

DEPARTMENT OF ENERGY

BASALT WASTE ISOLATION PROJECT

WESTINGHOUSE HANFORD COMPANY (WHC)

QUALITY ASSURANCE AUDIT NO. 8705

SELECTED QA PROGRAM ELEMENTS

AUDIT REPORT
NOVEMBER 9 - 20, 1987

T. K. Subramanian 1.28.88
T. K. Subramanian
Audit Team Leader
Date

R. P. Saget 1/28/88
R. P. Saget, Director
Quality Systems Division
Date

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AUDIT 8705

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It was determined by the Director, Quality Systems Division that all 18 criteria of 10 CFR 50, Appendix B as documented in the WHC program, should be audited as part of an annual audit of the WHC QA Program. Audit 8704 encompassing 10 of the 18 10 CFR 50, Appendix B criteria (i.e., 1, 2, 3, 5, 6, 11, 15, 16, 17, and 18) was conducted on August 31 through September 11, 1987, resulting in 3 Findings and 12 Concerns issued to WHC. Audit 8705 provides for evaluation of the remaining 8 criteria as listed in this report (Attachment 1).

The implementation of the selected quality related policies and procedure, were reviewed during the audit. The audit focused on boreholes DC-24/25 activities (ESC), including control of measuring and test equipment, inspection, control of special processes, inspection, test and operating status, and procurement. The audit also included the core storage facilities, Major Project Participant coordination and direction of work, and control of procurement document packages both inside and outside of DC 24/25 activities.

3.0 OVERALL QA PROGRAM

3.1 QA PROGRAM

The status of the overall WHC QA Program is summarized in the following Table 8705-01. (The table reflects the results of both Audit 8704 and 8705.)

Within the scope of this audit, the audit team verified that WHC has an approved QA Program in place and except as noted in the Findings and Concerns, the QA Program meets the hierarchy BWIP requirements (i.e., BQARD), and its implementation is achieving its intended purpose.

During the conduct of this audit, all previously open responses to Findings and Concerns were being evaluated by DOE-RL. Therefore, verification of these corrective actions was not conducted.

3.2 TECHNICAL PERFORMANCE

The Technical advisors selected for the audit team, are specialists in the fields audited. These advisors provided input into the development of the checklist, as well as, the selection of the audit samples. They also participated in the audit including evaluation of the technical performance within their respective area of expertise. Attachment 3 is a compilation of reports from the technical advisors.

1.0 INTRODUCTION

The U.S. Department of Energy - Richland (DOE-RL) Assistant Manager for Commercial Nuclear Waste (AMC) Quality Systems Division (QSD) conducted an audit of the Westinghouse Hanford Company (WHC) Basalt Waste Isolation Project (BWIP) Quality Assurance Program, November 9-20, 1987.

This is the second part of a two part audit on the BWIP Integrating Contractors (WHC) Quality Assurance program. Eight of the eighteen 10 CFR50 Appendix B criteria were selected for the scope of the audit. The remaining ten criteria were reviewed during Audit No. 8704 conducted August 31 through September 11, 1987.

2.0 BACKGROUND

Rockwell Hanford Operations (Rockwell), the BWIP Integrating Contractor (IC) was directed by DOE-RL, AMC to execute a general Stop Work Order (SWO) on the Basalt Waste Isolation Project (BWIP) activities on May 1, 1986 (reference DOE-RL letter to Rockwell General Manager, dated 5/1/86). Rockwell was allowed to continue specified activities identified as "exempted work"; one of which, was the development and implementation of a QA program upgrade.

In some special cases, the BWIP IC was permitted to initiate work prior to DOE-RL granting a partial lifting of the stop work order. The permission was based upon the contractor having procedures in place to control the specific task. This process is identified as the Expedited Special Case (ESC). Design and Drilling of boreholes DC-24/25 are the ESC activities addressed in this audit.

Rockwell executed the SWO and developed a plan of action that addressed the programmatic deficiencies and the recovery process (reference Rockwell letter 30568, R1 to DOE-RL, dated 5/14/86). On January 5, 1987, Rockwell submitted to DOE-RL the "BWIP Restart Readiness Report" which defines actions to be taken to correct the deficiencies identified in the SWO. In addition to the DOE-RL Readiness Review Team, an Independent Management Review Team (IMRT) was established to evaluate Rockwell's readiness. As a result of these evaluations, a partial lifting of the SWO was granted on June 10, 1987 (Reference DOE letter 87-AMC-437 to Rockwell General Manager.) The partial lifting of the SWO allows WHC to resume work following DOE-RL approval of selected Quality Level 1 and 2 Work Initiation Packages (WIPs).

The DOE-RL consolidation effort, resulted in Westinghouse Hanford Company (WHC) replacing Rockwell Hanford Operations as the BWIP IC on June 29, 1987. The transition included transfer of BWIP technical tasks, IC management, QA functions and personnel from RHO to WHC. The QA Manual (MA-3) and procedures developed by Rockwell have been adopted in total for BWIP use by Westinghouse Hanford Company.

It was determined by the Director, Quality Systems Division that all 18 criteria of 10 CFR 50, Appendix B as documented in the WHC program, should be audited as part of an annual audit of the WHC QA Program. Audit 8704 encompassing 10 of the 10 10 CFR 50, Appendix B criteria (i.e., 1, 2, 3, 5, 6, 11, 15, 16, 17, and 18) was conducted on August 31 through September 11, 1987, resulting in 3 Findings and 12 Concerns issued to WHC. Audit 8705 provides for evaluation of the remaining 8 criteria as listed in this report (Attachment 1).

The implementation of the selected quality related policies and procedure, were reviewed during the audit. The audit focused on boreholes DC-24/25 activities (ESC), including control of measuring and test equipment, inspection, control of special processes, inspection, test and operating status, and procurement. The audit also included the core storage facilities, Major Project Participant coordination and direction of work, and control of procurement document packages both inside and outside of DC 24/25 activities.

3.0 OVERALL QA PROGRAM

3.1 QA PROGRAM

The status of the overall WHC QA Program is summarized in the following Table 8705-01. (The table reflects the results of both Audit 8704 and 8705.)

Within the scope of this audit, the audit team verified that WHC has an approved QA Program in place and except as noted in the Findings and Concerns, the QA Program meets the hierarchy BWIP requirements (i.e., BQARD), and its implementation is achieving its intended purpose.

During the conduct of this audit, all previously open responses to Findings and Concerns were being evaluated by DOE-RL. Therefore, verification of these corrective actions was not conducted.

3.2 TECHNICAL PERFORMANCE

The Technical advisors selected for the audit team, are specialists in the fields audited. These advisors provided input into the development of the checklist, as well as, the selection of the audit samples. They also participated in the audit including evaluation of the technical performance within their respective area of expertise. Attachment 3 is a compilation of reports from the technical advisors.

