

# Basalt Waste Isolation Project

## Restart Readiness Report Final Update

October 30, 1987

Westinghouse Hanford Company

8803240117 871123  
PDR WASTE  
WM-10 PDR



Westinghouse  
Hanford Company

P.O. Box 1970 Richland, WA 99352

November 17, 1987

8756169

Mr. J. H. Anttonen, Assistant Manager (3)  
Commercial Nuclear Waste  
U. S. Department of Energy  
Richland Operations Office  
Richland, Washington 99352

RECEIVED

NOV 18 1987

DOE-RL/AMC DCC

Dear Mr. Anttonen:

**BASALT WASTE ISOLATION PROJECT STOP WORK ORDER BSWO-86-004**

On October 30, 1987 Westinghouse Hanford Company (WHC) requested a general lift of Stop Work Order (SWO) BSWO-86-004 from the office of Assistant Manager for Commercial Nuclear Waste (AMC), U. S. Department of Energy Richland Operations Office (DOE-RL).

The materials sent to you on October 30, 1987 have undergone minor revisions, as a result of comments from within WHC and DOE-RL. Attached is an errata sheet detailing the changes that have been made.

Please contact Mr. A. R. Hawkins (376-8522) if you have any questions.

Very truly yours,

D. C. Gibbs, Manager  
Civilian Waste Management Division

lj

Attachment

DOE-RL - Director, Financial Resources Division  
A. W. Kellogg, AMO Operations Officer (w/o attachments)

## ERRATA

ENCLOSURE 2

- |                       |                            |  |
|-----------------------|----------------------------|--|
| Cover                 | 5th line                   | Date change from October 30, 1987 to November 9, 1987  |
| p. 4                  | First item<br>1.3.7        | In status column, changed the word "Complete" to "In Process." Added the words "for informal review and comment. To be formally submitted to the DOE-RL by November 30, 1987. Item has been placed on general restart punch list (Item 2.9-2)."  |
| p. 5                  | Item 3.10.2                | In status column, 3rd line, replaced the words "FY-88 funding of WIP #77300A" with "resolution by the Nonconformance Disposition Board."   |
| p. 10                 | 3rd para.<br>last sentence | Changed the last sentence to read as follows:<br>"The area-of-focus method has proved to be effective in decreasing unsatisfactory rates."   |
| p. 12                 | Section 6.0<br>2nd para.   | Paragraph changed to read as follows:<br>"The work initiation process has started. Sixty Quality Level 3 packages have been approved. Eleven Quality Level 1 packages and thirteen Quality Level 3 packages have been accepted by the DOR-RL. Appendix 0 (included in this update) has been updated to reflect the current scheduling for work initiation as of November 9, 1987." |
| p. C-4                | * at bottom<br>of table    | Replaced the words "upon FY-88 funding of Work Initiation Package 77300-A" with "by November 30, 1987."  |
| p. K-5                | Discrepancy<br>No. 0154    | In status column, changed "closed" to "resolved."  |
| Appendix 0<br>through | p. 0-3<br>0-18             | Pages 0-3 through 0-18 have been replaced with pages 0-3 through 0-8 as attached.  |

ENCLOSURE 3

- |           |                       |   |
|-----------|-----------------------|---|
| Each page |                       | Enclosure 3 was paginated, pages 1 through 7.   |
| p. 6      | 2nd para.             | Moved up one space to delete unnecessary blank line. Therefore, what appeared to be two paragraphs becomes one paragraph. |
| p. 6      | 4th para.<br>3rd line | Deleted the word "Under."   |

ENCLOSURE 4-6

p. 2

In the P.D. No. Column, added "87-015."

In the Title column, added "PD to Initiate Critical Readiness Review Activities."

In the Effective Date column, added "10/30/87."

In the Status column, added "An interim measure to allow critical readiness reviews to proceed concurrently with the preparation of the BWIP Readiness Review Program Plan and implementing procedure."

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## 1.0 SUMMARY

On January 4, 1987, the Basalt Waste Isolation Project's (BWIP) Integrating Contractor (IC), Rockwell Hanford Operations (Rockwell), submitted the Restart Readiness Report (RRR) to the U.S. Department of Energy-Richland Operations Office (DOE-RL). The RRR documented the actions taken to correct the conditions that caused the issuance of a stop work order on May 1, 1986. In addition, the RRR documented several issues involving the evaluation of the adequacy of established and planned project controls.

Rockwell submitted updates to the RRR on March 17, 1987, and May 20, 1987, documenting the status of the restart efforts between January and May 1987. This final update to the RRR by the BWIP's current IC, Westinghouse Hanford Company (Westinghouse), documents the status of the restart effort between May and October 1987. All references to action items, discrepancies, chapters, appendixes, and other items in this update parallel those of the RRR and previous updates.

Progress has been continuous in the resolution of the issues stated in chapter 1.0, section 1.3 of the RRR, and their status is summarized as follows.

1. All project management and quality assurance documents required for general lift of the stop work order are now issued for project use. (The Project Plan (PP) and Project Management Plan (PMP) were released for project use pending approval by the U.S. Department of Energy-Headquarters (DOE-HQ).)

The status of documents that are annexes to the PMP and that are not issued at this time is as follows:

- Environmental Plan--No activity at the present time. Awaiting DOE-RL direction.
- BWIP Safety Plan--Reviewed by the DOE-RL. Presently in Technical Publications--Section II for revision.
- Information Resource Management Plan (IRMP)--All annexes to the IRMP are issued. The IRMP is being reviewed by DOE-RL.
- Test and Evaluation Plan--The need for a test and evaluation plan is under consideration. Many of the needs for a test and evaluation plan are met by the Test Control Plan (an annex to the Management and Integration Plan (M&IP)). In the interim, testing requirements of the expedited special cases and the work initiative packages are reviewed individually to verify that the necessary prerequisites are in place.

