memo issued to C. Rixford for response concerning TCP-2.39 and to Rick Munzer for response concerning TCP-2.23. Memos issued 1/9/96 for response by February 1, 1996. Faxed response received 2/1/96. Remedial and corrective actions</p>	01/05/96	02/01/96	02/08/96	02/01/96	02/09/96

YM-97-D-014
ATTACHMENT 2

Internal KPB QA Deficiency Report Log

Number	Status	Organ	Condition/Activity/Comments	Date Issued	Response Due Date	QA ACC Date	Est Comp Date	Closed Date
			complete. Response acceptable. Requested that a memo be generated to file with a copy to me identifying which engineers had been in the specific method established for underground in the confined area at the TBM cab to prevent this problem from recurring. Response received from Records Manager 2/2/96. Response acceptable and remedial and corrective actions complete. Issued memo on 2/9/96 accepting responses and closing deficiency document.					
K-96-D-020	C	QC	QAR V. J. Barish, Jr. Contrary to the requirements of Spec. Section 01400, R/2, ECR E96-0035 Section 1.05K (Hold point: An established point past which work may not proceed until a written release is obtained from the specifying organization.) a Hold Point established in Work Package 2.25.4 for installation of perimeter bolts prior to excavation of alcove number five was violated. Excavation was started on alcove number 5 prior to QC and Construction signing off their hold points as required. NOTE: Upon investigation it was determined that QC allowed construction to proceed with the excavation of the alcove and construction proceeded without a written release. Construction also failed to sign off their hold point for the same activity prior to commencing excavation of the alcove. Memo issued to the Construction Manager and QC Manager for response by 2/23/96. Response received from CND on 2/22/96. QAR to evaluate by 2/28/96. Evaluated response and performed verification simultaneously. Response and verification satisfactory and memo for acceptance and closure issued 3/25/96.	01/31/96	02/23/96	03/14/96	11	03/25/96
K-96-D-021	C	ESH	QAR V. J. Barish, Jr. During the conduct of K/PB Surveillance SR-96-18 the following deficiencies were identified:	01/31/96	02/23/96	03/14/96	05/01/96	06/04/96

17
9
41

Internal KPB QA Deficiency Report Log

Number	Status	Organ	Condition/Activity/Comments	Date Issued	Response Due Date	QA ACC Date	Est Comp Date	Closed Date
			<p>designated numbered storage location for regulated materials.</p> <p>2. Some of the regulated materials stored in the change house building do not have a Regulated Material Tracking Label applied.</p> <p>3. The change house building has no temperature controls installed. Some of the paint containers (e.g. Dunn Edwards Permashene) had manufacturers storage requirements on their label requiring that the paint be stored in temperatures above freezing. It is indeterminate if the paints were frozen due to sub-freezing temperatures at the site. Flammable materials (e.g. Dunn Edwards Ceraglaze Polyester Finish Epoxy) were stored next to combustible materials and none were observed in fireproof cabinets. No spill containments were provided for the storage of regulated liquids. Issued on 2/5/96 to Rick Munzer for response by 3/4/96. Response received 2/12/96. QAR to evaluate. Remedial and Actions to Preclude Recurrence acceptable. All verifications acceptable except for storing items susceptible to freezing temperatures were still stored in the Change House. Sent verification rejection memo 3/15/96 recommending that FDR be initiated to evaluate the useability of the materials. Unsatisfactory verification letter sent to Rick Munzer on 4/26/96 with response due 5/7/96. FDR 96-58 issued 6/28/96 to resolve issue of materials potentially subjected to freezing temperatures. All actions are addressed. The DR was closed 6/28/96.</p>					
K-96-D-023	C	CND	<p>QAR V. J. BARISH, JR. Contrary to the requirements of QCP-008, Rev. 6, para. 3.5.2, TCP-2.39, Rev. 1 para 3.2.2B., and Spec. Sectin 02341, Rev 3 para 3.01 A. 7. washers that were not procured for steel set installation were installed on the tie rod bolted</p>	03/01/96	04/02/96	04/22/96	04/19/96	05/02/96

18
41

Internal KP8 QA Deficiency Report Log

Number	Status	Organ	Condition/Activity/Comments	Date Issued	Response Due Date	QA ACC Date	Est Comp Date	Closed Date
			connections of the following steel sets: Rings # 721 through 729. RELATED DOCUMENT NCR K/PB 96-0011. Assigned Rick Munzer and Howard Cox as responsible individuals on 3/8/96 with response due 4/2/96. Responses received from Rick Munzer and Howard Cox on 4/4/96 and 4/5/96 respectively. QAR to evaluate by 4/12/96. Responses accepted 4/22/96 and memo issued.. Performed verification 4/26/96 with following results: Washers were replaced under NCR 96-0011; personnel responsible for preassembly steel sets were instructed to use only authorized material. Unable to locate records of training identified in Block 20 of DR. Called L. File on 4/26/96 who indicated that R. Munzer had them and that L. File would fax copies to me. M. L. Brown provided additional training records that included first and second shift personnel. Verification satisfactory and DR closed 5/2/96. Closure memo issued to QC and CND on 5/2/96.					
K-96-D-024	C	CAN	QAR V. J. BARISH, JR. During K/PB Surveillance SR-96-20 it was identified that contrary to the requirements of BABEAB000-01717-6300-02165 Rev. 6, para 3.02 F.3.c, some temporary function ground support materials that are not removed do not have: Date of installation type or dimension of the bolt, or location which references a tunnel station recorded. (Example: Super Swellex Rockbolt Inspection Form for WP 2.23.4, Item B-12, dated 2/2/96 indicating the "(12) 3' Split sets to pin wire." Cancelled/Voided on 3/8/96 with originator's concurrence.	02/26/96	11	11	11	03/08/96
K-96-D-025	C	CND	QAR V. J. BARISH JR. During Surveillance SR-96-20 it was identified that contrary to the requirements of Drawing BABEAB000-01717-2100-40152 Rev. 1 and SK 1,	03/07/96	05/07/96	06/06/96	05/29/96	06/06/96