WMC QA PROGRAM CRITERIA SUMMARY TABLE
Table 8705-01

| CRITERIA NO. | TITLE | STATUS | DISCREPANCY DOCUMENT |
|-----------------|---------------------------------------|--|--|
| 1 | Organization | Organization is fully implemented except as noted | Concern 8704-01 |
| 2 | QA Program | The program is complete and documented in approved procedures. However, training is not fully implemented. | Concern 8704-02 8704-03 8704-05 Finding 8704-02 |
| 3 | Design Control | The approved Design Control activities documented in PHPMs are not fully implemented due to SWO. Concerns noted are from design activities permitted as ESC. | Concern 8704-07 8704-08 8704-11 |
| 4 | Procurement Doc. Control | The control of documents resulting from procurement activities is not in compliance for SOW's, LOI's, WO's and Task Authorizations. Handling of PR's is satisfactory. | Finding 8705-03 8705-04 |
| 5 | Instructions, Procedures and Drawings | WMC procedure control system is adequately implemented with the exception of Desk Instructions, and the Procurement Procedures Manual (CH-2-1). Project Directive controls are not in compliance with the approved system. | Finding 8704-03 Concern 8705-01 8704-04 |

[QA22L7.8705]

WHC QA PROGRAM CRITERIA SUMMARY TABLE
Table 8705-01
Continuation Page 2 of 3

| CRITERIA NO. | TITLE | STATUS | DISCREPANCY DOCUMENT |
|-----------------|---|--|-------------------------------|
| 6 | Document Control | System is not fully implemented. Master Document List is incomplete and not distributed as required. | Concern 8704-06 8705-01 |
| 7 | Control of Pur. Material, Equip. and Services | No Q-Level 1 materials or equipment purchased since Stop Work. Control of Q-Level 1 services is being implemented. (QL-2 ES Liner is maintained by MPP contract.) | None |
| 8 | Identification and Control of Materials, Parts and Components | These requirements are not applicable at this stage of the project. No Q-Level 1 material purchased by WHC since SWO issue. | None |
| 9 | Control of Special Processes | Control systems are established and in place. No special processes have been identified and qualified for BWIP by WHC. | Finding 8705-02 |
| 10 | Inspection | Control systems are established and in place. However, "Inspections" per Criterion 10 are not being conducted on Q-Level 1 items or activities requiring inspection. (However verifications are performed) | Finding 8705-01 |
| 11 | Test Control | System is in place and implemented. However, a few individual procedures are incomplete. | Concern 8704-12 |
| 12 | Control of Measuring and Test Equipment | Fully implemented and functioning. | None |

[QA22L7.8705]

WHC QA PROGRAM CRITERIA SUMMARY TABLE
Table 8705-01
Continuation Page 3 of 3

| NO. | CRITERIA TITLE | STATUS | DISCREPANCY DOCUMENT |
|-----|---|---|--|
| 13 | Handling, Shipping and Storage. | No Q-Level-1 material or equipment purchased by WHC. Since issuance of SWO. External controls through procurement documents are not applicable. (QL-2 ES Liner is stored and maintained by MPP contract.) For core and field samples, controls are fully implemented. | None |
| 15 | Nonconforming Materials, Parts and Components | The nonconformance control system does not fully implement BQARD requirements. Trend analysis is not fully implemented. The use of quality status tags is not addressed in the program. Design control measures do not exist for accept-as-is and repair dispositions. | Concern 8704-09 8704-10 8704-11 |
| 16 | Corrective Action | This criteria is fully implemented. | None |
| 17 | Records | Records management system is not fully implemented. | Finding 8704-01 8705-04 |
| 18 | Audits | This criteria is fully implemented. | None |

TABLE 8705-01 SUMMATION

- o Fourteen (14) of the Eighteen (18) BQARD Criteria are applicable to WHC at this stage of the project. (1, 2, 3, 4, 5, 6, 9, 10, 11, 12, 15, 16, 17, and 18)
- o Four (4) Criteria are partially applicable to WHC at this stage of the project. (7, 8, 13, and 14)
- o Of the fourteen (14) applicable criteria, six (6) have noncompliance to BQARD requirements. (3, 4, 6, 9, 10, and 17)
- o Of the remaining nine (9) applicable criteria, five (5) have deficiencies requiring corrective action. (1, 2, 5, 11, and 15)
- o The remaining three (3) have no identified deficiencies (12, 16, and 18)
- o Of the four (4) partially applicable criteria, no deficiencies have been identified. (7, 8, 13, and 14)
- o Eleven (11) of the eighteen (18) applicable criteria had seven (7) Findings and thirteen (13) Concerns.

3.3 OVERALL PERFORMANCE

The information presented in Table 8705-01 is a compilation of the results of DOE-RL audits 8704 and 8705. It provides an overview of the status and effectiveness of the WHC Quality Assurance Program implementation. The results indicate that implementation does not satisfy BQARD requirements in six (6) of the eighteen (18) applicable criteria, and five (5) criteria have deficiencies requiring corrective action. It should be noted that WHC was in a Stop Work mode for many activities at the time of the audit, and a full assessment of the quality program implementation can be made only after the lifting of Stop Work Order 86-002. The deficiencies identified during the audits 8704 and 8705 should receive attention from WHC and the corrective actions will be monitored through audits and surveillances by DOE-RL.

Considering the limited scope of DC 24/25 and the numerous assessments performed before and during the audit 8704, the audit team concluded that the activities associated with DC 24/25 were adequately controlled and therefore, should be allowed to proceed.

The specific problem areas with significant project impact are as follows:

- Criterion 4 - Procurement documents (i.e., SOWs, LOIs, and WOs) are not controlled in accordance with BWIP programmatic requirements. Records generated as a result of procurement activities are not controlled and maintained in accordance with programmatic requirements.
- Criterion 5 - Project Directives are not controlled in accordance with the requirements stipulated in PMPM 1-110.
- Criterion 6 - Document Control is not completely effective in achieving its intended purpose. The Master Document List is incomplete and improperly distributed. Control of Project Directives is not in accordance with PMPM requirements.
- Criterion 9 - Special Processes have been identified in the WHC QA Program for BWIP. However, no special processes have yet been listed or qualified.
- Criterion 10 - It is unclear at this point how this criteria will be applied to BWIP and DC 24/25.
- Criterion 17 - Some records are currently missing and are not fully identified.

4.0 COMMENDABLE PRACTICES

- o Cooperation and professionalism was excellent with all WHC interfaces.
- o In general the control of Measuring and Test Equipment was found to be adequate.
- o Activities within the WHC Purchasing Department were found to be well controlled and personnel were knowledgeable in their programmatic requirements.

5.0 AUDIT PERFORMANCE

Eight (8) BQARD criterion (listed in Attachment 1) were selected for review and evaluation. Two audit subteams were utilized during this audit. Checklists were prepared to address the applicable criteria from: BQARD, DOE-RL QA Plan, ANSI/ASME NQA-1 1986, and the WHC Project Management Procedures Manual CM-7-1. Specific effort was made to develop questions that did not duplicate questions previously addressed in audit 8704. Copies of audit checklists were mailed to the observers before the audit and the audit team leader provided an orientation session for the Technical advisors as required by BP 18.4 & 18.6.

A pre-audit briefing was held to familiarize the audit observers (i.e., the Affected Indian Tribes, Nuclear Regulatory Commission (NRC & DOE-RL). At the audit entrance, the observers and WHC representatives were briefed on the audit scope, plan, schedules, audit participants, audit definitions, and the observer's responsibilities. Details of the items/activities examined during the conduct of the audit are covered under Section 6.0. Audit caucuses were held to discuss audit results and observer concerns.

Upon completion of the audit, an exit briefing was held to provide a summary of the audit results to WHC, DOE-RL management and the audit observers.

Excerpts from the NRC Observer's report are included in Attachment 7 as information for future audits and for potential usage by non-BWIP operations.

Personnel present at the audit entrance and exit meetings and those interviewed during the audit are identified in Attachment 2.