The M&IP and all annexes are now issued.

All other significant project documents are issued except for the following:

- Advanced Procurement Plan--This document is revised and issued as necessary to accurately reflect the project's current procured goods and services requirements and provides a mechanism for tracking planned procurements. The document is in place and in use. The DOE-RL has found the form and format acceptable. However, the DOE-RL has asked that the Advanced Procurement Plan be updated and resubmitted when FY 1988 budget guidance is received.
  - System Engineering Management Plan (SEMP) Annexes--The Systems Integration Plan annex to the SEMP is in review by the DOE-RL. Upon completion of the ongoing BWIP baseline process, the levels and functional grouping of summary logics most appropriate for inclusion in the SEMP will be determined in coordination with the DOE-RL. The Systems Study Plan will be issued to DOE-RL for approval in December 1987.
2. The DOE-RL has now provided the PP, PMP, and the M&IP to all Major Project Participants other than Westinghouse for determination of the impacts of implementing these documents. With issuance of the final M&IP, Westinghouse has requested that the final M&IP and the available annexes to both the M&IP and the PMP be provided to the other Major Project Participants. As previously expected, implementation will occur in FY 1988, provided the necessary contractual agreements are reached between the DOE-RL and the Major Project Participants based on funding availability.
  3. For those documents released for project use, a comprehensive matrix has been developed that cross references non-NQA-1 management systems requirements to lower level plans and procedures. This matrix contains WHC-CM-7-2 (previously RHO-QA-MA-3, Rev. 3), which is complete. Any deficiencies associated with implementation of the requirements are tracked and closed through the Action Tracking System (ATS).
  4. Of the 372 discrepancies generated during the appraisal process, 344 had been closed as of October 15, 1987. Overall status of the appraisal/reappraisal process is discussed in chapter 5 of this update.
  5. Reappraisal of Westinghouse's Procurement and Design Control Management Systems is complete, and the systems were determined to be adequate.
  6. Implementation of software controls was completed on schedule May 31, 1987.

7. Initial Project Logics and the Project Master Schedule required for general restart have been agreed on and approved by the IC.
8. The impact of revisions to the BWIP Quality Assurance Requirements Manual (WHC-CM-7-2) (approved by DOE-RL on February 18, 1987) has been assessed to identify changes that were needed to the project management procedures. Required changes are complete, and all procedures are in place.
9. No update required.
10. The Systems Engineering Manager position was filled. The Chief Scientist position remains open and efforts are continuing to fill it. Dr. David Pentz of Golder & Associates continues to provide the necessary support for this position under consultant agreement M68-SCA-411275-01, Task No. 87-63-009. The filling of the position is therefore not a constraint to general restart.

The remainder of this update contains accomplishments by the project since May 20, 1987, except where noted, and a status of commitments made in the RRR.

Deficiency reports (e.g., stop work orders, corrective action reports, audit findings, nonconformance reports, and surveillance reports) are discussed in chapter 3.0 and summarized in appendix C (included with this update). Accomplishments in the training program are discussed in chapter 4.0. Discrepancies identified as a result of the appraisal process are discussed in chapter 5.0. All discrepancies which required closure prior to general restart have been closed or resolved and are stated in appendix K (included with this update). Additional open items discussed throughout the RRR are summarized and stated in table 1.

An Appendix F, revised to reflect current plan and procedure titles and numbers, is included in this update for historical continuity. The full list of management, technical and quality assurance procedures necessary to control Project activities is in place as WHC-CM-7-1. The full list of Project manuals, directives, procedures and plans is found in the Master Document List.

## 2.0 MANAGEMENT SYSTEMS

All project commitments made in the area of management systems are contained in table 1.

Table 1. Status of Action Items. (sheet 1 of 6)

Report section	Action	Required for general restart	Status
1.3.1	Approval of Project Management Plan (PMP), System Engineering Management Plan (SEMP), Information Resource Management Plan (IRMP), and outstanding Quality Assurance Administrative Procedures (QAAPs)	Yes	<u>Westinghouse Actions Complete.</u> Only the IRMP is unreleased at this time. All subannexes to the IRMP are issued. See chapter 1.0 for further definition
1.3.2	Approved assignment of Contracting Officer's Technical Representative (COTR) to Management and Integration (M&I) end function; reference procedure Org. 1.1	No	<u>Complete.</u> The COTR for Kaiser Engineers, Inc./Parsons Brinckerhoff Quade & Douglas, Inc., was assigned to BWIP construction. The COTR for Morrison-Knudson Company, Inc., was assigned to the M&I Exploratory Shaft end function
1.3.2	Take corrective action to impose new business management systems on Major Project Participants (MPPs) effective in FY 1988	No	<u>In Process.</u> the Project Plan (PP), PMP, and Management and Integration Plan (M&IP) have been provided to the MPPs for determination of impacts of implementing. Implementation to occur as planned in FY 1988 subject to successful negotiation of necessary contract modifications and budget constraints
1.3.3	Develop comprehensive matrixes cross-referencing management system requirements to procedures	Yes	<u>In Process.</u> The preparation of the matrixes for WHC-CM-7-2 is complete. This is included in the comprehensive matrix that has been developed cross referencing non-NQA-1 management systems requirements to lower level plans and procedures for those documents released for project use. The comprehensive matrix has been provided to the DOE-RL for review. The Business Management System Plan, initially excluded from the matrix, will be added when its implementing procedures have been revised as necessary to correct financial control deficiencies. Identified deficiencies are being entered into the Action Tracking System
1.3.5	Reappraisal of Procurement and Design Control Management Systems	Yes	<u>Complete.</u> Reappraisal of the Design Control Management System is complete. All discrepancies identified as constraints to general restart have been closed. The reappraisal of the Procurement Control Management System is complete, and all discrepancies have been closed
1.3.6	Complete and implement software configuration control and software procedures	No	<u>Complete.</u> The seven procedures needed for software configuration control were approved and issued May 31, 1987
1.3.7	Prepare a Level 1 Project Master Schedule (PMS) and a Level 2 Project Integration Schedule (PIS)	Yes	<u>Complete.</u> The PMS has been prepared, reviewed, and approved by the IC and the DOE-RL. Draft Level 2 (PISs) have been provided to the DOE-RL
1.3.7	Complete Initial Project Logics without interfaces	No	<u>Complete.</u> Initial Project Logics without interfaces were completed mid-March 1987
1.3.7	Complete Initial Project Logics with interfaces	No	<u>Complete.</u> Initial Project Logics with interfaces were completed March 27, 1987
1.3.7	Integrate the PMS and end function-integrated schedules with logics	No	<u>Complete.</u> Integration of the top-down PMS with the logics was accomplished through integration of the End Function Schedules and the interfaced logics. This activity was completed in September 1987