17
96
61

Internal KPB QA Deficiency Report Log

Number	Status	Organ	Condition/Activity/Comments	Date Issued	Response Due Date	QA ACC Date	Est Comp Date	Closed Date
			from Quality Engineering on 4/22/96. Response received from Purchasing on 4/30/96. QAR evaluating. Response received from Construction 5/3/96. QAR to evaluate all responses 5/6/96. Evaluation performed and accepted by QAR. Verification of remedial and actions to preclude recurrence acceptable 6/17/96. DR closed 6/17/96.					
K-96-D-033	C	CND	<p>QAR V. J. BARISH, JR. Contrary to MCP-15.0 Rev. 10, para 3.2.1 A, YAP-15.1Q, Rev. 2, para. 5.1.1 d), and QCP-002, Rev. 3, para 3.2.1 C, one of seven boxes of one inch diameter ASTM A-307 studs, that had been identified as nonconforming and appropriately tagged, were taken from the warehouse during a back shift, the tag removed by personnel other than QC and the items used. Per the description of NCR YMSCO 96-0022 , page 2, bolts were being sorted by QC, containerized, and identified with hold tags. On 3-8-96 there were 7 boxes under hold tags in the warehouse. On 3-15-96 it was noticed that there were only 6 boxes in the warehouse. Upon investigation construction personnel told QC that the box of studs had been taken on a back shift into the tunnel for use and that the box and hold tag had been placed in the trash by construction. Issued to Rick Munzer on 3/25/96 for response by 4/12/96. Received a faxed request for extension of response due date from K. Stollenmaier on 4/15/96 followed up by a memo from Rick Munzer on 4/18/96. QAR evaluating. Extension approved to 5/10/96. Response received 5/15/96. Memo issued to Rick Munzer requesting amended response not later than 6/4/96. Response received 6/4/96. Also received copy of memo issued to craft concerning unauthorized removal of hold tags. Amended response accepted and memo issued 6/18/96. Remedial actions to be verified on or about</p>	03/25/96	06/04/96	06/18/96	06/21/96	07/16/96

14 20 08

Internal KPB QA Deficiency Report Log

Number	Status	Organ	Condition/Activity/Comments	Date Issued	Response Due Date	QA ACC Date	Est Comp Date	Closed Date
			6/21/96. QAR to evaluate verification information 7/1/96. Verification satisfactory. DR Closed 7/16/96.					
K-96-D-034	C.	CND	QAR V. J. BARISH, JR. Contrary to the requirements of Spec. sec. 01400, rev. 2 and TCP-2.0, Rev. 16, para. 3.1.3C a HOLD POINT, established in work package 2.23.4 Supplemental Traveler 8.1, line item 3, for witnessing rock anchor pull tests was violated. During package review of 2.23.4 F it was determined that on 8-10-95 bolt number 2, station 11+96 (Pull test Data Sheet attached) was pull tested without QC witness. Also discovered during record review of work package 2.23.4 N, construction did not have documentation for bolt 3, station 26+95 pulled on 11-15-95 and bolt 1, station 26+13, pulled on 11-9-95 (A/E reports attached) and it is indeterminate at this time if QC witnessed these pull tests. Issued to Rick Munzer, Construction Manager, on 4/3/96 for response by 4/30/96. Response received 4/30/96. QAR to evaluate by 5/2/96. Response accepted 5/6/96 and memo issued to Rick Munzer. Corrective action verified by Steve Schuermann on 5/23/96. Closed 6/5/96.	03/27/96	04/30/96	05/06/96	05/17/96	06/04/96
K-96-D-035	C	CND	QAR V. J. BARISH, JR. During K/PB Surveillance 96-22 it was identified that contrary to the requirements of TCP-2.7, Rev. 4, paras. 3.4, 3.5, 3.12, and 3.13: 1. Due to the dynamics of the traced water system, the water that is metered and reported for an individual shift is not accurate on a shift basis; 2. Although water is measured coming out of the tunnel, additional estimation and/or averaging is used to determine total water removed from the tunnel; 3. The water usage recorded on the Weekly Water Loss Summary does not match the usage as recorded on the Tunnel Water Use Log (which is used as the	03/29/96	06/15/96	06/19/96	06/19/96	06/19/96

17
20
/ C

Internal KPB QA Deficiency Report Log

Number	Status	Organ	Condition/Activity/Comments	Date Issued	Response Due Date	QA ACC Date	Est Comp Date	Closed Date
			<p>Surveillance SR-96-27, it was identified that contrary to the requirements of:</p> <ol style="list-style-type: none"> Note 2 on Drawing 41101, rev. 3 (Jacking Bracket design is based on "Simplex Jack HSR-256T" with rated capacity of 25 tons. The capacity for the jack used by the constructor shall be 25 tons or less.) QCP-008, Rev. 8 requires approximately 26 tons and Specification 02341, para. 1.04 N.2 requires 27 ton maximum. These documents conflict with one another., and Note 5 on Drawing 41101, Rev. 3 (For each steel set, two expansion inserts shall be installed, one on the left rib and one on the right rib. The inserts shall be installed so that the length of one insert plus shim plates does not exceed the length of the other insert and shim plates by more than two inches.), there is no objective evidence that this requirement is being verified. <p>In process of accumulating information to justify canceling/voiding document. Cancelled/voided on 5/30/96.</p>					
K -D-043	C	CND	<p>QAR V. J. BARISH, JR. Contrary to the requirement of TCP-2.20, Rev. 3, para 3.7.5 (The shift engineer or designee will use a calibrated gauge to check the accuracy of the Swellex pump unit. This check will be done once per shift. The information will be recorded in the "notes" section of the Ground Support Determination Report.) the check of the Swellex pump unit was not performed each shift - Note: Attached are 5 examples, documented by shift engineers, that state that that required check was not performed. Issued to Rick Munzer on 5/1/96 for response by 5/29/96. Response received 5/29/96. QAR to</p>	05/01/96	06/26/96	07/01/96	07/15/96	07/16/96