6.0 DISCUSSION OF RESULTS

The audit resulted in the issuance of four (4) Findings and one (1) Concern. Each Finding and Concern is discussed below along with a description of activities audited for each criteria.

[QA22L7.8705]

6.1 CRITERION 4 - PROCUREMENT DOCUMENT CONTROL

This portion of the audit focused on all types of documents utilized in the procurement process by WHC. Those documents include:

- o Statements of Work (SOW) including Subtask Authorizations (TA).
- o Purchase Requisitions (PR)
- o Letters of Instruction (LOI)
- o External Work Orders (WO)

The audit team interviewed personnel from Acquisition Planning and Procurement Management (AP&PM), WHC Purchasing Department, Procurement Quality Unit (PQU) and Basalt Document Control/Basalt Records Management Center (BDC/BRMC).

The results of the evaluations on procurement documents are as follows:

- o The audit team could not locate 27 of 35 SOW procurement document packages and only partial data from 8 packages. These packages are to be supplied to the AP & PM for submittal to the Basalt Records Management Center (BRMC) in accordance with PMPM 6-116 and 8-121 by the initiator. However, in interviewing members of the AP & PM department, it was found that SOW packages are not being transmitted to them.
- o SOWs and their supporting documents do not have a unique identification number in accordance with 10 CFR 50, Appendix B and NQA-1, for expeditious retrieval of records. (Ref. Observation 8705-05.)
- o BDC/BRMC and the personnel interviewed were unable to provide all of the requested WOs or supporting documents such as Review Comment Records (RCRs), Procurement Requirements Checklists, and Task Authorizations.
- o The SOW to MK (L93DH) indicated that the IC would establish the Quality Level for the specific tasks, however, there was no method or procedure to accomplish this assignment or its review by QA prior to the tasks being accomplished.

These deficiencies are documented in Findings 8705-03 and 8705-04 of this report.

As part of the audit, the team attempted to follow the approved flow of documents as outlined in PMPMs 6-101, 6-105, 6-112, 6-114, 6-116, 6-117, 6-120 and 8-121. As indicated in Findings 8705-03 and 8705-04, the flow of documents was not consistent with specified requirements.

For those documents that were located, the audit team identified additional problem areas in the lack of designation of quality levels on the documents and reviews of procurement documents by the Quality Assurance:

- o Task Authorizations issued by WHC to KE/PB as directed by the Task VI SOW were not being reviewed by Quality Assurance as required by PMPM 6-105.
- o Seven of eight task authorizations reviewed by the audit team did not reflect the quality level of the scope of work.
- o Although the purchase requisition PR Y539372 to Golder Associates had been reviewed by QA and assigned Q-Level 3, the individual work task scope documents have not received QA review to confirm that only level 3 tasks are being assigned.

These deficiencies are identified in Finding 8705-03.

During the review of purchase requisitions and supporting documentation at WHC Purchasing, it was found that the procedures governing the purchasing activities were not part of the BWIP Document hierarchy. WHC Procurement Procedure Manual (CM-2-1) is not listed in the Master Document List and has not been placed under the control of PMPM 1-101, "Preparation and Control of Project Management Procedures". This particular deficiency was partially identified in WHC Audit IA-87-008, Finding 03.

All parts of this deficiency are documented in Concern 8705-01.

6.2 CRITERION 7 - CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES

The areas reviewed and evaluated relative to Criterion 7 are as follows:

- o Suppliers qualification and evaluation including quality review of suppliers programs and bidders proposals.
- o Audit of suppliers including scheduling, documentation and review.
- o Tracking and trending of the results of suppliers audits.
- o Review of Advanced Procurement Planning activities.
- o Source inspection of items at the suppliers facilities.
- o Qualification of Procurement Quality Unit personnel performing audits and source inspections.

No Q-Level 1 or 2 hardware or equipment purchases have been completed since the initiation of the Stop Work Order 86-002. However, the supplier audits by WHC are continuing on an ongoing basis and these were reviewed for compliance to approved procedural requirements. No deficiencies were identified in the area of schedule, documentation, review and qualification of personnel.

Since no Q-Level 1 or 2 purchases have been issued the evaluation of source inspection and material receipt control was limited to verification of preparatory activities by WHC. WHC Central Receiving has been delegated responsibility for material and equipment receipt inspection and control via SOW L9D3AC1. Interviews were conducted at Central Receiving with WHC QA to determine if personnel were adequately trained and qualified and to verify that procedures were available for the inspection activities as delineated in the SOW. The system is not yet in place and no personnel are trained and qualified specifically for the BWIP. Procedures to be followed for BWIP activities have not been requested by the supervisor. However, there are no Q-Level 1 or 2 purchase requisitions for material, equipment or items pending, nor does there appear to be any in the near future.

The audit team evaluated the WHC PMPMs relative to Criteria 7 to verify compliance with BQARD requirements and found them to be satisfactory.

6.3 CRITERION 8 - IDENTIFICATION AND CONTROL OF MATERIALS, PARTS AND COMPONENTS

As with Criterion 7 above, the audit team found that no Q-Level 1 or 2 purchases of materials, parts or components have been issued since the initiation of the Stop Work Order. The evaluation by the audit team included preparation of WHC to carry out responsibilities and requirements in this criteria.

The procedures were evaluated for compliance to the requirements stipulated in the BQARD and no deficiencies were identified.

The identification and control of test samples were reviewed as part of the audit of Criterion 13.

6.4 CRITERION 9 - CONTROL OF SPECIAL PROCESSES

The scope of activities for the control of special processes was addressed during this portion of the audit. A review was made of the following requirement areas:

- o Definition of special processes used on the BWIP.
- o Qualification of special processes, equipment and personnel.

- o Recording of evidence of acceptability of special processes.
- o In-process monitoring and documentation of special processes.
- o The identification of special processes.

Interviews were conducted with Mr. G. Harper, Mgr. Design and Engineering and Mr. G. Jackson, Mgr. Science and Engineering.

The results of this portion of the audit are as follows:

WHC BWIP has not identified and qualified any special processes on DC 24/25 or on the remainder of the work for BWIP. See Finding 8705-02 for documentation of this problem.

6.5 CRITERION - INSPECTION

The scope of activities for required inspections on BWIP were addressed during this portion of the audit. Reviews were made of the following requirement areas:

- o Inspection planning.
- o Verification of acceptability by sampling.
- o Inspection of work activity requiring verification.
- o Final inspection.
- o Documentation of acceptance by authorized and qualified personnel.
- o Organizational responsibility for inspection.
- o Qualification of inspectors.
- o Inspection procedures and instruction.
- o Inspection records.
- o Mandatory inspection hold points.

Ms. K. Tominey of QA Surveillance and Mr. M. Quinn, Welding Inspector were interviewed. An additional interview was conducted with Mr. R. Johnson, BWIP QA Manager. Mr. Johnson indicated that Criteria 10 "Inspection" controls per se were not applicable to DC 24/25. He also stated that even the activities of the Independent Witness were not done under Criteria 10, but were verification and not inspection.

The results of this portion of the audit are as follows:

No inspections have been completed on BWIP work excluding Title III inspections on liner. Verifications for the purpose of confirming achievement of specified requirements are being done by technical experts (independent witness with QA overview). Finding 8705-01 documents the failure to implement Criterion 10.

