



Department of Energy

WM DOCKET CONTROL CENTER

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Mr. J. E. Kennedy, BWIP Section Leader
Repository Project Branch
Division of Waste Management
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

WM Record File: 101.2

WM Project 10
Docket No. _____
PDR
LPDR

Distribution:
KENNEDY WRIGHT
DELLIGATE BILHORN
(Return to WM, 623-SS) 13

Dear Mr. Kennedy:

BASALT WASTE ISOLATION PROJECT OFFICE - QUALITY ASSURANCE AUDITS

Per verbal request from Ms. Susan Bilhorn of your staff, example copies of quality assurance audits conducted by the Basalt Waste Isolation Project Office are being sent for your information.

Very truly yours,

O. L. Olson, Project Manager
Basalt Waste Isolation Project
Office

SQA:GJB

Enclosures

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Department of Energy -
Richland Operations Office
P.O. Box 550
Richland, Washington 99352

MAR 7 1984

General Manager
Rockwell Hanford Operations
Richland, Washington

Dear Sir:

QUALITY ASSURANCE AUDIT, BASALT WASTE ISOLATION PROJECT - FEBRUARY 21-24, 1984

Transmitted for your action are the results of the recent RL audit of Rockwell's Basalt Waste Isolation Project (BWIP) Quality Assurance (QA) Program. The audit identified the need for substantial improvement in several areas, including definition and control of organizational interfaces, compliance with procedures, detection and correction of deficiencies through Rockwell internal review processes, establishment and enforcement of QA requirements in procurement actions, and maintenance of records sufficient to demonstrate performance to QA requirements. The broad nature of the audit results emphasize the need for an aggressive and systematic internal review of all areas of the BWIP-QA program.

Rockwell is requested to respond to the Findings, Observations, and Appendix B items presented in the Enclosure within 30 days of receipt of this letter. Your response should include commitments for corrective actions to resolve specific items raised in the audit report as well as commitments for actions to identify and correct related deficiencies throughout the BWIP-QA program.

Very truly yours,

QE Mecca
for O. L. Olson, Project Manager
Basalt Waste Isolation Project
Office

SQA:GJB

Enclosure

cc w/encl:
R. D. Hammond, Rockwell
E. B. Ash, Rockwell

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Audit Report
Rockwell Hanford Operations (Rockwell)
Basalt Waste Isolation Project (BWIP)
Quality Assurance Program
February 1984

INTRODUCTION

This report presents the results of a Rockwell-BWIP Quality Assurance (QA) Program audit performed by RL during the week of February 21, 1984, (reference letter, O. L. Olson to General Manager, Rockwell, same subject, dated February 8, 1984). The audit scope consisted of Rockwell's internal and external audit and surveillance programs, the preparation and implementation of procedures, control of procurement documents, and identification control of interfaces within the QA Program. The RL audit team consisted of G. J. Bracken (Lead), RL-SQA, R. D. Hudson, RL-BWIP, J. L. Rast, RL-SQA and K. M. Thompson, RL-BWIP. Information used in the preparation of this report was obtained through discussions with quality assurance and line personnel, facility visits, and reviews of Rockwell and other contractor's manuals, records, reports, procedures and documentation.

The results of this audit were discussed with Rockwell management as appropriate during the week of February 21, 1984, and in a scheduled exit briefing on February 28, 1984. This audit is intended to complement but not replace or otherwise substitute for continuing Rockwell management review and evaluation of all Quality Assurance program areas for identification and resolution of problems requiring corrective action.

SUMMARY

Rockwell's performance in those QA program areas evaluated is judged to be fair. Audit results presented below reflect the need for improvements in the following areas:

- o Definition and control of interfaces;
- o procedural compliance;
- o internal review processes which detect and correct QA program deficiencies;
- o procurement document controls relating to the establishment of QA requirements for BWIP contractors, and
- o maintenance of records necessary to demonstrate compliance with requirements.

Included as appendices to this enclosure are a list of Rockwell personnel contacted during the audit and a list of problems and issues raised by Rockwell during the audit entrance meeting on February 21, 1984. It is expected that Rockwell's response to the audit will include trackable commitments for actions necessary to address these problems and issues.