179088
41

Internal KPB QA Deficiency Report Log

Number	Status	Organ	Condition/Activity/Comments	Date Issued	Response Due Date	QA ACC Date	Est Comp Date	Closed Date
			evaluate by 6/4/96. M&O QA identified several additional instances where the pressure gauge was not checked. Construction was requested to include these in their investigation. Amended response requested by 6/26/96. Response received. QAR to evaluate response by 7/2/96. Response accepted 7/1/96. Corrective action due 7/15/96 (QAR to distribute a closed copy of the DR to Work Packages 2.20.3 and 2.23.7. DR Closed on 7/16/96.					
K--D-044	C	QC	<p>QAR V. J. BARISH, JR. Contrary to the requirements of TCP-2.36, Rev. 1, para 5.4.1 (Water sampling and testing activities will be accomplished by Kiewit/PB QC personnel in accordance with Reference 2.5" and QCP-014, Rev. 4, para. 3.2.1 (Tank Batching: Each batch of water prepared with Bromide mixed in (tracer water) per Reference 2.4 shall be sampled and tested.), beginning with the second shift on Friday, May 3, 1996, testing has not been performed prior to the use of traced water. The following comments are relevant to this deficiency:</p> <ol style="list-style-type: none"> 1. The equipment used for testing were all nonfunctional including a unit recently repaired. 2. Two new testing units will be ordered to preclude a recurrence of this situation. 3. The State of Nevada has approved a request to modify and reduce the sampling and testing for LiBr in the ESF but these criteria are not yet included in ESF Specifications and, as a result, are not reflected in K/PB procedures. <p>As an interim action, Kiewit/PB QC is ensuring that samples of each batch of water are being collected and these samples are being delivered to the Bechtel-Nevada Material Test Laboratory for testing. In addition, repair of test equipment is being expedited</p>	05/06/96	06/21/96	06/19/96	07/19/96	08/15/96

23 of 41

Internal KPB QA Deficiency Report Log

Number	Status	Organ	Condition/Activity/Comments	Date Issued	Response Due Date	QA ACC Date	Est Comp Date	Closed Date
			<p>INCLUDED IN TCP-3.4 SINCE THE EFFECTIVE DATE OF REV. 2 ON 9/5/96, NO RECORDS WERE REQUIRED. THEREFORE, NO EVIDENCE WAS GENERATED THAT THE INSPECTIONS OF VEHICLES AND FIXED ELECTRICAL EQUIPMENT WERE BEING PERFORMED. ISSUED TO D. WAYMAN ON 5/20/96 FOR RESPONSE BY 5/31/96. Procedure revised. Response for remaining DR items extended to 6/12/96. Response completed and sent to Dave Wayman 6/12/96 however original never received by QAR. John West faxed copy of response, revised in accordance with discussions with QAR and resubmitted by fax. Original forwarded 6/18/96. Response received 6/19/96. QAR to evaluate. Response accepted 6/27/96 but needed to received clean copy for processing. After several attempts received clean copy 7/11/96. Response memo sent 7/12/96. Corrective actions due 7/10/96. Verification scheduled for 8/1/96. All information verified except for submittal of records. To be completed by 9/13/96. Verification completed and closure letter sent 9/17/96.</p>					
K-96-D-046	C	CND	<p>QAR V. J. BARISH, JR. Evaluation of NCR YMSCO 96-0033 indicated that a corrective action document should be written. Contrary to the requirements of BABEE0000-01717-6300-02165, Rev. 00, section 2.01 (Materials and Equipment, H.1 allows the use of SS39 and SS46 split set rockbolts as pins to fasten WWF.) Construction cut three SS39, 2-meter split sets to approximately 4-1/2 feet and installed them as pins to fasten WWF. Issued to Rick Munzer on 6/11/96 for response by July 10, 1996. Response received 6/20/96. Evaluated as acceptable on 7/11/96, remedial and corrective actions verified as having been completed and DR closed on 7/11/96. This was determined to be an isolated incidence.</p>	06/10/96	07/10/96	07/11/96	06/19/96	07/11/96