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Table 1. Status of Action Items. (sheet 2 of 6)

Report section	Action	Required for general restart	Status
1.3.8	Assess magnitude of revisions to project management procedures and revise them to comply with Revision 3 of the Basalt Waste Isolation Project Quality Assurance Requirements Manual	No	Complete. Responses were received from all top BWIP management requesting impact assessment of incorporating WHC-CM-7-2 changes. Changes to procedures are complete
3.10.2	Open deficiencies from 1986 listed in appendix C to Restart Readiness Report	Yes	In Process. Nonconformance Reports (NCRs)—One remains open from 1985. Four remain open from 1986. Closeout is pending FY88 funding of WIP #77300-A. Eight have been issued in 1987 and remain open, pending lift of stop work order. (All were issued after March 1, 1987.) Total of 13 open NCRs. Corrective Action Reports (CARs)—Six were issued this year; one has been closed. Total of 5 open CARs. Surveillances—Of 294 surveillances this fiscal year, 24 remain open. These open performance deficiencies have been assessed, and it has been determined that they are not constraints to general restart
3.10.3.2.1	Attention to timeliness of procedure preparation, release, and change process	No	Complete. Preparation, review, and release of project management procedures are now firmly scheduled in advance with any extension requiring management authorization. Scheduling for technical operating procedures was developed
3.10.3.2.2	Monitor quality assurance records for completeness	No	Ongoing. Sixteen surveillances have been performed on records control since March 1, 1987. Findings from these surveillances are being closed in a timely manner and are not considered constraints to general restart. This area continues to be surveilled
3.10.3.2.3	Monitor adequacy of documented followup action on deficiency reports	No	Ongoing. Fifteen surveillances have been performed since March 1, 1987, on followup corrective actions to deficiency reports. Findings from these surveillances are being closed in a timely manner and are not considered constraints to general restart. This continues to be surveilled
3.10.3.2.4	Monitor, for compliance, approval of programs, plans, and procedures for new procurements from offsite suppliers	No	Complete. Monitoring continues as an ongoing activity for procurements from offsite suppliers
3.10.3.2.5	Establish procedure guidelines and ensure procedures adequately address required dispositions, approvals, authorities, and documentation of their evaluation	Yes	Complete. PMPM 4-105, "Nonconformance Reports," and PMPM 4-106, "Construction Nonconformance Reports," were revised and approved
3.10.3.2.6	Assess equipment calibration system to ensure past organizational problems are resolved and avoid repeated deficiencies in calibration records. Ensure responsibilities and interfaces are clearly defined in work authorization documents. Follow up on implementation through audits and surveillances	No	Complete. Two of the three actions were completed and reported in the March 17, 1987, update. The third, an audit of all BWIP calibration activities, was completed April 7, 1987. The audit results indicate that past deficiencies in the calibration control system have been corrected
3.10.3.2.7	Ensure controls are established for identifying, documenting, tracking, and segregating nonconforming data and activity results (by a means directly recognizable on the results themselves)	No	Complete. The DCR 87-96 was approved and incorporated into revision 1 of PMPM 4-105, "Nonconformance Reports." Controls were established for software nonconformances (including data).

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Table 1. Status of Action Items. (sheet 3 of 6)

Report section	Action	Required for general restart	Status
3.11	Through audits and surveillances, verify completion of preparation for partial restart, exempted ongoing work, expedited special cases, and new work	No	<b>Complete.</b> For work started prior to partial lift, a project directive for "Expedited Special Cases" was used to verify that the necessary technical, management, and quality assurance prerequisites were in place. Since the partial lift, a work initiation procedure is used to provide the same assurance. This procedure also applies, as necessary, to work considered "Transition" and determined to be Quality Assurance Level 1 by a Quality Evaluation Board
3.11.1	Audit planning will include some specific activities stated in this section	No	<b>Complete.</b> The Lead Auditors Guide and the direction mentioned in section 3.11 require the inclusion of these activities when planning audits
3.11.2	The surveillance program will emphasize the management controls critical to partial restart, start of new work, and transition of exempted work	No	<b>Complete.</b> Surveillance planning has and will continue to focus on the management control systems and closely monitors operations connected with the DC-24/25 Expedited Special Case  <b>Complete.</b> Since March 1, 1987, the quality assurance surveillance section has reviewed the 100 Work Initiation Packages. Information concerning planned work activities, resulting from the Work Initiation Packages, is being integrated into the surveillance planning process
3.11.2	Surveillances of participating contractors will be structured to ensure their audit/surveillance programs provide coverage of the management control systems	No	<b>Complete.</b> Surveillances of participating contractors audit/surveillance programs will continue to be an area of focus
3.11.2	Surveillance planning will be based on the following criteria: <ul style="list-style-type: none"> <li>● Scheduled restart-area-of-emphasis-appraisal results (weak areas)</li> <li>● Results of previous surveillances</li> <li>● Nonconformance reports</li> <li>● Trend analysis reports</li> <li>● Audit results (internal and participant)</li> <li>● Surveillance requests</li> </ul>	No	<b>Complete.</b> Biweekly surveillance planning meetings began January 16, 1987, to discuss the referenced criteria and exchange information between the Quality Assurance Audit and Surveillance Groups. Detailed meeting minutes are written, noting commitments made by each group. Appraisal results, previous surveillances, previous audits, NCRs, and surveillance requests are discussed during these meetings. Biweekly surveillance planning meetings are continuing to ensure continued coordination and coverage of all aspects of restart
4.2.4	Complete preliminary job analysis for all positions	No	<b>Complete.</b> Job analysis specialists have been selected and trained in each organization. They generated job task lists for each identified position in the organization. Job incumbents evaluated the tasks to determine training needs. Managers reviewed and approved the task lists. From these data, position qualification requirements were written that describe the duties and tasks performed by a position and the requirements necessary to qualify for the position. This activity was completed August 15, 1987
4.2.5	A training catalog will be prepared that describes the content of each lesson plan	No	<b>Complete.</b> This activity was completed in March 1987. The catalog, which is kept current, lists the titles and content of all current approved formal training, length of time required to complete the training, type of instruction, and homework and examination requirements (if applicable)