FINDINGS

Finding 84-01

The relationships between the various Rockwell policies, procedures and organizations which affect BWIP need to be reviewed for continuity and clarity.

Discussion

- NQA-1 establishes that the responsibility and authority of each organization involved in activities (of the BWIP) shall be clearly established and documented. It is the judgment of the audit team that several of the conditions observed during the audit and discussed in the audit Findings and Observations reflect on the adequacy with which the numerous organizational and administrative interfaces are defined and controlled.
- The Basalt Operating Procedures Manual, RHO-BWI-MA-4, is issued by the Rockwell Project Director (see B04 A-1) for compliance by "all personnel within or in support of the BWIP". It is not clear that the Project Director has sufficient authority to require compliance by non-BWIP personnel, especially when support organizations have requirements and procedures in existing Rockwell manuals.
- BOP C-1.1 was authored within the BWIP Site Department and approved for issuance in April of 1983. It presents requirements for support organizations, such as the Engineered Barriers Laboratories, which were apparently not made known to these organizations and have not been followed.
- The scope of the BWIP surveillance program is described in varying terms by QAP 1-402 (Quality Assurance Surveillance Program), QAI 1-406 (Surveillance Activities - BWIP) and RHO-QA-PL-3 (QA Program Plan - BWIP). None of these descriptions relate directly to the work breakdown structures by which work is organized and accomplished.
- The BWIP QA Program Plan indicates that other Rockwell QA organizations provide support to BWIP through implementation of their existing procedures, such as Quality Engineering and Control thru QAI 1-404. The precise nature of the interaction between these two organizations is not spelled out.

Finding 84-02

Numerous examples of noncompliance to Rockwell-approved procedures were detected in all areas reviewed during the audit.

Discussion

- Although Basalt Operating Procedure A-1 specifically restates the NQA-1 and the BWIP QA Program Plan requirements for compliance to procedures, numerous examples of informal practices in conflict with approved procedures were in evidence in practically all areas reviewed. This finding reflects practices similar to those which were the subject of an RL audit finding in July of 1982. Examples are provided below.
- Rockwell's BWIP surveillance program requires, as a minimum (QAI 1-406), that those surveillances established in the quarterly surveillance plan be conducted. However, available surveillance logs indicate since January 1983, 257 surveillances were planned, but only 159 were actually conducted.
- Proposed Basalt Operating Procedures (BOP) in the C-4.3 series deal with data and sample control in laboratories under the Engineered Barriers Department. These procedures have been in various stages of preparation and implementation during the previous 18 months and are still unapproved. In the meantime, BOP C-1.1 presents approved requirements for handling of some laboratory data which laboratory management had not been made aware of and therefore were not following.
- BWIP QA personnel confirmed that audits have not been performed to the requirements referenced in the BWIP QA Program Plan. Audits have been conducted to an informal mixture of approved requirements (QAI 1-401), draft procedures (BOP J-3) and auditor preference. There is a need to assure that audit planning, execution and followup satisfy applicable requirements.
- BOP C-1.5 ("Qualification of Technical Procedures") was originally issued in August of 1982 and subsequently updated in June of 1983. This procedure establishes requirements for review and qualification of BWIP technical procedures. No evidence could be found to demonstrate this procedure is being implemented. Conversations with Rockwell personnel during the course of the audit confirmed this conclusion.

Finding 84-03

Significant areas of procedural noncompliance within the QA program were not detected or corrected by Rockwell's internal audit and surveillance programs.