17
2
41

Internal KPB QA Deficiency Report Log

Number	Status	Organ	Condition/Activity/Comments	Date Issued	Response Due Date	QA ACC Date	Est Comp Date	Closed Date
			<p>and Quality Control to address their corresponding actions to satisfy this DR. QAR should have issued this to Construction & Quality Control at the same time as to ES&H. Discussions with John West indicate that corrections discussed with him have been made and the response sent. QAR has not yet received as of 8/15/96. John West to verify to whom the corrected response was sent. Reissued to Construction and QC managers for response by 9/18/96. Request for extension to 10/11/96 received from Construction (R. Munzer) on 9/27/96. Extended to 12/2/96 via memo to file. (NOTE: The test required by the QA Control in spec. section 1800 is not due until May or June 1997.) Issued acceptance memo to environmental section for response submitted 7/23/96. Automatically extended the remedial action due date to coincide with the response date set for Construction and QC (12/2/96). Received response from H. Cox which covers both Construction and Quality Control on 12/2/96. QAR to evaluate 12/6/96. Response accepted 12/8/96. Corrective Action due 1/10/97 by Environmental Section. On 1/7/97 TCP-2.42 was placed in DRR. Due to the fact that the DRR process takes at least 4 or 5 days, even if expedited, and TCP-2.42 must be submitted to the A/E for review and approval, the corrective action completion due date of 1/10/97 cannot be met. An extension of 3 working weeks was requested and granted on 1/8/97. Due date now 1/31/97. TCP-2.42 submitted to the A/E for review and acceptance on 1/17/97. Checked on status 1/22/97 - still in A/E review process. Checked on status 1/27/97 - still in A/E review process (we are trying to expedite). Memo sent 1/30/97 automatically extending CACDD to 2/28/97 due to A/E processing.</p>					
K-96-D-048	C	SUP	QAR V. J. BARISH, JR. Contrary to the requirements	06/25/96	07/23/96	06/26/96	06/26/96	06/26/96

25 of 41

Internal KPB QA Deficiency Report Log

Number	Status	Organ	Condition/Activity/Comments	Date Issued	Response Due Date	QA ACC Date	Est Comp Date	Closed Date
			<p>of TCP-2.34, Rev. 4, para. 3.2.12 (Field welding is not allowed without A/E written concurrence.) and QCP-008 Rev: 10, para. 3.1.4 E (Field welding is not allowed without A/E concurrence)</p> <p>field welding occurred without written concurrence from the A/E. Discussion with QC has revealed that welding occurred on lagging @ station 56+32.73 on the right rib at approximately the 9:00 position. Also NCR YMSCO-96-0039 (attached) states that there are arc strikes and small amounts of weld on steel set #1141 @ station 56+01.98. (NOTE: Discussion with Construction Engineering determined that it was possible that all shift superintendents and foremen may not be aware of the need to have A/E written concurrence prior to welding. Both items appear to be isolated instances. Assigned to Rick Munzer on 6/25/96 for response by 7/23/96. DR superceded by K/PB 96-P022.</p>					
K-96-D-049	C	QA	<p>QAR V. J. BARISH, JR. During K/PB Surveillance SR-96-36 it was identified that contrary to the requirements of:</p> <p>A. MCP-5.0, Rev. 12, para 3.3.3 (Identifies the sequence of activities to be followed including any controls necessary for altering the sequence of activities.)</p> <p>B. MCP-5.0, Rev. 12, Exhibit 5.1, para. 6.D (Does the procedure section address/contain, The appropriate level of detail.)</p> <p>C. MCP-6.2, Rev. 2, para. 3.4.2 (Once a document has been reviewed and assigned a status indicator by the M&O A/E, and the document is revised, Kiewit/PB will resubmit the document to the M&O A/E for their further review and approval...)</p> <p>1. Contrary to A and B above, TCP-2.17, Rev. 7, did</p>	06/26/96	07/23/96	08/05/96	08/05/96	08/05/96

17 2.98

Internal KPB QA Deficiency Report Log

Number	Status	Organ	Condition/Activity/Comments	Date Issued	Response Due Date	QA ACC Date	Est Comp Date	Closed Date
			<p>not include all the applicable criteria to effectively implement the requirements established within Plan-012.</p> <p>2. Contrary to C above, changes identified on EPC 96-004 to TCP-2.17/Plan-012 were implemented prior to submittal t the A/E for review and approval.) (Copy of EPC 96-004 attached).</p> <p>Issued to H. R. Cox on 6/25/96 for response by 7/23/96. Response received 7/23/96. Evaluation revealed that the deficient condition was not well defined. DR was superceded by K/PB 96-P024. DR closed 8/5/96.</p>					
K-96-D-050	C	CND	<p>QAR V. J. BARISH, JR. Contrary to the requirements of TCP-2.39, Rev. 4, para. 3.3.2 (Items for which installation is incomplete... and for which work will not be completed on the shift...shall be reported to K/PB QC... Copies of completed Steel Set Installation Forms shall be available to K/PB QC on a daily basis.) and TCP-2.20, Rev. 6, para 3.13.3 (Incomplete Rockbolt and Accessories Installation Reports shall be submitted to K/PB QC on a daily basis by K/PB Engineering personnel.) K/PB QC is not receiving the referenced reports on the shift or daily basis. (Incomplete Item Reports are not received for the previous shifts activities. Copies of completed reports are not received on a daily basis. Engineering is about a week behind in the completed reports that are turned in.) Note: There are procedural inconsistencies in reporting incomplete items to K/PB QC in TCPs-2.39, -2.20, and 2.12. Issued to Rick Munzer on 7/1/96 for response by 7/30/96. Response received 7/30/96. When identified that TCP-2.20 had not been revised, call H. R. Cox to request an amended response. Received amended response</p>	07/01/96	07/30/96	08/15/96	07/30/96	09/17/96