6.6 CRITERION 12 - CONTROL OF MEASURING AND TEST EQUIPMENT

The scope of activities for the controls of measuring and test equipment were addressed during this portion of the audit. Reviews were made of the following requirement areas:

- o Establishment of an M&TE program.
- o Documented procedures for M&TE calibration.
- o Responsibility for implementing the M&TE program.
- o Labeling or tagging of M&TE.
- o Calibration of M&TE at specified intervals.
- o Traceability of BWIP standards to nationally recognized standards.
- o Out of calibration evaluations.

The BWIP Calibration Program consists of an on site calibration laboratory; 1) WHC standards lab, and 2) an administrative controls system to maintain, store, and control the measuring and test equipment for BWIP. Both parts of the system were reviewed.

As a result of this portion of the audit, no problems were identified.

6.7 CRITERION 13 - HANDLING, STORAGE AND SHIPPING

The scope of activities for controlling handling, storage, and shipping were addressed during this portion of the audit. Reviews were made of the following requirement areas:

- o Establishment of sampling handling preservation storage and shipping requirements.
- o Handling, storage and shipping special equipment and special protective environments.
- o Special procedures for shipping, handling, storage and packaging.

- o Inspection and testing of special handling tools and equipment.
- o Training of operators of special handling and lifting equipment.
- o Instructions for marking and labeling during packaging, shipment, handling and storage.

Handling, storage and shipping requirements are twofold in nature: 1) External through Procurement activities levied on suppliers and 2) Internal. Since there are no Q-Level 1 or 2 items or materials purchased by WHC IC after issuance of the SWO, these controls are not currently applicable. The internal controls are being applied to Geologic samples taken during the performance of work. The samples are stored in the Core Store Library. The activities of the library were audited.

As a result of this portion of the audit one (1) mis-identification problem was noted on a sample. This was easily corrected during the audit. No further deficiencies were noted and no further corrective actions were necessary.

6.8 CRITERION 14 - INSPECTION, TEST AND OPERATING STATUS

The scope of activities for the control of inspection and test and operating status were addressed during this portion of the audit. Reviews were made of the following requirement areas:

- o Marking or tagging of inspection or test items.
- o Identification of items which have passed required inspections or test.
- o Indication of operating status.

No inspections have been performed per Criterion 10 on BWIP (Ref: 8705-01). The project has not reached the stage of construction that operating status of constructed system is required. Therefore, the audit was limited to the identification by labeling of tests in-process.

As a result of this portion of the audit, no problems were identified.

ATTACHMENT 1
CRITERIA AND RESPONSIBILITIES

WHC AUDIT 8705, NOVEMBER 9 - 20, 1987

| CRITERIA | TITLE | AUDITOR | TECHNICAL SPECIALIST |
|-----------------|--|----------------|---------------------------------|
| 4 | PROCUREMENT DOCUMENT CONTROL | YOUNG KASCH | LESH |
| 7 | CONTROL OF PURCHASED MATERIAL, EQUIPMENT AND SERVICES | YOUNG KASCH | LESH PEARSON |
| 8 | IDENTIFICATION AND CONTROL OF MATERIALS, PARTS AND COMPONENTS | YOUNG | PEARSON |
| 9 | CONTROL OF SPECIAL PROCESSES | HANS | MITCHELL |
| 10 | INSPECTION | HANS | MITCHELL |
| 12 | CONTROL OF MEASURING AND TEST EQUIPMENT | HANS | MITCHELL |
| 13 | HANDLING, SHIPPING AND STORAGE | HANS | |
| 14 | INSPECTION, TEST AND OPERATING STATUS | HANS | MITCHELL |

Observers J. Donnelly (NRC); Abdul Alkazweeny, Tribal On-site representative; Sami Andrea (EWA-YIN); B. Blake (EWA-YIN); J. Hutchins (CERT); covered all the criterion through audit observation or audit caucus.

ATTACHMENT 2
ATTENDANCE ROSTER

WHC AUDIT 8705 NOVEMBER 9 - 20, 1987

| NAME | ENTRANCE | INTERVIEWED | EXIT |
|--------------|----------|-------------|------|
| G. HARPER | | X | X |
| D. HANLON | | X | |
| D. FARWICK | X | X | X |
| D. MOAK | X | X | X |
| S. RIFAAY | | X | |
| T. AULT | | X | |
| M. QUINN | | X | |
| K. TOMINEY | X | X | X |
| W. PRICE | X | X | X |
| D. PRICE | X | X | X |
| J. UPSHAW | X | X | |
| H. WARD | X | X | |
| P. RUMBULON | | X | |
| W. HINCKLEY | | X | |
| P. MIX | | X | |
| J. HABERSTOK | | X | |
| J. RIVERA | | X | |
| D. LINI | | X | |
| R. MAHOOD | | X | |
| R. JOHNSTON | | X | |

ATTACHMENT 2
ATTENDANCE ROSTER (CONTINUED)
WHC AUDIT 8705 NOVEMBER 9 - 20, 1987

| NAME | ENTRANCE | INTERVIEWED | EXIT |
|----------------|----------|-------------|------|
| S. MOSS | | X | |
| D. WIGGENS | | X | |
| W. HEARTZ | | X | |
| M. GILLEN | | X | |
| J. OSTER | | X | |
| T. OATTS | | X | |
| D. HALKO | | X | |
| A. CASTLEBERRY | | X | |
| J. MILLER | | X | |
| G. JACKSON | | X | X |
| J. FRIEND | X | | |
| S. ARMSTRONG | X | | |
| J. DONNELLY | X | | X |
| R. SAGET | X | | X |
| A. SASTRY | X | | X |
| J. GRIMES | | X | |
| W. BLAIR | X | | |
| A. DUNNING | X | X | X |
| W. JORDAN | X | | |
| M. CONNORS | | X | |

ATTACHMENT 2

ATTENDANCE ROSTER (CONTINUED)

WHC AUDIT 8705 NOVEMBER 9 - 20, 1987

| NAME | ENTRANCE | INTERVIEWED | EXIT |
|----------------|----------|-------------|------|
| J. KIRKENDALL | | X | |
| J. LAUCK | | X | |
| R. BRYCE | X | | |
| S. STRAIT | X | X | |
| L. NELSON | X | | |
| D. GIBBS | X | | X |
| P. BOURNE | X | | X |
| R. VIENS | X | | X |
| K. CHUBB | X | | |
| L. McDOUGAL | X | X | X |
| H. TUTHILL | X | X | X |
| D. QUIGLEY | X | | |
| J. SMITH | X | | X |
| R. UTLEY | X | X | X |
| R. JOHNSON | X | | X |
| D. MORISSETTE | X | X | X |
| R. COOK | | | X |
| O. THOMPSON | | | X |
| B. BLAKE | | | X |
| A. ALKEZWEENY | | | X |
| M. WITHERSPOON | | | X |

[QA22L7.8705]

ATTACHMENT 2
ATTENDANCE ROSTER (CONTINUED)
WHC AUDIT 8705 NOVEMBER 9 - 20, 1987

| NAME | ENTRANCE | INTERVIEWED | EXIT |
|-----------------|----------|-------------|------|
| K. WELSCH | | | X |
| J. THOMAS | | | X |
| M. ANDERSON | | | X |
| D. LAWRENCE | | | X |
| P. DAHLBERG | | | X |
| S. DOUBET | | | X |
| H. DOWNEY | | | X |
| B. McGILLICUDDY | | X | X |
| D. DUNCAN | | | X |
| S. YOUNG | X | | X |
| T. SUBRAMANIAN | X | | X |
| S. HANS | X | | X |
| J. LESH | X | | X |
| C. KASCH | X | | X |
| E. PEARSON | X | | X |
| M. MITCHELL | X | | X |

ATTACHMENT 3

TECHNICAL SPECIALISTS' SUMMARY REPORTS

TECHNICAL ADVISOR: J. R. LESH
HACTEC

CRITERION: 4 "Procurement Document Control"

In September 1987, I was selected to be the Technical Advisor in the Acquisition and Procurement Area of Audit 8705. From that time until the end of October, I assisted with the development of the audit checklist, and selected the sample Purchase Orders, Work Orders, and Statements of Work to be utilized during the audit. From November 9 through November 20, 1987, I participated in the audit of the Westinghouse BWIP Procurement process and its applicability to the BQARD. Overall, the audit was performed in a very professional and methodical manner and was well received and supported by Westinghouse BWIP personnel and the outside observers from the NRC, States, and Tribes. My specific recommendations are included in the audit report, however, I have four observations.