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Table 1. Status of Action Items. (sheet 4 of 6)

Report section	Action	Required for general restart	Status
4.2.6	Complete missing components of training records system (i.e., personnel briefs, position qualification requirements).	No	Complete. The individual training files have been updated for all personnel to include current job resumes. Position qualification requirements have been written, reviewed, and approved. Managers have documented their evaluations of personnel qualifications. This activity was completed on September 1, 1987
5.3.2.3	The Westinghouse design control and records management control systems implementing QAAPs and instructions will be monitored by the IC's Quality Assurance Audit and Surveillance Groups	No	Complete. The Westinghouse design and records management control systems have been included in the IC audit and surveillance schedules. An audit (audit report #BWIP-EA-87-003) was conducted of Westinghouse's design and records management control systems. Fourteen surveillances were also conducted between January and July 1987
5.3.5.2	The BCS Richland, Inc. (BCSR), telecommunications procedures should be released and reviewed for adequacy. Reference BCSR-RA-005 Discrepancy Report 0270	Yes	Complete. Discrepancy Report 0270 was closed on January 10, 1987, and identified the release of telecommunications procedures. See status for action items 5.3.5.3 below
5.3.5.3	BCSR will complete procedures to control telecommunications activities by January 31, 1987	Yes	Complete. Discrepancy Report 0270 was closed on January 10, 1987, and identified the release of telecommunications procedures
5.3.5.3	The IC will perform an assessment of BCSR's telecommunications procedures prior to release for work	Yes	Complete. An assessment of BCSR's telecommunications procedure for adequacy was performed during the week of February 23, 1987. An Assessment Report was issued stating the acceptability of the procedures
5.4.1.3	The IC will obtain funds from the U.S. Department of Energy-Richland Operations Office for construction and operation of a records storage vault meeting requirements of NQA-1	No	Complete. Funding was allocated by the DOE-RL. The location of the core storage and records vault has been established. The Functional Design Criteria and Conceptual Design Report has been approved by the DOE-RL. Tentative completion date for the vault is scheduled for August 31, 1988
5.4.1.3	Imposition of a Document Control Plan on the MPPs by the DOE-RL is necessary for appropriate procedures to be developed	No	Complete. The IC has incorporated all the DOE-RL comments into management system plans. The DOE-RL has approved these plans, including IRMP Annex DOE-RL-8-9-02, "Documentation Management Plan." This plan, among others, has been imposed on the MPPs
5.4.3.3	Westinghouse will not initiate new work requiring development of new software. Modifications to existing software may be made, but must be justified and controlled on a case-by-case basis. The justification must demonstrate that controls can be applied. Each of these special cases must be approved by the Quality Manager and M&I Director	Yes	Complete. A letter was issued on March 4, 1987, notifying affected Westinghouse organizations of the described software restrictions. These restrictions will remain in effect until the required software procedures are issued and appropriate personnel are trained. The contents of the letter were incorporated into Project Directive 87-007, issued on April 28, 1987. The Project Directive 87-007 was cancelled following issuance of the software control procedures and required training
5.4.3.3	A reappraisal of the Design Control Management System will be performed	Yes	Complete. The reappraisal of the Design Control Management System is complete, and all general restart constraint items have been resolved
5.4.4.3	A reappraisal of the Procurement Control Management System will be performed	Yes	Complete. The reappraisal of the Procurement Control Management System is complete, and all discrepancies have been closed

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Table 1. Status of Action Items. (sheet 5 of 6)