14
96
11

Internal KPB QA Deficiency Report Log

Number	Status	Organ	Condition/Activity/Comments	Date Issued	Response Due Date	QA ACC Date	Est Comp Date	Closed Date
			8/13/96. Accepted response and amended response 8/15/96. QAR to verify 8/16/96. Verification completed and closure letter sent 9/17/96.					
K-96-D-051	C	QCM	<p>QAR V. J. BARISH, JR. Contrary to the requirements of MCP-2.0, Rev. 17, para 3.1.3 (the Traveler identifies the overall general tasks to be accomplished while supplemental travelers may be used to expand on general tasks listed on the traveler. These forms may contain the following information as appropriate: F. Governing QCP/TCP) some Work Packages do not have the correct governing QCP/TCP referenced on their travelers. An example is current Work Package 2.25.4 which lists QCP-006 AND 010 on the traveler which have been superseded by QCP-018. NOTE: The MCP does not address who is responsible, or how, to update the Traveler when procedures are superseded or new ones developed. The correct procedures are updated and referenced in section C of the Work Packages. The WPD does state that procedures contained in section C will be used to perform the work. There is no indication that work has performed to incorrect procedures per discussion with QC and Engineering personnel. Issued to H. R. Cox on 7/12/96 for response by 8/9/96. Response received 8/13/96 (fax) and hard copy to follow. Hard copy response received 8/16/96. Response accepted by QAR on 8/16/96. Corrective action due 9/13/96. Attempted on several occasions to verify actions to preclude recurrence but with no success. Issued a memo to H. Cox for an amended response on 10/9/96. Response received 11/8/96. Response acceptable. QAR to verify for closure 11/12/96. Verification satisfactory and DR closed 11/12/96. Closure memo sent 11/12/96. (NOTE: K/PB Sketch SK#83 was not submitted as noted on the remedial action response</p>	07/12/96	10/16/96	08/16/96	09/13/96	11/12/96

98
17 41

Internal KPB QA Deficiency Report Log

Number	Status	Organ	Condition/Activity/Comments	Date Issued	Response Due Date	QA ACC Date	Est Comp Date	Closed Date
			BABEAB000-01717-6300-15486, current revision. Because the wrong specification section was referenced, the purchase order resulting from this (1899-1887) incorrectly specifies the lithium bromide strength by weight at 54.6 when the spec. section 15486 requires 53.5% to 54%. by weight. Issued to Engineering on 8/21/96 for response by 9/18/96. Response received 9/17/96. QAR to evaluate. Response accepted 9/19/96. QAR to verify corrective actions. Verification satisfactory 9/24/96. DR closed 9/25/96.					
K-96-D-062	C	QCM	<p>QAR V. J. BARISH, JR. Contrary to the requirements of 1. QCP-014, Rev. 0, para. 3.2.1A (water must be mixed for a minimum of 20 minutes prior to sampling), 2. TCP-2.36, Rev. 0, para 5.3.5 (water must be recirculated for a minimum of 20 minutes to ensure complete mixing) and 3. MCP-17.0, Rev. 10, para 3.2.3 E (responsible record sources ensure....information contained on quality assurance records is accurate) records generated from requirements 1. and 2. above contain conflicting information concerning the time recorded for completion of batching and the time tested. During record review it has been determined that there are some conflicts in Work Packages 1.24.1 K, M thru V, X, CC and DD in which the times recorded show that the water was tested before the batching was completed. Some specified examples are in package O line items B-5 and 6, B-15 and 16, B-23 and 24, B-25 and 26, B-33 and 34, and B-35 and 36. Issued to H. R. Cox on 9/4/96 for response by 10/2/96. Response received 10/2/96. Response accepted 10/7/96 and memo sent. Corrective action due 10/31/96. Procedures were revised and submitted but the A/E rejected them. Discussions are underway to</p>	08/28/96	10/02/96	10/07/96	12/13/96	12/24/96

29
14841

Internal KPB QA Deficiency Report Log

Number	Status	Organ	Condition/Activity/Comments	Date Issued	Response Due Date	QA ACC Date	Est Comp Date	Closed Date
			resolve the problems but more time will be required to implement the corrective actions. Expect a request for extension to 12/2/96. Request for extension received 11/5/96. Memo granting extension to 12/13/96 issued 11/6/96. Verification satisfactorily performed 12/24/96. DR Closed 12/24/96.					
K-96-D-063	C	CND	<p>QAR V. J. BARISH, JR. Contrary to the requirements of MCP-2.4, Rev. 11,</p> <p>1. para. 3.3.2B (Training of an individual should be completed within 30 days of the time of hire or reassignment. If training cannot be completed within 30 days, the manager/supervisor shall contact training and provide justification for the additional required time.) and</p> <p>2. para. 3.3.2C (Upon completion of the required training, the manager/supervisor shall return the required training packet to Training.)</p> <p>Guy Arminger, who was hired on 5-13-96, has not completed General Employee Training. Also Spill Response Training scheduled 6-4-96 was not attended as required. No justification has been provided to Training as required.</p> <p>Mike Shough, rehired as a Walker 8-1-96, has not completed his training packet and no justification has been provided to Training.</p> <p>Issued to Rick Munzer on 9/4/96 for response by 10/2/96. Response received 9/25/96. QAR to evaluate. Response to be sent back for additional information. Discussions between R. E. Armstrong and V. Barish on 10/8/96 resulted in some additional actions required by QAR prior to issuance of memo to Construction. D. Osborne researching records for work performed by Mike Shough during period 8/2/96</p>	09/04/96	10/25/96	10/31/96	11/15/96	/ /