During the review of the procurement function it was determined that no individual group within BWIP maintains a complete listing of all procurement actions (i.e., PRs, LOIs, SOWs and WOs). Multiple lists are available, however, none of these are complete. Some lists drop completed actions, and most are strictly budget type computer runs. These contained limited data, were difficult to utilize, or were incomplete. In no instance did we find a complete listing that identified the QA Level of the procurement activity. The advanced Procurement Plan was the closest to an acceptable list, but it is a planning document and should not be utilized as a permanent record for reference. A listing that identifies all procurement actions identify all work which has been authorized and the QA Level of the work performed. This list could also be utilized by Basalt Document Control to verify that they have all documents to support the documentation criteria of 10 CFR 50.

During the audit, it was determined that QA Level 3 procurement documentation is not required to be submitted to Basalt Document Control. This policy should be reviewed and a determination made as to whether QA Level 3 documents should be retained to support the program. In my opinion, it might be helpful to the project if Quality Levels are revised or upgraded by QEB. Another observation identified during the audit was that all procurement documents required to be submitted to Basalt Document Control are not being submitted in a timely manner. The responsible individual or organization for the documentation appear to be holding the documentation until it is final or closed out.

The procurement process for the IC is overly complicated. Work is controlled by SOWs, LOIs, WOs and PRs. In many instances, there are additional tasking

Technical Advisor - J. R. Lesh (Continued)

instruments and/or subtasks providing additional or different controls on the activities. This complicated process lends itself to a myriad of procedures and desk instructions or program instructions which make the system even more complicated. Westinghouse BWIP should make an attempt to simplify the procurement process.

TECHNICAL SPECIALISTS' SUMMARY REPORTS

CRITERION:

- 7 "Control of Purchased Material, Equipment and Services."
- 8 "Identification and Control of Materials, Parts, and Components."

Responses to audit checklist questions were generally in the affirmative. However, no Q-Level 1 or 2 items or materials have been procured by WHC since the issuance of the SWO in 1986. Therefore, verification of actual application of requirements could not be performed.

- J. Cadick
- D. Dempsey

[QA22L7.8705]

ATTACHMENT 3 (continued)

TECHNICAL SPECIALISTS' SUMMARY REPORTS

TECHNICAL ADVISOR: Dr. M. J. MITCHELL
MACTEC

CRITERION: 9 "Control of Special Processes"
12 "Control of Measuring and Test Equipment"
(For Criterion 10 & 14, Support was provided on
as needed basis)

BACKGROUND

Team members decided, at the beginning of the planning of Audit 8705, that the Technical Advisors would participate in all phases of the audit at as active a level as possible. This included the decision to write programmatic checklist questions. It was felt that these questions could be used in a variety of settings. These questions would first be used to determine if the program elements were in place and to lead into the area of implementation. Once the strategy for the checklist questions was developed, the remaining planning was carried out.

My activities included working with team members in checklist question preparation. The primary area of input was Criteria 12, with additional input to Criteria 9, 10, and 14. Background information was gathered for the areas of interest with emphasis on the background material for Criteria 12, with S. Hans taking the lead. This included gathering the equipment lists for active and inactive test equipment. These lists were cross-checked with lists of equipment calibrated by the site calibration laboratory and equipment calibrated by the equipment operators. From this information, the sample of items for audit was made. These items included active items which were thought to provide keys to the possible weaknesses in the laboratory and operator calibrated equipment systems. Since much of the equipment is listed as inactive, the DC 24 & 25 drilling projects, where actively calibrated equipment was found, received attention along with the operator calibrated major analytical instruments. In addition, additions were made to the sample list from items taken randomly from the active equipment lists. For the inactive equipment, the equipment list for audit was made from those items that were thought to be difficult to calibrate or where calibration requires methods development or particular expertise and training is necessary for calibration.

It was felt that Technical adequacy of the program could be determined through an audit of various records and through indepth technical discussions with the personnel in the calibration laboratory and with instrument operators calibrating analytical equipment. The indepth technical questioning was used most extensively with the instrument operators and the appropriate calibration control authorities.

Technical Advisor - Dr. M. J. Mitchell, (Continued)

The audit sequence chosen was to tour the facility under audit while observing equipment tags for status, calibration and equipment condition. During these tours the decision of what checklist questions would be most appropriate for what people to be audited was made.

OBSERVATIONS

The following items are observations and as such require no response or action on the part of integrating contractor or of the audit team.

Criterion 9

Study plans such as Exploratory Shaft Grout Development (-056) investigate grout mixes which should be identified and documented as special processes. Much of the special process identification documentation and actual inspection is done as part of good engineering practice. These activities require early identification and sufficient lead times for process development prior to implementation. From a technical standpoint, the finding on Criterion 9 indicates that training of engineers and managers is appropriate in the areas of special process identification and documentation. The references in PMPM to special processes need to be checked where necessary.

Criterion 12

During audit discussions with the Westinghouse Standards Laboratory, the staff was found to be helpful and knowledgeable. The personnel in the calibration laboratory showed considerable expertise and ingenuity in dealing with a wide range of calibration and equipment problems without losing the appropriate goals and/or the confines of a good calibration methodology. BWIP personnel should look at the calibration laboratory staff and facilities as resources on which to draw when equipment problems are encountered on BWIP.

The calibration laboratory relies, in part, on a computer data base for records management. This system provides many of the records used in the laboratory on a day to day basis. These records include the instruments to be recalled from the field during a given time period and the test equipment that various instruments in the calibration laboratory have been used to calibrate. This last item forms part of an important link in the traceability of calibration information to BWIP field and laboratory test data.

Information concerning the existence of the computer system and some of its capabilities has been given to BWIP organization 72110, Information Process Management. This group has been planning BWIP computer data base activities.

Knowledge of the strengths and comprehensiveness of the calibration system and the general records management system in the calibration laboratory will aid

Technical Advisor - Dr. M. J. Mitchell, (Continued)

BWIP personnel preparing certified transmittal packages of data. Calibration records often need to be checked for completeness prior to including them with test data in the packages.

Calibration of major analytical equipment is done on this project, as it is on most facilities, by the instrument operators. Service contracts are maintained with the instrument manufacturers or contract service companies for preventative maintenance and repair outside of routine calibration. These field service engineers often leave rather limited records of their activities with the instruments. As found measurements are usually not given. Field service engineers need to be informed of the ramifications of their activities and the requirements for detail in service records. In addition, items such as voltage output for high voltage power supplies such as electron guns in electron beam instruments used for chemical analysis require documentation and inclusion with other calibration information and other instrument records.