Discussion

- Implementation of an internal audit program to detect deficiencies in QA program implementation is a requirement of NQA-1 (Basic Requirements 2 & 18). No record could be found, however, to demonstrate that internal audits of the BWIP QA program itself, using "auditors who are independent of any direct responsibility for performance of the activities which they will audit" (NQA-1, Supplement 185-1) were performed. In light of the extensive nature of the audit results, it is felt that an aggressive internal audit effort planned to provide complete coverage of the BWIP QA program, including those portions implemented by the BWIP QA organization, is warranted.
- Although a yearly schedule is prepared listing several organizations to be audited; QA implementing procedures to be audited are not specified. As a result it is unclear that all applicable procedures and activities are audited within a given period. QAP 1-401 leads the reader to believe that all internal quality related activities are to be audited annually. In practice, this does not occur. The volume of audits performed to date indicates that full coverage of the QA program is not achieved. In addition, records of closed audits and status information for audits in progress are sufficiently buried in individual audit files so as to be of no practical value in managing and planning audit activities. The audit log, a requirement of QAI 1-401, could facilitate management of the audit effort. However, BWIP QA has not been maintaining an audit log. In summary, there appears to be no systematic approach to assure that all required audits are scheduled or performed.
- Followup to surveillance results, while generally satisfactory, does not provide for systematic management involvement to assure visibility and appropriate action for past due corrective actions. An ad hoc effort was initiated in February 1984 to deal with this area.
- It is noted that six of seven audits performed since January 1982 remain open.

Finding 84-04

There is insufficient evidence to establish that the work of other contractors is being performed under a QA program adequate for BWIP requirements.

Discussion

- As stated in the BWIP QA Program Plan, "Rockwell is responsible to assure proper integration of the overall BWIP quality assurance program with other principal contractors". QA requirements for WHC and PNL were provided by Statements of Work which contain a very short description of six elements for a QA program. These elements were of undetermined origin. As a result, the WHC and PNL QA Plans for BWIP do not contain any reference or apparent link to Rockwell's BWIP QA Program Plan.

- Rockwell BOP G-2 (Quality Assurance Review of Procurement Documents) contains some provisions for QA programs to be applied to suppliers performing studies, such as Woodward-Clyde (P. O. No. M3A-SBB-98960). However in the case of this purchase order, the minimum requirements of the procedure were not satisfied.
- There are no procedures within the Rockwell BWIP Program for review and comment or approval of subcontractor QA programs, although NQA-1 (Basic Requirement 5) requires that activities such as this be prescribed by and performed in accordance with documented instructions and procedures. The following reflect symptoms of this:
 - PNL's QA Plan "PGM-19" was reviewed by Rockwell BWIP-QA and approved with comment via a December 2, 1982, internal letter. There is no evidence to suggest the comment has ever been closed out. In fact the 12/2/82 letter was preceded by PNL's 11/16/82 final issuance of PGM-19. The review basis for Rockwell's approval or comment action could not be established.
 - The QA programs of the Construction Manager and the Architect/Engineer have been reviewed and approved by Rockwell. Per discussions with BWIP-QA staff, some kind of an NQA-1 checklist was used in these reviews; however, no record of this exists.
 - A penciled checklist referring to review of a WHC QA Plan was located; however, no action appeared to have been taken regarding correction of identified deficiencies. In fact, no action of any kind beyond completion of the checklist could be found.

Finding 84-05

The availability and content of records necessary to provide objective evidence of performance to the requirements of the QA program fall far short of that required to demonstrate compliance or manage program implementation.

Discussion

- In the audit teams judgment, insufficient attention has been given to identifying, developing and maintaining the records necessary to prove compliance with QA Program requirements. It is likely this has contributed to the shortcomings of Rockwell's internal review processes discussed under Finding 84-03. Problems in this area are exacerbated by the various interfaces between BWIP and non-BWIP organizations (see Finding 84-01). For example:
 - Records necessary to establish compliance with BOP-04 ("QA Responsibilities-NSTF") were not readily located by BWIP-QA. Some records are located at the NSTF site, while others remain in the Bank Building. In spite of a special effort on the part of BWIP-QA personnel to provide pertinent files, the information located was found to be incomplete.

- Although a cognizant BWIP QA representative escorted the audit team, it was necessary to visit three separate departments before the official procurement records were located.

OBSERVATIONS

Observation 84-01

It appears the responsibilities presently assigned to the Director of Quality Assurance, particularly those associated with operation of the analytical laboratories, may compromise the line independence of the QA organization required by licensing related criteria.