30
9
41

Number	Status	Organ	Condition/Activity/Comments	Date Issued	Response Due Date	QA ACC Date	Est Comp Date	Closed Date
			states that this procedure is applicable to all K/PB YMP activities that are governed by "Issued for Construction" drawings and specifications) work has commenced for clearing and grubbing of the South Portal area, including the access road (issued for construction specification 02210) and construction has started on the Equipment Wash Facility (issued for construction specification 01500) without approved Work Packages. Issued to Rick Munzer on 9/27/96 for response by 10/23/96. Phone call from H. R. Cox on 10/23/96 transferred responsibility for response to H. R. Cox. Issued memo on 10/29/96 for response by 11/8/96. Phone call with H. Cox on 10/29/96 confirmed that 11/8/96 ok for response due date. Response received 11/5/96. QAR to evaluate 11/13/96. Response accepted 11/12/96. Corrective actions due date 11/29/96. Issued memo accepting response on 11/12/96. Verified on 11/12/96 that MCP-2.0, Rev. 19 added REFERENCE 2.2 to the procedure and added application information to paragraph 1.2 "Scope". Corrective action due date extended to 12/20/96 based upon request submitted 12/2/96. Extension requested until 1/17/97 approved 12/23/96. MCP-2.2 still not issued as revised on 1/21/97. Toni Casselli to contact Howard Cox to get the OK to process. MCP-2.2, Rev. 7 issued 1/21/97 to be effective 1/27/97. Closed 1/27/97.					
K-97-D-001	C	CND	QAR V. J. BARISH, JR. Contrary to the requirements of TCP-2.17, Rev. 8, para 3.1 (Explosives, initiation system components, and ancillary blasting materials shall not be used unless receipt inspected by QC. (QC Hold Point).) Primacord manufactured by Ensign Bickford Company was used for tracing *Xactex in the perimeter holds and initiating the blast (IC # 5C-18) in alcove 5 connecting drift without receipt inspection.	10/25/96	11/22/96	11/25/96	11/08/96	11/25/96

31 of 41

Internal KPB QA Deficiency Report Log

Number	Status	Organ	Condition/Activity/Comments	Date Issued	Response Due Date	QA ACC Date	Est Comp Date	Closed Date
			Assigned a number 10/18/96. Original copy received 10/21/96. Issued to Rick Munzer on 10/25/96 for response by 11/22/96. Received draft response to DR on 11/19/96 and provided recommendations to L. File/M. O'Niell. Received phone call from H. Cox 11/21/96. He indicated that he had agreed with L. File and O'Neill to respond to the DR. On 11/22/96 received a response from H. Cox. QAR to evaluate 11/25/96. All remedial and actions to preclude recurrence completed by 11/8/96. DR closed and memo sent to Construction & Quality Control 11/25/96.					
K-97-D-002	C	PUR	<p>QAR V. J. BARISH, JR. 1. Contrary to the requirements of MCP-4.0, Rev. 13, para. 3.1.9.B (The PR originator shall develop the RIPs for non-Q procurements in accordance with Reference 2.4 and shall, at the time of development, provide a copy of the PR and RIP to QE for monitoring purposes) and 1.2.1 (This procedure applies to the procurement of Q-List items and services and those items and services which are specified in YMP specification and drawings) purchase request A06521 was initiated on October 22, 1996 for #2 diesel fuel - low sulphur without a corresponding RIP being developed and without copies being provided to QE for monitoring purposes.</p> <p>2. Contrary to MCP-4.0, Rev. 13, paragraph 3.1.9B, diesel fuel, an item specified in spec. section BAB000000-01717-6300-01501, Rev. 04, para. 3.01.S4 and S.4.a (Only low sulphur diesel fuel less than 0.05% sulphur by weight shall be used in the ESF Subsurface Facilities. The following related controls shall also apply: a. *The sulphur content of fuel delivered to the storage facility at the NTS shall be documented in accordance with current NTS</p>	11/20/96	12/17/96	01/21/97	01/21/97	01/21/97

32 of 41



KIEWIT/PB
YUCCA MOUNTAIN PROJECT

INTEROFFICE MEMO

QA: N/A

To: W. D. Wightman
 From: J. D. Christensen
 Date: June 10, 1996
 SUBJECT: SURVEILLANCE REPORT NUMBER SR-96-33

Attached is the subject surveillance report documenting a surveillance of A/E Specification 02313, *Subsurface Drilling and Blasting QA Controls*.

There were no recommendations and no deficiencies as a result of this surveillance. One deficient item was corrected during the surveillance. The program and procedures in place for drilling and blasting activities are adequate.

ATTACHMENT

Surveillance Plan

cy: (w/attachment)

Central Files

R. E. Armstrong

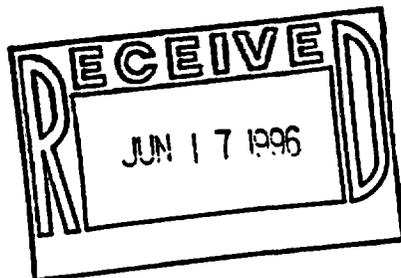
V. J. Barish

R. J. Munzer

K. H. Stollenmaier

C. D. Osborne ←

INFORMATION COPY



YM-97-D-014
 ATTACHMENT 3

**KIEWIT/PB
YUCCA MOUNTAIN PROJECT
SURVEILLANCE REPORT**

(SURVEILLANCE REPORT NO. 96-33)

QA: L

DATE OF SURVEILLANCE: 5-27 through 5-31-96

SURVEILLANCE CONDUCTED BY: C. D. Osborne and C. A. Rixford

PERSONNEL CONTACTED:

Ken Quintana
Kevin Krank
Carol Rixford
Forbie Harper
Ken Stollenmaier
Richard Noel
Rufino Cruz
Jay Keating
Norm Salter

INFORMATION COPY

SCOPE:

This surveillance covered implementation of the requirements as identified in A/E Specification Section 02313, *Subsurface Drilling and Blasting*, Revision 1. The K/PB QA Controls Matrix and the K/PB Inspection, Monitoring, and Surveillance Plan-009 Revision 0 (PLAN-009) were used as a guide. A copy of PLAN-009 is attached and the requirements are itemized to correspond with the items below. The surveillance consisted of record and document review and surveillance of activities in the field.