Open nonconformance reports exist for a series of pressure transducers used as part of the hydrology measurements. This situation was addressed in WIP 71530-A prepared by the Ground-Water Monitoring Section. Data from alternate sources should be compared and monitored on a continuing basis while the data is being acquired so that the severity of problems can be assessed before as found measurements on instruments are taken. Problems of this nature indicate that special processes and methods for obtaining redundant or auxiliary data need to be identified early in the planning of this project.

SUMMARY

The above items are observations and are for information only and supplement other sections of this report.

ATTACHMENT 4

DEFINITIONS - FINDING, CONCERN AND OBSERVATION

WHC AUDIT 8705 NOVEMBER 9 - 20, 1987

FINDING

- o Results from objective evidence examination**
- o Evaluation establishes significant condition adverse to quality (NQA-1, Supp. S-1)**
- o or, failure of a control system to achieve the intended purpose**
- o May summarize numerous small anomalies**
- o Requires response including root cause, action to prevent recurrence, impact on completed work besides corrective action.**

CONCERN

- o Results from objective evidence examination**
- o Is noncompliance to requirements which would not lead to reduced product quality.**
- o Requires documentation of corrective action (Response from audited organization is one form of corrective action documentation)**

OBSERVATION

- o Is a written expression of an auditor's opinion on a perceived quality affecting condition.**
- o May reflect insufficient investigation of a condition to identify it as a finding or concern.**
- o Need not be responded to.**

ATTACHMENT 5

PROCEDURES REFERENCED THROUGHOUT AUDIT 8705

| PROCEDURE NO. | TITLE |
|----------------------|---|
| PMPM 2-130 | Control of Special Processes |
| PMPM 4-102 | Use of Quality Status Tags |
| PMPM 4-103 | BWIP Quality Assurance Surveillance Report |
| PMPM 4-104 | Quality Assurance Audits |
| PMPM 4-107 | Surveillance of Suppliers |
| PMPM 4-108 | Inspection Activities |
| PMPM 6-101 | Major Participant Interface Control |
| PMPM 6-105 | Direction of Technical Work |
| PMPM 6-106 | Supplier's Qualification and Evaluation |
| PMPM 6-107 | Source Inspection |
| PMPM 6-108 | Receiving Inspection |
| PMPM 6-112 | Procurement Planning Activities |
| PMPM 6-114 | Procurement Requisition, Documentation, and Review |
| PMPM 6-115 | Procurement Management System |
| PMPM 6-116 | Procurement Document control |
| PMPM 6-117 | Major Project Participant Procurement Interface Activities |
| PMPM 6-119 | Shipping and Storage Control |
| PMPM 7-108 | Control of Standard(s) and Measuring and Test Equipment |
| PMPM 7-109 | Standard(s) and Measuring and Test Equipment Calibration Specification(s) |

ATTACHMENT 5 (Continued)

PROCEDURES REFERENCED THROUGHOUT AUDIT 8705

| PROCEDURE NO. | TITLE |
|----------------------|--|
| PMPM 7-110 | Operator-Calibration Measuring and Test Equipment |
| PMPM 7-111 | Recall of Standard(s) and Measuring and Test Equipment |
| PMPM 7-112 | Control of Standard(s) and Measuring and Test Equipment Status, Identification, and Labeling |
| PMPM 7-113 | Review of Standard(s) and Measuring and Test Equipment Calibration Report(s) |
| PMPM 7-118 | Identification and Control of Samples |
| PMPM 7-119 | Data Collection Test Control |
| PMPM 7-120 | Control of Data Gathering Equipment Components and Materials |
| PMPM 7-121 | Inspection, Test and Operating Status Indicators |
| PMPM 7-123 | Operating Equipment Status Tag Control |
| PMPM 8-115 | Control of In-Process Documents |
| PMPM 13-102 | Qualification and Certification of Inspection/Test Personnel |
| PMPM 13-106 | Administration of Qualification and Training |
| PMPM 14-102 | Software Change Control |



Department of Energy

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

ATTACHMENT 6

87-QSD-306

NOV 20 1987

President
Westinghouse Hanford Company
Richland, Washington

Dear Sir:

DOE-RL QUALITY ASSURANCE AUDIT 8705, BASALT WASTE ISOLATION PROJECT (BWIP)
AUDIT FINDING

Enclosed please find a copy of one audit finding issued as a result of DOE-RL Audit 8705, which was conducted recently.

This letter is issued as the formal transmittal of the finding, however, DOE-RL expects response to the finding by December 28, 1987. The remainder of the findings will be transmitted under separate cover letter.

Should you have any questions regarding this matter, please contact T. K. Subramanian (376-3176) of my staff.

Sincerely,

R. P. Saget, Director
Quality Systems Division

QSD:TKS

Enclosure

cc: D. C. Gibbs, WHC, w/enc1.



QUALITY AUDIT FINDING

ATTACHMENT 6

[illegible]

ATTACHMENT

Step/paragraph 6.2.2.1 of Test and Operations Procedure, FI-DC-241, Rev. 1 has not been verified to confirm the specified criteria of Engineering Documents, HS-BC-0005, by the O&T Independent Witness. Additionally, the final Gyroscope Survey of borehole deviation, as documented is FI-DC-241, Rev. 1, does not currently require verification by the O&T Independent Witness. The O&T Independent Witness is responsible to confirm attainment of specified technical criteria.

The Quality Evaluation Board Level Assignments, Expedited Special Case, for restart of boreholes, DC-23, 24, 25, 32, and 33, Rev. 0; SD-BWI-AR-031 identifies Item 4, "Rotary Drilling" and item 1, "Open and Cased Hole Logs", as Quality Level 1 activities. The Evaluation Board considered hole deviation as a failure mode for rotary drilling. This failure mode was considered non-credible because; "In general the survey of the borehole for verticality during drilling [i.e., paragraph 6.2.2.1] and at completion [Gyroscope Survey] both moderates and quantifies deviation." As permissible by PMPM 4-121, Rev. 1, Paragraph 5.4, "Optimizing Quality Commitment", no subdivision of further QL assessment of a less stringent quality requirement for surveying hole verticality during drilling was taken by the QEB.

The surveying of borehole verticality at completion was addressed by the QEB in Item 1, BHL-004-1; "Open and Cased Hole Logs and Directional Survey Item Analysis". The borehole geophysical logs to be applied include: #19 well orientation survey (Gyroscope). As stated by the QEB: "The necessity of

these data for piezometer placement and structural interpretation associated with site characterization, designates this as a QA Level 1 activity.

Therefore, no inspection in accordance with 10CFR50 Appendix B Criterion 10, took place for the in process surveies required by the engineering document referred to every 100 ± 20 feet of drilling. Also the final Gyroscopic survey for verticality also does not currently require inspection for conformance of specified criteria in TOP FO-DC-241, Rev. 1.



Department of Energy

Richland Operations Office

P.O. Box 550

Richland, Washington 99352

87-QSD-309

NOV 25 1987

President
Westinghouse Hanford Company
Richland, Washington

Dear Sir:

DOE-RL QUALITY ASSURANCE AUDIT 8705, BASALT WASTE ISOLATION PROJECT (BWIP)
AUDIT FINDINGS AND CONCERNS

Enclosed please find a copy of three (3) audit Findings and one (1) audit
Concern issued as a result of DOE-RL Audit 8705.