Discussion

- NQA-1 discusses QA independence in terms of absence of cost and schedule pressures. The proposed NRC review plan for site characterization QA programs is much more specific in calling for the director level position within the QA organization to have no duties other than quality assurance. Under Rockwell's present organization the greatest responsibility of the QA Director, in terms of manpower, is the operation of the analytical laboratories. Rockwell needs to re-evaluate this organization in light of the independence between performing (line) and verifying (QA) functions which will be required for the BWIP.

Observation 84-02

There appear to be inadequate coordination and planning between QA and Procurement organizations to assure contractual quality assurance requirements (e.g., hold points) are accomplished in a timely manner.

Discussion

- During review of this area, no evidence could be found to suggest that any prescheduling of inspection hold points occurs. Vendors are required to provide Rockwell purchasing with 48 hours advanced notice of an upcoming hold point. However, such short notice creates the potential for hold points to be by-passed. One extreme example of this is the recent procurement of the main hoist. Fabrication for this hardware progressed to within one month of delivery before it was realized that hold points required early in fabrication had been violated.

APPENDIX A

Rockwell Personnel Contacted
(February 1984 BWIP QA Audit)

K. B. Davis	BWIP-EMS
W. F. Davis	BWIP-QA
D. C. Edwards	BWIP-MTG
J. E. Ferguson	BWIP-EMS
W. A. Herber	BWIP-QA
C. R. Hoover	RHO-QE&C
T. E. Jones	BWIP-MTG
A. L. Morissette	RHO-QAPD
D. C. Morissette	BWIP-QA
L. T. Murphy	BWIP-QA
M. F. Nicol	BWIP-QA
D. G. Price	BWIP-QA
R. A. Palmer	BWIP-MTG
B. D. Slonecker	BWIP-QA
G. K. Thompson	RHO-QE&C

Problems/Issues Raised by Rockwell
During Entrance Meeting
(February 1984 BWIP QA Audit)

During the entrance meeting Rockwell identified three general areas of concern (problems/issues) which are reported below. It is expected that the audit response will include appropriate commitments for actions necessary to resolve these areas.

- o Definition of roles and responsibilities for the establishment and enforcement of Quality Assurance requirements in procurements involving interagency agreements, Hanford contractors and off-site principal contractors.
- o Identification and application of hardware oriented Quality Assurance program requirements to Nuclear Waste Terminal Storage site characterization programs.
- o Nuclear Waste Terminal Storage (BWIP) Quality Assurance programs' and organizations' ability to meet license applicant requirements during pre-applicant activities such as site characterization.



Department of Energy

Richland Operations Office
P.O. Box 550
Richland, Washington 99352

JUN 22 1984

General Manager
Rockwell Hanford Operations
Richland, Washington

Dear Sir:

QUALITY ASSURANCE AUDIT, BASALT WASTE ISOLATION PROJECT - JUNE 5-7, 1984

Transmitted for Rockwell's action are the results of the recent RL quality assurance (QA) audit of the Basalt Waste Isolation Project (BWIP). The audit focused on field activities connected with block testing and piezometer installation and monitoring. Rockwell performance in those areas evaluated is judged to be very good.

Rockwell is requested to respond to the enclosed audit findings and observations within 30 days of receipt of this letter. The response should include commitments for corrective actions to resolve specific items raised in the audit report as well as commitments for actions to identify and correct related deficiencies throughout the BWIP.

Very truly yours,

R. P. Saget for
O. L. Olson, Project Manager
Basalt Waste Isolation Project
Office

SQA:GJB

Enclosure

cc w/encl:
E. B. Ash, Rockwell
R. D. Hammond, Rockwell

QUALITY ASSURANCE AUDIT REPORT
ROCKWELL HANFORD COMPANY (ROCKWELL)
BASALT WASTE ISOLATION PROJECT (BWIP)

June 1984

INTRODUCTION

This report represents the results of a Quality Assurance (QA) Audit of Rockwell-BWIP performed by RL during the week of June 5, 1984, (reference letter, O. L. Olson to General Manager, Rockwell, same subject, dated May 21, 1984). The audit scope consisted of Rockwell-BWIP's implementation of requirements for instructions, procedures and drawings, for control of processes and tests and for calibration of measuring and test equipment. Activities audited were the installation and monitoring of piezometers and the performance of block tests. The audit team members were G. J. Bracken (Lead), RL-SQA, J. A. Acsai, RL-SQA, B. W. Hurley, RL-BWIPO and J. E. Rhoderick, HQ-OGRD. Information used in the preparation of this report was obtained through discussions with Rockwell quality assurance and line personnel (Enclosure A), facility visits and reviews of manuals, records, reports, procedures and documentation.