Report section	Action	Required for general restart	Status
5.4.8.3	An assessment of the IRMP, its annexes, and the Safety Plan will be performed on their issuance to establish an appropriate schedule for their full implementation in lower tier procedures	Yes	<u>Westinghouse's Actions Complete.</u> The IRMP annexes have been issued. All annexes are included in the requirements matrix ensuring that all requirements are implemented through project management procedures. The requirement matrix was completed October 20, 1987, and provided to the DOE-RL for review. The IRMP is in review by the DOE-RL. The Safety Plan has been submitted to the DOE-RL for approval
5.6.3	A data base will be developed to allow the determination to be made of the common discrepancies related to procedures and to track the status of the procedures needed by each management control system	No	<u>Complete.</u> A data base identifying common discrepancies related to procedures and their scheduled date of completion was developed. A procedure traveler system was developed in which a firmly established schedule is outlined for each procedure when it enter the system
5.6.3	The BWIP will focus its efforts on completing the upper level documents and will seek DOE-RL assistance in expediting their issuance	Yes	<u>Westinghouse's Actions Complete.</u> See section 1.3.1
5.6.3	Followup audit and surveillance activities will be conducted to evaluate the effectiveness of the corrective actions initiated as a result of the appraisal. Followup verification activities will also provide a review of the completeness and effectiveness of the procedures developed and/or revised as a result of the management system appraisal	No	<u>Complete.</u> Followup audits and surveillances of the IC and other MPPs have been conducted on a regular basis in accordance with documented schedules. Twelve audits and 285 surveillances of BWIP activities were performed between January 1987 and October 1987
5.6.3	Appraisal coordinator will develop a plan for the conduct of required reappraisals and assessments by January 10, 1987	Yes	<u>Complete.</u> A draft of this plan was issued on January 10, 1987; the final plan was issued on January 26, 1987
5.6.3	Appendix K provides a list of all discrepancies that remain open and must be closed prior to partial restart of project activities	Yes	<u>Complete.</u> All discrepancies identified as constraints to general restart have been closed or resolved
6.1, App. A, 2.13	A matrix is being prepared to correlate work specified in various plans with the work breakdown structure (WBS). This will become the basis for an updated WBS Dictionary	Yes	<u>Complete.</u> The matrix (Cost/Scope Estimate Basis) and the new WBS Dictionary were completed, approved, and issued. The most recent issue of the Cost/Scope Estimate Basis, dated August 31, 1987, was transmitted to the DOE-RL on September 25, 1987
6.1	When the program definition stabilizes in early 1987 and long-range baseline tools are finalized, a retroactive check will be made to ensure correlation of work to the WBS is correct	No	<u>Complete.</u> The retroactive check was performed in June and July 1987
App. G	Evaluate incorporation of the requirements of DOE Order 4700 Sec. IV.B.3 and IV.B.7 in the PMP or the Business Management Plan	No	<u>Complete.</u> These items were discussed with the authors of these documents and have been included as necessary
App. G	Evaluate incorporation of the requirements of DOE Order 4700 Sec. III.B.C(1) in the SEMP	No	<u>Complete.</u> The SEMP is in compliance with DOE 4700, sec. III.B.C(1). The project fully satisfies the requirements of the Order through a parameter-based site characterization program

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Table 1. Status of Action Items. (sheet 6 of 6)

Report section	Action	Required for general restart	Status
App. O	Work initiation package schedules will be provided to the DOE-RL	Yes	Complete. The schedules were submitted to the DOE-RL on April 10, 1987, and are updated and resubmitted weekly
New Item 12/19/86 (SMART)	Establish requirements in a work initiation procedure for review of old work for adequacy	Yes	Complete. Revision to procedure PMPM 1-112, "Work Initiation," has been completed and approved

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### 3.0 QUALITY ASSURANCE PROGRAM

Chapter 3.0 of the May 1, 1986, RRR presented the evolution of the BWIP quality assurance program from early site identification studies to preparation for the site characterization phase. Subsequent revisions have reported evaluations of deficiency reports issued prior to 1986 and actions taken since the Stop Work Order to ensure that conditions adverse to quality are corrected prior to general restart.

Since January 1, 1987, the audits that have been conducted have been programmatic in scope rather than implementation audits. Fourteen audits were performed in FY 1987, nine since January 1987. These audits covered BWIP licensing, training, calibration, Site Characterization Plan licensing activities, Quality Assurance, Science and Engineering, the Morrison-Knudson Company, Inc., Quality Assurance Program, the Kaiser Engineers, Inc./Parsons Brinckerhoff Quade & Douglas, Inc. Quality Assurance Program, Westinghouse design control of boreholes DC-24, and DC-25, and an audit of Westinghouse Procurement, which was just completed. Future audits will focus on implementation and primarily address newly initiated work. The latest planned schedule of audits is shown in appendix D. Audit scopes will be defined during the audit planning stage.

There were 319 surveillances performed during FY 1987, 285 performed since January 1987, emphasizing an "area-of-focus" method for surveillance emphasis. Using this method, surveillances were scheduled emphasizing one of the seven quality assurance infrastructure management control systems during each biweekly surveillance planning period. During the first 6 mo of 1987, each of the seven management control systems was emphasized twice. The area-of-focus method of surveillance planning has proved to be effective, showing significant decreases in unsatisfactory rates.

A Trend Analysis Program is now in place, with the first report issued in October 1987. This represents a major accomplishment in data gathering, task comparison and measurement, and analysis of results. The Quality Assurance Trend Report will be used as a tool for line management to identify areas of weakness and plan for remedial actions as early as possible.

## 4.0 TRAINING

Westinghouse has made significant achievements and has met all the restart requirements in the qualification and training area since the last update to the RRR in May 1987. The work required to complete open action items has been completed, as shown in table 1.

In the area of personnel qualification, all permanent positions have been reviewed to establish comprehensive task lists from which position qualification requirements have been written. Managers have evaluated workers work experience, education, and training against the requirements of the positions. All personnel qualification files have been updated.

A project-wide, centrally administered required reading program has been successfully implemented and verified. Managers select the documents their personnel are required to read. This information is stored in a data base administered by the Project Qualification and Training office. When new or revised procedures are issued for use the Project Qualification and Training office issues a notification of reading assignment to all affected personnel. Personnel complete the reading assignment, document their reading on the assignment notification form, and return the form to the Project Qualification and Training office. The completion information is entered into the computer and hard copies stored. Management controls are provided through the issuance of reading status and deficiency reports. The DOE-RL conducted an indepth review of this program in August and September 1987 and reported no deficiencies.