This letter is issued as the formal transmittal of the Findings and Concern,
and DOE-RL expects response to the documents by no later than
December 28, 1987. Finding 8705-01 was previously transmitted under separate
cover letter 87-QSD-306 on November 20, 1987.

Should you have any questions regarding this matter, please contact
T. K. Subramanian (6-3175) of my staff.

Sincerely,

R. P. Saget

R. P. Saget, Director
Quality Systems Division

QSD:TKS

Enclosure —

cc: D. C. Gibbs, WHC, w/encl.



QUALITY AUDIT FINDING

2. QAF Control No.
8705-021. TO: Name
G. Jackson, Mgr. Science and Engineering

Title

3. Location
CDC-1

4. Reference/Requirements

Criteria 9 - "Control of Processes and Special Processes"
WHC-CM-7-2, Sect. C, Chapter 9.0, Rev. 3, Para. 1.0 -
States in part "This chapter defines the requirements and
prescribes the responsibilities to ensure that processes
and special processes affecting..." (See Sheet No. 2)

5. Audit Or Surveillance Report No.
87056. Potential Reportability
under 10 CFR 60.73
☐ Yes ☒ No

7. Description

Contrary to the above requirement; no special processes have been indentified for BWIP including Expedited Special Case, DC 24/25, by the Director of Science and Engineering and Director of Construction for WHC (Paras. 4.4 and 4.5). Several specific and general process areas (See Below*) have been identified by DOE-RL which meet the definition of Special Processes contained in the BWIP QA Plan, DOE-RL 86-6, Rev. 2, Para. 9.1. These processes have not been identified as "special" and therefore do not conform to the requirements and controls specified in BQARD Criterion 9.

* SPECIAL PROCESSES - Welding; Grouting of shaft liners; Seals in shaft liners; Grouting of well instrumentation; Activities for prevention of I-129 movement; Seals and packing in repository; Shaft breakout and porthole tests; Hydrofrac testing; Sample testing where the sample is altered to such an extent that some of the properties are changed or that the sample is changed by the test and the test cannot be repeated.

8. Lead Auditor (Signature)

9. Issue Date

11-25-87

10. Response Due Date

12-28-87

11. Audit Corrective Action Commitment (See Reverse for Instructions)

NOTE: Action Shall Address Root Cause, Impact on Previous Work and Measures to Prevent Recurrence

12. Responsible Action Manager (Signature)

13. Date

14. Action Completion Due Date

ACTION VERIFIED

15. Lead Auditor (Signature)

16. Date

18. Final Distribution

ORIGINAL-Audit/Surveillance Report File

1--Addressee

2--

3--

17. Final Review and Approval (QAF Closed)

DIRECTOR - Quality Systems Division_____
Date



QUALITY AUDIT FINDING

2. QAF Control No.
8705-031. TO: Name
J. Kirkendall3. Location
CDC-1

4. Reference/Requirements PMPM 6-105, R. 4, Para 4.5 - "The preparer...is also responsible to obtain approval/concurrence signatures as delineated in Section 6.0...."

5. Audit Or Surveillance Report No.
8705

(See Sheet No. 2)

6. Potential Reportability
under 10 CFR 60.73
☐ Yes ☐ No

7. Description

- (1) Task authorizations issued by WHC to KE/PB as directed by the Task VI SOW are not being reviewed by Quality Assurance.
- (2) Seven of eight task authorizations reviewed did not have the quality level indicated.
- (3) SOW L93DH to M-K states "...Quality levels for construction will be determined by the IC...." However, no evidence was provided to demonstrate that quality levels had been provided to the contractor. Based on 6-101, R. 1, Para. 3.9, WHC may provide quality levels to M-K during meetings, by telecon, or formal letters which would not be reviewed by QA.
- (4) Although the PRY539372 to Golder Associates, has been reviewed by QA and assigned Level 3, the individual work task scope documents have not received QA review to confirm that only Level 3 tasks are being assigned.

8. Lead Auditor (Signature)

9. Issue Date

11/25/87

10. Response Due Date

12/28/87

11. Auditee Corrective Action Commitment (See Reverse for Instructions)

NOTE: Action Shall Address Root Cause, Impact on Previous Work and Measures to Prevent Recurrence

12. Responsible Action Manager (Signature)

13. Date

14. Action Completion Due Date

ACTION VERIFIED

15. Lead Auditor (Signature)

16. Date

18. Final Distribution

ORIGINAL-Audit/Surveillance Report File

1--Addressee

2--

3--

17. Final Review and Approval (QAF Closed)

DIRECTOR - Quality Systems Division_____
Date

QUALITY AUDIT FINDING - SHEET NO. 2

8705-03

4. Reference/Requirements (Continued) -

- (2) PMPM 6-105, R. 4, Para. 6.3.1 - "The preparer initiates a review by providing a copy of the SOW to each affected BWIP administrative and technical organizations;"
- (3) PMPM 6-105, R. 4, Para. 4.4 - "Quality Assurance (QA) is responsible for verifying that all quality requirements are addressed by the SOW and LOI and that the document is prepared in accordance with project procedures."
- (4) PMPM 6-114, R. 7, Para. 6.1.1 - "Originator identifies if items or services are quality level 1, 2 or 3Identify at the top of the purchase requisition document as either, quality level 1, quality level 2, or quality level 3. If more than one page, each page must be identified."
- (5) PMPM 6-114, R. 7, Para. 6.1.15 and or Para. 6.2.6 - "BWIP QA, PQU Verifies assignment of quality level..."



QUALITY AUDIT FINDING

ATTACHMENT 6

2. QAF Control No.
8705-04

| | |
|--------------------------|-------|
| 1. TO: Name | Title |
| A. Dunning, Mgr. AP & FM | |

3. Location CDC-2

4. Reference/Requirements

5. Audit Or Surveillance Report No.
8705

PMPM 6-114, R. 7, Para. 3.1 - "Procurement Requisition Documents. These documents include purchase requisitions (PR), external work order (WO), statements of work (SOW), and letters of instruction (LOI)" (See Sheet No. 2)

**6. Potential Reportability
under 10 CFR 60.73**
☐ Yes ☐ No

7. Description

- (1) Could not locate 27 of 33 total SOW packages and only partial data for 8 SOWs in AP & PM or in BDC/BRMC. Interviews with AP & PM revealed that SOWs do not normally come to the AP & PM department.
- (2) Supporting documentation to WOs and SWOs could not be located (e.g., RCRs, Procurement Requirements Checklists, & Task Authorizations).
- (3) Could not locate Work Order documentation packages in AP & PM or BDC/BRMC.
- (4) SOWs and supporting documents do not have unique identification numbers for retrievability. The SOWs are only identified by a CA or WA number.

8. Lead Auditor (Signature)

9. Issue Date

10. Response Due Date

11/25/87

12/28/87

11. Auditee Corrective Action Commitment (See Reverse for Instructions)

NOTE: Action Shall Address Root Cause, Impact on Previous Work and Measures to Prevent Recurrence

12. Responsible Action Manager (Signature)

13. Date

14. Action Completion Due Date

ACTION VERIFIED

15. Lead Auditor (Signature)

16. Date _____

18. Final Distribution

ORIGINAL-Audit/Surveillance Report File

1--Addressee

2..

1..