The results of this audit were discussed with Rockwell management as appropriate during the week of June 5, 1984, and in a scheduled exit briefing on June 12, 1984. This audit is intended to complement but not replace or otherwise substitute for continuing Rockwell management review and evaluation of all BWIP areas for identification and resolution of problems requiring corrective action.

SUMMARY

Rockwell's overall performance for those areas evaluated is judged to be very good. Records establishing compliance to formal BWIP requirements were generally available, clearly recorded and complete. Personnel interviewed displayed attentive concern for the performance and orderly documentation of quality work, and were encouragingly alert to opportunities for improvements in these areas.

The audit results include two findings, and two observations which reflect, in particular, the need for improvements in the implementation of BWIP's equipment calibration program.

FINDINGS

Finding 84/6-01

The calibration program applied to drilling and testing equipment in general and the downhole pressure transducers in particular does not satisfy the minimum requirements for calibration called out in Basalt Operating Procedure (BOP) C-1.3, "Measuring and Test Equipment Calibration."

o Discussion

BOP C-1.3, which established the calibration program requirements for BWIP, identifies that the Maintenance Instrumentation Calibration System (MICS) is used to track equipment requiring maintenance or calibration. Discussions with members of the Drilling and Testing Group verified this not to be the case. While some effort is underway to achieve compliance in this area, at present a separate, unique system is being administered by Drilling & Testing.

Not all equipment requiring calibration is inventoried in the existing calibration system. For example, a spotcheck established that two small diameter downhole probes (S/N 61 & 62) were not included on the calibration schedule as of June 6, 1984.

Some equipment listed on the Drilling and Testing calibration schedule dated June 6, 1984, had no entry for the next calibration due date. There was some confusion as to where this equipment is located and whether it is in or out of service.

It could not be determined how calibration frequencies are established for all equipment (BOP C-1.3, Para. 6.2.1). The newest downhole probes have been established on a 1-year recall, yet there does not appear to exist any formal recommendation from the manufacturer to this regard. It is noted that the initial data collection period involving this equipment, which is of critical importance to the project, is approximately 1-year.

There was no evidence to demonstrate how or whether equipment calibration tolerances are established or documented (BOP C-1.3, Para. 6.2.2). Discussions with BWIP staff confirmed this. In the absence of a documented derivation of calibration tolerances, it is difficult to assure that equipment performs satisfactorily in the context of the design of a given equipment and BWIP data requirements.

It was noted during the review of manufacturer's calibration data for one of the newest downhole probes (#0114), that the calibration points as reported are at variance with the "common practice" documented in the manufacturer's standard operating procedure (#8081-001) which applies to this area. The acceptability of this needs to be verified.

There was no documented evidence to suggest that environmental conditions of equipment storage and use are considered with respect to their impacts on calibration (BOP C-1.3, Para. 6.2.3).

BOP C-1.3, Para. 6.2.5 establishes requirements for labeling of measuring and test equipment. During a field inspection of piezometer sites at DC-19, no such labeling of the downhole probe installations was observed.