Project-required orientation and indoctrination programs, initiated in 1986, have been upgraded and conducted numerous times in order to train personnel hired in 1987. General Employee Orientation has been conducted weekly for the last several months. Management Systems training is conducted regularly each month. All new hire personnel attend these within their first month of employment with the BWIP. Topics include quality assurance, security, safety, site orientations, and an indoctrination on each of the 14 management system elements that provide overall direction and control for the project.

Since the last RRR update, 10 new instructors have been trained and qualified, and 7 presenters and 54 on-the-job training evaluators have been trained. There exists an adequate cadre of competent instructional staff who are qualified both to develop and conduct classes and assess personnel task skills. Also, a significant amount of formal training has been developed and approved for use, including 9 course plans, 33 lesson plans, and 50 on-the-job training guides.

All project requirements for personnel qualification and training are adequately addressed in Westinghouse procedures and are fully implemented. Personnel have received the training committed to as a prerequisite requirement to restart of work. The records system that documents the qualification and training requirements and their completion is in place. The

technical training needed to support specific quality-affecting activities is being implemented as needed. In summary, all training restraints to a general restart of work have been resolved.

## 5.0 PROJECT MANAGEMENT CONTROL SYSTEMS APPRAISAL SUMMARY REPORT

As stated in earlier versions of the RRR, 25 appraisals and 2 reappraisals of BWIP management control systems were conducted. These appraisals/reappraisals resulted in a total of 372 discrepancy reports; 344 of these had been closed as of October 15, 1987. Of the 372 discrepancy reports, 111 were identified as being constraints to partial restart and an additional 15 were identified as constraints to general restart. All 126 constraints to partial restart and general restart have been closed or satisfactorily resolved.

The appraisal/reappraisal status as of October 15, 1987, is shown in figure 1.

## 6.0 RESTART OF WORK

The following is the status of the items discussed in chapter 6.0 of the report.

- The Quality Evaluation Board has been established to determine the quality level of the items and/or activities contained in transition packages. Those transition packages containing Quality Level 1 or 2 items and/or activities will be converted to work initiation packages to document the requirements for performing the work. The cognizant manager of transition packages containing Quality Level 3 work shall document the scope, products, and deliverables of the packages. In addition, the cognizant manager shall state the justification for the work and verify that the work is being performed in accordance with project procedures. Approval by Westinghouse of the work initiation packages for Quality Level 1 or 2 transition packages and documentation associated with Quality Level 3 transition packages will be completed prior to general restart.
- The work initiation process has started. Fifty Quality Level 3 packages and four Quality Level 1 packages have been approved. Nine Quality Level 1 packages and thirteen Quality Level 3 packages have been transmitted to the DOE-RL. Appendix O (included in this update) has been updated to reflect the current scheduling for work initiation as of October 15, 1987.

MANAGEMENT CONTROL SYSTEM	DISCREPANCIES			
	TOTAL	CLOSED	CONSTRAINT TO FULL LIFT OF STOP WORK ORDER	
			TOTAL	CLOSED/RESOLVED
PNL-RA-001 (QUALITY ASSURANCE)	29	29	0	0
PNL-RA-001A (ADMINISTRATIVE)	0	0	0	0
WHC-RA-002 (QUALITY ASSURANCE)	40	40	0	0
WHC-RA-002A (ADMINISTRATIVE)	3	3	0	0
MK-RA-003 (QUALITY ASSURANCE)	9	9	0	0
MK-RA-003A (ADMINISTRATIVE)	3	3	0	0
KE/PB-RA-004 (QUALITY ASSURANCE)	23	23	0	0
KE/PB-RA-004A (ADMINISTRATIVE)	1	1	0	0
BCSR-RA-005 (QUALITY ASSURANCE)	47	47	42	42
BCSR-RA-005A (ADMINISTRATIVE)	0	0	0	0
DOCUMENT/RECORDS RHO-RA-006	27	22	10	10
QUALITY ASSURANCE RHO-RA-007	16	16	6	6
DESIGN RHO-RA-008	32	30	21	21
REAPPRAISAL RHO-RA-008R	39	29	7	7
PROCUREMENT RHO-RA-009	19	19	15	15
REAPPRAISAL RHO-RA-009R	0	-	0	-

MANAGEMENT CONTROL SYSTEM	DISCREPANCIES			
	TOTAL	CLOSED	CONSTRAINT TO FULL LIFT OF STOP WORK ORDER	
			TOTAL	CLOSED/RESOLVED
VERIFICATION RHO-RA-010	8	8	0	0
DEFICIENCY RHO-RA-011	17	17	6	6
TEST RHO-RA-012	4	4	3	3
COST/SCHEDULE RHO-RA-013	11	11	4	4
SAFETY RHO-RA-014	2	2	1	1
SECURITY RHO-RA-015	5	5	2	2
CORRESPONDENCE RHO-RA-016	3	3	0	0
ACTION RHO-RA-017	1	1	0	0
CONTRACTOR INTERFACE RHO-RA-018	11	11	4	4
RESOURCE RHO-RA-019	3	3	1	1
PMP/SEMP RHO-RA-020	19	8	4	4
TOTALS	372	344	126	126

REV. 10/15/87

Figure 1. Appraisal Summary.