SUMMARY OF RESULTS:

There were no recommendations and one deficiency (corrected during surveillance) as a result of this surveillance.

The K/PB Master Submittal Log was used to determine submittal status and compliance to Specification 02313. Carol Rixford reviewed a sampling of the submittals associated with this surveillance. The results are discussed below.

PLAN 009 ITEMS

ITEM 1 Paragraph 1.04 C. Requires that the manufacturer of explosives be licensed under 27 CFR part 55 Chapter 1, subpart D.

A review of RIP for PO No. 1899-0001 which contained a copy of ATF License # 9-CA-019-20-7C-00022 for W. A. Murphy Inc. provides sufficient objective evidence that this item has been properly addressed during receipt inspection.

ITEM 2 Paragraph 2.01 A.2s. requires that explosive products be packaged in cartridge form.

A review of RIP for PO No. 1899-0001 provides objective evidence that all explosives received were in cartridge form.

ITEM 3 Paragraph 2.01 A. 4s. requires that explosive products used shall be in accordance with the YMP TF&M Plan.

A review of the WP 2.25.4 provides evidence that this requirement has been complied with.

ITEM 4 Paragraph 3.01 C. requires the Constructor to maintain documentation addressing training and qualification for drill and blasting first line supervision.

A review of training records for Ken Quintana provides objective evidence that this requirement has been complied with.

ITEM 5 Paragraph 3.02 D. requires drill hole alignment to be maintained in accordance with the Constructors Drill and Blast Plan.

Verification of this activity in the field by QA surveillance personnel and review of records generated and contained in Work Package 2.25.4 provides sufficient objective evidence that this requirement has been complied with.

ITEM 6 Paragraph 3.03 C. requires the Constructor to obtain signature acceptance from the A/E Title III representative indicating concurrence with changes.

It was noted during surveillance that some changes made had not been documented properly. QC have issued NCR # YMSCO 96-035 to address these situations. Conversation with the A/E has revealed that they are not too concerned with the changes made as long as the results are found to be satisfactory. Discussion with the A/E and Construction Engineering has made them aware of the importance of documenting all changes to the blast plan. When activities were surveilled in the field there was no problems noted with the work or documentation associated with the days activities. The documentation is in process of being reviewed and corrected for the work that was performed prior to the surveillance of activities in the field. This condition can be considered to be corrected during surveillance (see Deficiency CDS Number 1). QCP-009 is being revised to more clearly define how documentation problems will be handled.

INFORMATION COPY

The A/E has concurred with all changes made to date. No other problems were noted during surveillance with this item.

ITEM 7 Paragraph 3.05 A. requires receipt verification of blasting material to be by visual inspection for conformance to purchasing documents.

Review of the RIP for PO 1899-0001 provides objective evidence that this item has been complied with.

ITEM 8 Paragraph 3.05 B.1 requires storage of materials in accordance with the manufacturers' recommendations and paragraph 2.01 and 2.02 B of spec 1600.

Review of documentation in Work Package 1.16 provides objective evidence that this item has been complied with.

ITEM 9 Paragraph 3.05 B.2 requires materials to be controlled to prevent inadvertent use prior to receipt verification.

No problem was noted during the surveillance with this item.

ITEM 10 Paragraph 3.05 C. requires monitoring of the drill and blast operations to ensure conformance to the specification section and Constructors approved Drill and Blast Plan.

Review of Work Package 2.25.4 provides sufficient objective evidence that this item has been complied with. QC has monitored the drill and blast activities as required by QCP-011.

ITEM 11 Paragraph 3.05 D. requires visual inspection to confirm that quantities and initiation hookup are in accordance with the Drill and Blast Plan.

Review of Work Package 2.25.4, containing QC and Constructors' records, provides sufficient objective evidence that this item has been complied with.

ITEM 12 Paragraph 3.05 E. requires blasting to conform to a designed goal not to exceed 300 mm avg. overbreak outside of the C line.

No problem was identified with this item during the surveillance.

ITEM 13 Paragraph 3.05 F. requires the constructor to maintain a record of each blast that includes the items listed in 1. thru 12.

Review of Work Package 2.25.4 provides objective evidence that this item has been complied with.

ITEM 14 Paragraph 4.01 B. requires the constructor to submit a controlled Drill and Blast Plan for each rock unit for A/E acceptance prior to starting blasting of that rock unit.

Review of the submittal log showed that this had been accomplished for the Thermal Test Alcove under submittal # BABEA0000-01717-6300-02313-CD-04-0.

ITEM 15 Paragraph 4.01 C.1 requires submittal of explosive product sheets, technical publications, MSDS, etc.

Review of the submittal log showed that there are many submittals made for these items under this specification section. No problem was noted with this item.

ITEM 16 Paragraph 4.01 C.2 requires submittal of copy of license required under Paragraph 1.04 C.

Review of the submittal log revealed that submittals 2313-VD-14 and 15 have been made to cover licenses for W.A. Murphy and ICI Explosives USA Inc.

GENERAL

The main implementing procedures for the work performed in the field are TCP-2.17 and QCP-011. The following is a review of the current procedures:

TCP-2.17 Rev. 6

The only problem noted with the implementation of this TCP was that the records produced by construction were not accurate and there were many mistakes with the totaling of material on the Controlled Drill and Blast Form. Meetings were held with Ken Stollenmaier and Jay Keating to try to eliminate the errors on the documentation. As stated under item 6, an NCR was generated by QC to reconcile differences on the documentation provided by construction and the documentation of the QC monitoring activities. When activities in the field were observed, it appeared that all parties involved had been reinstructed in the importance of documenting the operations in a correct and concise manner. The activities observed took place at a pace that could be kept up with by the shift engineer as well as QC. Follow-up of activities has provided confidence that the problems noted earlier in the drill and blast operations had been corrected. The documentation corrected by construction during surveillance appears to have been corrected. The NCR mentioned is currently still open. The condition noted is considered to have been corrected during surveillance (see Deficiency CDS Number 1).