17. Final Review and Approval (QAF Closed)

DIRECTOR - Quality Systems Division

Date _____

QUALITY AUDIT FINDING - SHEET NO. 2

8705-04

4. Reference/Requirements (Continued) -

- (2) PMPM 6-114, R. 7, Para. 7.0 - "The procurement requisition documents generated by this procedure are designated to become quality records and are maintained as document packages by AP & PM....the procurement requisition document packages composed of appropriate documents is transmitted by AP & PM to BDC....for retention by Basalt Records Management Center (BRMC)...."
- (3) BWIP Quality Assurance Program Requirements Manual WHC-CM-7-2, Appendix B, Chapter 17.0, Para. 3.5.5 - "(Records shall) be uniquely numbered and identified, indexed and retrievable...."

QUALITY AUDIT CONCERNS - SHEET NO. 2

8705-01

4. Reference/Requirements (Continued) -

- (2) PMPM 1-101, R. 6, Para 1.0 - "This procedure defines requirements for preparation, review, approval, and revision, including Change Notices (CNs) of the procedures for the Basalt Waste Isolation Project (BWIP)..."
- (3) PMPM 1-101, R. 6, Para 7.0 - "....A procedure work history file is maintained by BDC as a document package for the applicable procedure revision...."
- (4) PMPM 8-134, R. 0, Para 3.1 - "The MDL is a listing of specific documents and the latest revision of those documents that have been distributed on a controlled basis by BDC."

QA OBSERVATION(S)

AUDIT NO: 8705

o OBSERVATION NO: 1

WHC should evaluate the need to proceduralize/standardize the method of cancelling purchase requisitions. During the audit it was identified that someone other than the originator had incorrectly cancelled P.R. Y548888 (reissued during audit).

QA OBSERVATION(S)

AUDIT NO: 8705

o OBSERVATION NO: 2

WHC should evaluate the possibility of combining several of the '6' series of procedures. As presently written by 5 different preparing organizations, there are redundant and conflicting requirements (e.g., maintenance of QSL or ESC is addressed in PMPMs 6-106, 6-115 & 6-120). Flow charting of the procurement processes might be used effectively.

QA OBSERVATION(S)

AUDIT NO. 8705

o OBSERVATION NO: 3

Geologic field samples should be traceable to the actual location where the sample was taken. There does not appear to be any method to assure traceability of samples to parent for BWIP at this time.

QA OBSERVATION(S)

AUDIT NO. 8705

o OBSERVATION NO: 4

No list exists that reflects those purchase documents identified as Quality Level 1 or 2. WHC should identify, in their PO log, the Quality Level of the purchase.

QA OBSERVATION(S)

AUDIT NO. 8705

o OBSERVATION NO: 5

SOWs are not identified with a unique number. WHC should provide a unique identification number on the SOWs and all supporting documents to the SOWs.

ATTACHMENT 7

(Excerpted from the "U.S. Nuclear Regulatory Commissions Audit Observation Report for the Basalt Waste Isolation Project Audit (No.8705) of Westinghouse Hanford Company, 12/15/87.)

Summary

In November 1987, the Nuclear Regulatory Commission (NRC) staff observed the Department of Energy (DOE)/Basalt Waste Isolation Project's (BWIP) Audit #8705 of Westinghouse Hanford Company (WHC). This audit observation assessed the effectiveness of BWIP's audit program. To a lesser degree, it also evaluated the adequacy of WHC's quality assurance (QA) program.

Audit #8705 covered 8 of the 18 criteria of 10 CFR Part 50, Appendix B and focused, to a large extent, on the DC 24/25 drilling activity, which was in process during the audit. Information was gathered by the audit team through interviews with the WHC staff and through records and equipment investigations. consequently, the NRC observer made evaluations based on these audit activities.

The basic objective of Audit #8705 was to evaluate the adequacy of the implementation of the WHC QA program. Based on this objective, the NRC observer believes that the audit team did, in fact, accomplish this goal. Qualified and well prepared auditors, professionally conducted entrance and exit meetings, thorough investigations, and clearly communicated audit results based on a foundation of facts support this conclusion. The NRC observer believes that the areas observed would be acceptable to the NRC staff if the necessary corrective action and follow-up are performed for the identified findings, concerns, and open items. Although some programs and concerns were identified by the NRC observer with respect to the audit and WHC's QA program, the audit as a whole, was well done. The success of BWIP's audit program is contingent upon continued improvement and the necessary follow-up for those problems identified by the audit team and the observers.

APPENDIX A

Observations with Respect to the WHC QA Program

1. The lack of Quality Evaluation Board evaluations (i.e., the documented determination of quality levels) in the procurement packages.
2. The lack of a stand alone list which identifies Quality level I, II, and III procurements and allows them to be tracked.
3. The ambiguity with respect to who accepts the technical adequacy of work (i.e., inspections). If it is the "O&T Independent Witness," as defined in FI-DC-241, then this terminology should be consistently used throughout

this document. However, in FI-DC-241, the signature of the "O&T Independent Witness" also signifies the same function as QA surveillance personnel -- which is the acceptance of the sequence of events and not technical adequacy. This concern goes beyond the DC-24/25 operation and needs to be clarified project wide.

4. The definitions of "verification," "hold point," "independent witness," and "surveillance" should be clearly defined. This is in reference to the FI-DC-241 document.
5. The presence of WHC supervisors and QA staff during the interviewing of subordinates could hinder frank and open discussions between the auditor and auditee.

Note: These items were initially identified by the audit team and may become observations. These were not identified at the exit meeting because only findings and concerns were discussed and documented. The NRC observer does not believe these observations are direct violations of requirements; however, these items could lead to quality affecting conditions.

Open Items with Respect to the WHC QA Program

1. The documentation examined for certain basalt samples (i.e., non-core samples) indicated that the unique identifying number consists of the collector's initials and a sample number. No documentation was provided at the core library, which indicated the geographic location of the sample. Additional information is needed to clearly show the geographic location of these samples.
2. WHC is presently conducting permeameter tests for simulated piezometer seals. During discussions with the WHC staff, the observer was informed that the grout seals used in the testing are cured, for the most part, according to ASTM Standard 511 (i.e., under controlled temperatures and pressures). However, additional information needs to be provided which shows that the curing process is representative of the in situ conditions encountered at depth in the borehole.
3. During the audit team's discussions with the WHC staff, the observer noted that an Interim Problem Report (IPR) would be issued if the drill bit diameter for the DC-24/25/ drilling operation did not meet the required specifications. However, according to PMPM 7-119, IPRs are generated for suspected problems. This is not a suspected problem. The observer is concerned that the IPR system may allow actual problems to persist longer than necessary.

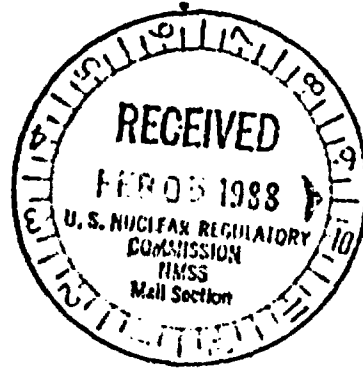
Note: These open items were initially identified by the NRC observer and need the necessary follow-up to determine their significance.

APPENDIX B

Concerns with Respect to the Conduct of the Audit

1. Quality Level II and III designation should be investigated further to determine their appropriateness.
2. The audit checklist could be improved by the elimination of questions which can be answered during a QA program document review.
3. When auditing a QA control system that deals primarily with a geologic or scientific item (e.g., the core library), technical specialists, knowledgeable in the area being audited, should be utilized.

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