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**APPENDIX C**

**STATUS OF OPEN DEFICIENCY DOCUMENTS**

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Status of Open Deficiency Documents. (sheet 1 of 2)

Deficiencies by responsible organization	Corrective action established		Corrective action due date
	Yes	No	
<u>Director's Office (BWIP)</u>			
SWO-86-004	X		The BWIP Quality Assurance completed verification of corrective actions. SWO-86-004 is closed. Westinghouse awaiting general lift of the SWO from the DOE-RL.
<u>Project Administration</u>			
BCAR-85-007	X		Closed August 14, 1987
<u>Science and Engineering</u>			
BNCR-85-025		X	*
BNCR-86-003		X	*
BNCR-86-004		X	*
BNCR-86-005		X	*
BNCR-86-006		X	*
CNCR-B-314-113	X		*Dispositioned "accept as is." CNCR returned to KE/PB to correct documentation problems
CNCR-B-314-114	X		*Part A dispositioned "accept as is." Part B awaiting corrective action (radiography) during double joining after restart
CNCR-B-314-115	X		*Dispositioned "accept as is." CNCR returned to KE/PB to correct documentation problems
CNCR-B-314-116	X		*Dispositioned "accept as is." CNCR returned to KE/PB to correct documentation problems
CNCR-B-314-117	X		*CNCR has been returned to M-K for closure

**Status of Open Deficiency Documents. (sheet 2 of 2)**

Deficiencies By responsible organization	Corrective action established		Corrective action due date
	Yes	No	
<b>DOE-RL Audits</b>			
06-84, Findings 1-2 (Science and Engineering)	X		Closed May 26, 1987
10-84, Findings 1-4 (BWIP-QA)	X		Closed May 26, 1984
86-04, Finding 2 (Science and Engineering)	X		Closed August 21, 1987, by the DOE 87-QSD-225 RPS Westinghouse Pres.
86-04, Finding 7	X		Reopened July 28, 1987, by the DOE-RL Due December 31, 1987
86-05, Findings 3,5 (Project Administration)	X		Closed May 14, 1987
86-07, Finding 1 (KE/PB)	X		Closed October 1, 1987 87-QSD-256

\*The Nonconformance Disposition Board action that is required to close these NCRs and CNCRs will be convened upon FY 88 funding of Work Initiation Package 77300-A.

M-K = Morrison-Knudson Company, Inc.

KE/PB = Kaiser Engineers, Inc./Parsons Brinckerhoff Quade & Douglas, Inc.

NCR = Nonconformance Report.

CNCR = Construction Nonconformance Report.

BNCR = Basalt Nonconformance Report.

**APPENDIX D**

**AUDIT SCHEDULE FOR RESTART READINESS**

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08/18/87

BASALT WASTE ISOLATION PROJECT  
QUALITY ASSURANCE AUDIT SCHEDULE  
REVISION 4

AUDIT NUMBER	ORGANIZATION/ACTIVITY	SCHEDULED	CONDUCTED	REPORT ISSUED	SCOPE	LEAD AUDITOR	QAPC	QC	PC	QC	VC	IC	QC	PC	RESCHEDULE/
							I	II	III	IV	V	VI	VII	VIII	COMMENTS
BWIP-JA-87-001	WHC	12/18/86	12/18/86	/ /	CALIBRATION LAB.	LM						X	X	X	JOINT PNL/BWIP
BWIP-JA-87-002	PHL	01/01/87	01/05/87	02/04/87	QA MANAGEMENT CONTROL SYSTEMS	RLS	X	X		X	X	X	X	X	JOINT DOE/BWIP
BWIP-EA-87-001	R-K	01/26/87	01/26/87	02/13/87	QA MANAGEMENT CONTROL SYSTEMS	JAU	X		X	X			X		
BWIP-EA-87-002	KE/PB	02/09/87	02/17/87	03/16/87	QA MANAGEMENT CONTROL SYSTEMS	JLR		X		X	X		X	X	
BWIP-IA-87-001	ROCKWELL	02/07/87	02/10/87	03/11/87	SCP ISSUES & RESOLUTIONS	RLS	X		X					X	
BWIP-IA-87-002	ROCKWELL	03/16/87	03/16/87	04/07/87	TRAINING	SLM	X			X				X	
BWIP-IA-87-003	ROCKWELL	03/30/87	04/07/87	04/23/87	CALIBRATION	JAO	X			X	X			X	
BWIP-JA-87-003	KE/PB	04/06/87	04/06/87	06/01/87	DESIGN CONTROL	IKS	X	X	X	X		X		X	JOINT DOE/BWIP
BWIP-IA-87-005	ROCKWELL	05/18/87	05/18/87	06/09/87	QA MANAGEMENT CONTROL SYSTEM	RJV	X		X		X		X		
BWIP-IA-87-004	ROCKWELL	05/25/87	05/26/87	07/08/87	SCP PRODUCTION	ROD	X			X				X	
BWIP-EA-87-003	WHC	05/25/87	06/26/87	07/02/87	QA MANAGEMENT CONTROL SYSTEM	JAU	X	X		X	X	X		X	
BWIP-IA-87-006	ROCKWELL	06/27/87	06/29/87	07/16/87	QA MANAGEMENT CONTROL SYSTEMS	JLR		X							
BWIP-IA-87-007	BLSR	07/27/87	07/27/87	/ /	QA PROGRAM CONTROL PROCESSES	RBB				X				X	
	WHC	09/14/87	/ /	/ /	QA PROGRAM CONTROL PROCESSES	RBB				X					
	WHC	09/28/87	/ /	/ /	QA PROGRAM CONTROL PROCESSES	ROD						X			
BWIP-EA-87-004	PHL	10/12/87	/ /	/ /	QA PROGRAM CONTROL PROCESSES	JAU									
	R-K	12/01/87	/ /	/ /	QA PROGRAM CONTROL PROCESSES	TDD									JOINT DOE/BWIP
	WHC	/ /	/ /	/ /	EXPEDITED SPECIAL CASES	TDD									AS REQUIRED

Approved By: *K. J. Vtens*  
 K. J. Vtens, Manager  
 BWIP Quality Assurance Audit Section

Approved By: *R. J. Johnson* 8/21/87  
 R. J. Johnson, Manager  
 BWIP Quality Assurance Group

Approved By: *D. C. Gibbs* 8/21/87  
 D. C. Gibbs, Manager  
 Civilian Waste Management Division

NOTE: The X's shown under each control system indicate which systems were examined during a completed audit, or the minimum required to be examined during a scheduled audit.