INFORMATION COPY

QCP-011 Rev. 1

No problems were noted in regards to implementation of this procedure. NCR YMSCO 96-0032 was generated by Receipt QC and was dispositioned to allow extension for use beyond the expired shelf life of explosives.

DEFICIENCIES:

CDS Number 1.

Review of documentation and discussion with QC revealed that construction was working too fast for the Shift Engineer to keep up and document the required information. Meetings were held with Engineering and it was possible to work out the necessary details to allow the Shift Engineer to document the information correctly. Howard Cox also had meetings with Rick Munzer to determine resolution. When activities were surveilled in the field, the Blast Supervisor and miners loading explosives helped to make certain that the Shift Engineer was able to keep up with the activities and document deviations for A/E concurrence. An NCR was generated by QC to document the deficient conditions identified prior to surveillance.

RECOMMENDATIONS: None

ATTACHMENTS:

Surveillance Plan
K/PB Inspection, Monitoring, and Surveillance Plan - 009

PREPARED BY: David Sousa DATE 6/10/96

APPROVED BY: Alan Ackerman DATE 6/10/96

**KIEWIT/P.B.
YUCCA MOUNTAIN PROJECT
SURVEILLANCE PLAN**

Surveillance Report Number: SR- 96-33

Scope of the Surveillance:

- * A/E Specification 02313, Subsurface Drilling and Blasting, Revision 1
- * Kiewit/PB Inspection and monitoring Plan (IMSP) for Specification 02313 (Plan-009) Revision 0

Approach/Methodology:

This surveillance will examine each of the 16 items (QA Controls) in IMSP-009. The Surveillance will involve a review of the following:

- * Work Package documentation such as blasting information, inspection reports, etc.
- * Procurement documentation (Purchase Requisitions and Purchase Orders) related to drilling and blasting
- * K/PB Master Submittal Log
- * Previous surveillance reports and deficiency documents related to this topic

The surveillance will also include witnessing of drill and blast activities in the field.

Surveillance Assigned To: C. D. Osborne

INFORMATION COPY

Spec Number	Rev	Specification Paragraph	Specification Requirement	Method of Oversight	Frequency of Oversight	
①	2313	01	1.04 C	The manufacturer selected to provide explosives shall be licensed under 27 CFR part 55 chapter I, subpart D.	S	Minimum of once every 12 months
②	2313	01	2.01 A.2s	Explosives products shall be packaged in cartridge form	IR	As received
③	2313	01	2.01 A.4s	Explosives products used shall be in accordance with the YMP TF&M Plan.	S	Minimum of once every 12 months
④	2313	01	3.01 C	The constructor shall maintain documentation addressing training and qualification of drilling and blasting first line supervision	S	Minimum of once every 6 months
⑤	2313	01	3.02 D	Drill hole alignment shall be maintained in accordance with the Constructor's Controlled Drilling and Blasting Plan.	M	Weekly or at least once during drill and blast activity in each area.
⑥	2313	01	3.03 C	Constructor shall obtain signature acceptance from the A/E's title III representative indicating concurrence with the change. Hold Point	M	Weekly or at least once during drill and blast activity in each area.
⑦	2313	01	3.05 A	Receipt verification of blasting material shall be by visual inspection of explosives, initiation components, ancillary blasting materials for conformance with purchasing documents.	IR	As received
⑧	2313	01	3.05 B.1	Field - verify storage of materials is in accordance with manufacturer's recommendations and article 2.01 and para 2.02B of spec 1600.	M	At least once every two weeks

INFORMATION COPY

Spec Number	Rev	Specification Paragraph	Specification Requirement	Method of Oversight	Frequency of Oversight
2313	01	3.05 B.2	Field - verify materials received are controlled to preclude inadvertent use prior to receipt verification.	IR	As received
(9)					
2313	01	3.05 C	Monitoring the drilling and blasting operations to ensure conformance to this Spec. section & the approved Constructor's Controlled Drilling and Blasting Plan.	M	Weekly or at least once during drill & blast activity in each area.
(10)					
2313	01	3.05 D	Visual inspection to confirm that the design quantities of explosives, are loaded, and initiation hookup, are in accordance with the Drill and Blast Plan.	M	Weekly or at least once during drill & blast activity in each area.
(11)					
2313	01	3.05 E	Blasting shall conform to a design goal of not exceeding 300 mm avg. overbreak outside the C line.	M	As requested by the A/E
(12)					
2313	01	3.05 F	The constructor shall maintain a record of each blast that includes the items list 1 thru 12.	M	Weekly or at least once during drill & blast activity in each area.
(13)					
2313	01	4.01 B	Submittals - Constructor shall prepare and submit a Controlled Drilling and Blasting Plan for each rock unit for A/E acceptance prior to starting blasting in that rock unit.	S	Minimum of once each 12 months
(14)					
2313	01	4.01 C.1	Submittals - Explosive product sheets, technical specification, MSDS, etc.	S	Minimum of once each 12 months
(15)					
2313	01	4.01 C.2	Submittals - Copy of license required under para. 1.04C	S	Minimum of once each 12 months
(16)					

INFORMATION COPY

41 of 41