Finding 84/6-02

Procedural Noncompliances - Procedural compliance relative to installation of piezometers, geologic logging, hydrologic head monitoring and block testing was found to be very good. For the noncompliances identified, however, no evidence could be found of implementation of formal mechanisms for identifying and accepting these deviations (such as nonconformance reports, revisions to procedures, etc.).

o Discussion

Piezometer Installation - Installation records were reviewed for two piezometer tubes in each of DC-19C and DC-22C. These records (notebooks number RHO-BW-NB-134 & 154) were found to be very complete and thorough. Specific deviations from the installation procedure (SD-BWI-TC-016) included:

- Not tagging (locating) the top of the cemented plug with the piezometer tubing followed by installation of the piezometer tube 1-2 ft. above the cement.
- Insertion of the working tubing (for sand addition) to a point five feet above the upper piezometer tube centralizer,
- not tagging the top of the fine sand interval,
- securing the piezometer tubing to the well head out of the sequence identified in the procedure, and
- deleting the water addition identified as a test for piezometer screen pluggage.

Geologic Logging - The log for DC-19C, prepared between 9/15/83 and 1/3/84, was reviewed (pages 1, 12, 18, 24 & 36). The log was found to be in compliance with BOP C-2.6 (Preparation of Borehole Geological Log) with the following exceptions:

- The requirement for evaluation of chip samples was not implemented.
- As written BOP C-2.6 requires a log of drill rate for the entire length of the hole. The actual rate logged was initiated at minus forty feet.
- Contrasting ink to identify reviewer's comments on the log was not used.
- Whiteout on Page 1 of the log was not initialed and dated.

Hydrologic Head Monitoring - BOP C-2.12 (Hydrologic Head Monitoring Procedure) is the interim (approved) procedure governing this area. A review of data recorded from wells 19A, 19C and 20C demonstrated generally consistent compliance to the requirements of this BOP. The following exceptions were noted:



Department of Energy

Richland Operations Office
P.O. Box 550
Richland, Washington 99352

OCT 17 1984

General Manager
Rockwell Hanford Operations
Richland, Washington

Dear Sir:

QUALITY ASSURANCE AUDIT, BASALT WASTE ISOLATION PROJECT - OCTOBER 2-4, 1984

Transmitted for Rockwell's action are the results of the recent RL Quality Assurance (QA) Audit of the Basalt Waste Isolation Project (BWIP). The audit focused on activities in the areas of design control and QA records management. Rockwell performance in those areas evaluated is judged to be fair, as explained in the enclosed audit report.

Rockwell is requested to respond to the enclosed audit findings and observations within 30 days of receipt of this letter. The response should include commitments for corrective actions to resolve specific items raised in the audit report as well as commitments for actions to identify and correct related deficiencies throughout the BWIP.

Very truly yours,

ORIGINAL SIGNED BY
O. L. OLSON

O. L. Olson, Project Manager
Basalt Waste Isolation Project
Office

SQA:JLR

Enclosure

cc w/encl:
E. B. Ash, Rockwell
R. D. Hammond, Rockwell

QUALITY ASSURANCE AUDIT REPORT
ROCKWELL HANFORD OPERATIONS (RHO)
BASALT WASTE ISOLATION PROJECT (BWIP)
OCTOBER 1984

Introduction

This report presents results of the recent QA Audit of the Rockwell BWIP performed by RL (Reference letter, O. L. Olson to General Manager, RHO, same subject, dated September 24, 1984). The audit was conducted during the week of October 1, 1984 by J. L. Rast (lead), RL-SQA, G. J. Bracken, RL-SQA, E. H. Petrie, RL-BWIP and D. C. Newton, HQ-OGRD.

The audit focused on the areas of design control, for both data acquisition system designs and facility designs, and Quality Records Management. Information was obtained through interviews with RHO personnel (list attached) and reviews of Quality Records, reports, manuals and procedures.

Summary

Rockwell's overall performance in the areas examined is judged as fair, reflecting a need for significant improvements. Although certain aspects of the design control process were observed to be very good, (e. g., facility design review), these are more than offset by deficiencies in other areas. Of particular concern is the peer review process for data acquisition system designs.

Specific audit results are presented in the following findings and observations:

FINDINGS

Finding 84/10-01

Insufficient records are available to demonstrate compliance by RHO to its requirements for design control. This is particularly prevalent in the peer review areas for data acquisition system design.

Discussion

- o Some areas reviewed were found to be practically unauditible due to the lack of retrievable records. This finding is very similar to one presented in RL's February 1984 Quality Assurance Audit of RHO-BWIP.
- o Although Basalt Operating Procedure A-22, "Peer Review" requires records of peer reviews to be submitted to the Basalt Records Management Center (BRMC), it was confirmed during the audit that this has not occurred. The majority of the peer review records requested by the audit team could not be located in the BRMC. Some records were located in individual working files, however, in at least 50% of the cases reviewed for compliance to A-22, no records could be found by Rockwell during the 3 days of the audit.

Some of the difficulty in this area was exacerbated by inaccuracies in the listing of responsible organizations versus issued BWIP documents contained in the "Configuration Summary Report" provided to the audit team.

- o BOP A-22 requires the establishment of records entitled "Valid Data Files". The audit team confirmed these also do not exist at this time. Although internal surveillance by Rockwell Quality Assurance identified this situation over 1 year ago, no corrective action has been implemented to date. Rockwell has knowingly allowed a situation of noncompliance to an approved procedure to exist during this period. A Corrective Action Request was issued by Rockwell in September 1984, although as of the date of this audit, no commitments for action had been made.

In the area of Design Review, several concerns were noted:

- o Design Review meeting minutes, as required by section 4.4 of BOP B-11, are not being generated. Without the minutes, it is not evident that all the objectives of the review (Section 5.2.1) are addressed. Additionally, it is not clear that further comments or Requests for Information (Section 6.3(3)) are resolved during the meetings.
- o The Design Document Review Report (DDRR) is not being completed according to section 6.5(1) of BOP B-11. In those review packages examined, only the DDRR cover sheet was present.
- o Aside from the above discrepancies, the Design Review packages maintained in the Configuration Management files were found to be in very good order. The Review Comment Records indicate that meaningful and thorough design reviews are being conducted (for facility type designs).
- o Engineering Change Proposals require several levels of board approval, depending on the change class. It is often the case that an informal review is conducted, (i.e., no board meeting is conducted). No records were available to indicate that all board members review and concur with the ECP's and that all comments are adequately resolved prior to approval. Therefore, the ECP review system does not appear to be commensurate with that of the original design, (i.e., the design review is not formally documented as with BOP B-11).

Finding 84/10-02

Activities affecting quality, specifically preparation of Test Plans, are being conducted in the absence of approved procedures establishing requirements for these activities.

Discussion

- o NQA-1 and RHO-QA-PL-3 (Quality Assurance Program Plan - Basalt Waste Isolation Project) require that work activities important to the quality of the BWIP be performed in accordance with documented procedures or instructions. One such activity is the preparation of test plans. From June 1982 through July 1984, Basalt Operating Procedure D-6, "Test Program Documentation" established the requirements for content and issuance of approved test plans (as well as other test documents such as reports, instructions, etc.). On July 28, 1984, this procedure was voided and is yet to be replaced. Preparation of test plans continues, however, in areas such as hydrology and the exploratory shaft. Rockwell needs to reestablish controls for these work activities commensurate with requirements of the DOE approved QA Program Plan, RHO-QA-PL-3.
- o Voiding of BOP D-6 represents deletion of implementation requirements which fulfill a major commitment on Test Control in the DOE approved QA Program Plan, RHO-QA-PL-3. Rockwell needs to review its policies and procedures to assure that all changes to the BWIP QA program remain consistent with the program as approved by DOE.

Finding 84/10-03

It is not evident that Design Field Changes (DFC's) are receiving design review in a manner commensurate with that of the original design, as required by BOP B-18 section 5.3.

Discussion

- o Before the BOP B-18 change Notice of 9/25/84 was issued, all DFC's required design review in accordance with BOP B-11, "BWIP Design Review Requirements." All DFC's examined by the auditors were issued prior to 9/25/84; however, none of them had received the required BOP B-11 design review.
- o The above mentioned change notice deletes the requirement for the DFC review to be conducted in accordance with BOP B-11. In the audit team's judgement, this change notice provides insufficient guidance to assure that DFC's are adequately reviewed.

Finding 84/10-04

In many cases the Quality Records, which were available during the audit, were found to be incorrectly or incompletely prepared.

Discussion

- o The Quality Levels, originating organization, or review type (formal or informal) were not designated on several of the Design Document Review Notice forms examined.

- o The final approval signature for Class II Engineering Change Proposals (ECP) was consistently found in other than the correct location, and undated. This led the auditor's to believe that, in the case of ECP 00387, the change had been released without proper approval. A Rockwell employee, familiar with the required signature, later identified the approval signature on another part of the form.
- o NQA-1 Supplemental Requirement 17S-1 requires that, where corrections to records are made, the corrections include the date and identification of the person authorized to issue the correction. The QA Records reviewed were consistently found to have changes made using correction fluid and tape, and without the information as stated above. Additionally, BOP E-11, Section 5.1(2) prohibits the use of "white-out" for correcting errors in Quality Records.
- o The Architect-Engineer's Safety and QA approvals are not indicated on several RHO released Design/Field Changes (DFC's).
- o BOP B-18, Section 5.1(6), requires that DFC's clearly relate the new design to that being changed in a "was/is" format. DFC B-314-103 describes the initial configuration: "as shown on drawing H8-S10308." (No revision stated.) This does not appear to meet the intent of the above requirement in that the original configuration is not described by the DFC.
- o BOP B-18, Section 4.5, requires the Rockwell Facilities Construction Department Manager's approval in Block 17A of the DFC. In many cases there is no signature at all in 17A.
- o BOP D-6 states approval signature requirements for supporting documents. The Health, Safety and Environmental approval was omitted from SD-BWI-007 and a performer signature was missing from SD-BWI-006.
- o On some records examined, persons names were given without functional titles. The titles would be helpful in demonstrating compliance with requirements.

Finding 84/10-05

A lack of adherence to procedural requirements was observed in several instances.

Discussion

- o BOP E-6, BWIP Records Management System, Section 5.2.3 requires that the Records Retention Data Base (RRDB) be issued to and reviewed by BWIP end functions quarterly, for records other than those designated for Public Release System. The quarterly issue and review are not being performed.
- o The above referenced BOP section also requires end function managers' signatures on the reviewed RRDB Index for Public Release System data. No signatures were present on the samples examined.

- o BOP E-6, Table 1, allows Finance and Information Services 5 days to complete microfilming of documents submitted by BWIP. Several cases were noted where the time limitation was exceeded.
- o BOP D-6 requires a section in the test plan deliniating the Instruments and Equipment to be used. This section was omitted from SD-BWI-007. Additionally, the Quality Assurance sections in test plans reviewed do not address the minimum requirements called out for consideration in BOP D-6.
- o The requirement for specifying applicable procedures and instructions was neglected in the case of Test Record SD-BWI-TD-006.
- o Objectives of tests are to be stated in the Test Report conclusions per BOP D-6. These Objectives are not addressed in Test Report RSD-BWI-TD-022.

Observation 84/10-01

Rockwell's procedures for peer reviews do not appear to assure consistent levels of documented reviews for similar types of BWIP work.

Discussion:

During the audit, various documents and geologic maps were examined for evidence of peer reviews performed to procedures established for BWIP (BOP A-22 "Peer Review" and BOP C-3.5, "Geologic Map and Drawing Approval and Issue"). Some inconsistencies were noted. BOP A-22, for example, contains very specific requirements for establishing and maintaining records of peer reviews performed under this procedure. BOP C-3.5, which applies to Rockwell prepared maps and drawings, has no similar requirements for records, and indeed during the audit, no records of review comments, resolutions, etc., were found. Geologic maps prepared by other (non-Rockwell) organizations do not appear to be subject to any peer review requirements. For example, maps prepared by Kaiser Engineers Hanford which were issued as part of a Rockwell document, evidenced no peer review.

Observation 84/10-02

A Review Comment Record for Project DR-B31482-18 indicates that one of the assigned reviewers had not performed an evaluation because the package had not been received by him. There was no evidence of a subsequent review by that reviewer. The acceptability of deleting some reviewers should be evaluated and guidelines established as appropriate to assure consistency in this area.



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