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**APPENDIX F**

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Document no.	Title
WHC-CM-7-2	Basalt Waste Isolation Project Quality Assurance Program Requirements Manual
370	SCP Management Plan <sup>a</sup>
DOE-RL-86-1	Basalt Quality Assurance Requirements Document
DOE-RL-86-6	Basalt Quality Assurance Plan
DOE-RL-87-01	System Engineering Management Plan (SEMP)
DOE-RL-87-02	Project Plan (PP) and Charter <sup>b,c</sup>
DOE-RL-87-03	Project Management Plan (PMP) <sup>b,c</sup>
SD-BWI-AP-010	Security Policy for BWIP Unclassified Computer System
SD-BWI-OP-003	NSTF/ES Facility Operations Plan
SD-BWI-PBD-001	Basalt MGDS Design and Development Plan
SD-BWI-PD-023	ES Construction Plan
SD-BWI-PD-024	ES Prerequisites Plan
SD-BWI-PMP-006	Management and Integration Plan (M&IP) <sup>c</sup>
SD-BWI-VP-004	ES Functional Analysis Plan
01-114	Project Management and Work Process Control
02-101	Preparation of Technical Requirements Document
02-102	Technical Document Review
02-104	Design Field Change
02-107	BWIP Engineering Order System
02-108	Computational Briefs
02-113	Preparation and Control of Design Requirements Document
02-117	Preparation of Engineering Plans
02-126	Design Control Process
02-130	Control of Special Processes

Document no.	Title
03-101	Controlled Notebooks
03-102	Peer Review
03-106	Test Data Collection Specifications
03-111	Preparation of Study Plans
04-103	Surveillance Activities
04-104	Quality Assurance Audits
04-105	Nonconformance Reports
04-106	Construction Nonconformance Reports
04-108	Inspection Activities
04-111	Trend Analysis
04-113	Preparation of Functional Requirements for Construction Readiness Reviews
04-115	Stop Work Order
04-116	Resolution of Disputes with Quality Assurance
04-121	Graded Quality Assurance
04-122	Corrective Action Report
05-101	Change Proposal Processing
05-102	Configuration Verification and Accounting System
06-101	Major Participant Interface Control
06-103	Support Services for the Construction Manager
06-105	Direction of Technical Work
06-106	Suppliers Qualification and Evaluation
06-107	Source Inspection
06-108	Receiving Inspection

Document no.	Title
06-112	Procurement Planning Activities
06-114	Procurement Requisition, Documentation, and Review
06-115	Procurement Management System
06-116	Procurement Document Control
06-117	Major Project Participant Procurement Interface Activities
06-119	Shipping and Storage Control
06-120	BWIP Procurement Process
06-123	Supplier Deviation Requests
06-124	Proposal Evaluation and Award
06-125	Material Receiving and Delivery
07-104	Preparation of Facility Plans
07-106	NSTF Drilling Permit
07-108	Control of Standards and Measuring and Test Equipment <sup>e</sup>
07-112	Control of Standards and M&TE Status Identification and Labeling <sup>e</sup>
07-118	Identification and Control of Samples
07-119	Data Collection Test Control
07-120	Control of Data Gathering Equipment Components and Materials
07-121	Inspection, Test and Operating Status Indicators
07-128	NSTF Test Support Requirements <sup>d</sup>
08-101	BWIP Correspondence Control
08-103	BWIP Records Management System
08-105	Recording Data for Quality Records and Recording Corrections
08-106	Control of Supporting Documents

Plans and Procedures Required for General Restart. (sheet 4 of 5)

Document no.	Title
08-107	Test and Operations Procedure Preparation and Control
08-110	Control of Geotechnical Samples
08-113	Submittal of Raw Data
08-115	Control of In-Process Documents
08-116	ESF Test Design Administration and Control
08-117	Format of Test and Operations Procedures
08-120	Off-Normal Conditions/Events Reporting and Recording
08-121	Document Receipt Control <sup>f</sup>
08-125	Document Update Control
08-127	BWIP Document Control Transmittal Numbering System
08-129	Master Submittal List
08-133	Document Control
09-101	Project Scheduling
09-107	BWIP Business Management
11-102	Exploratory Shaft Visitor Access Control
11-103	Unusual Occurrence Reporting System
11-104	NSTF Access Control
13-106	Administration of Qualification and Training
13-108	Qualification of Instructional Staff
13-109	Job Analysis
13-110	Training Materials Development
13-112	Conduct of Training
13-113	On-The-Job Training
13-114	Writing Learning Objectives

Document no.	Title
13-116	Qualification and Training Documentation and Records
13-121	Personnel Training Requirements
14-102	Software Change Control
14-103	Software Quality Assurance Checklist
14-109	Software Validation
14-116	Software Application Control
ORG-1.1	Westinghouse Organization and Responsibilities

<sup>a</sup>Quarterly update.

<sup>b</sup>Issued through DOE-RL for implementation.

<sup>c</sup>Exclusive of annexes.

<sup>d</sup>Was previously PMPM 3-110.

<sup>e</sup>Content of PMPM 7-105 was incorporated into this procedure, and PMPM 7-105 was deleted.

<sup>f</sup>Content of PMPM 8-108 was incorporated into this procedure.

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**APPENDIX K**

**DISCREPANCIES REQUIRING CLOSURE  
PRIOR TO GENERAL RESTART**

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**Discrepancies Requiring Closure Prior  
to Full Restart. (sheet 1 of 6)**

<b>Responsible participant/ organization</b>	<b>Discrepancy No.</b>	<b>Corrective action due date</b>	<b>Status</b>
DOC/RECORDS CONTROL	0102	02/15/87	Closed
DOC/RECORDS CONTROL	0103	02/28/87	Closed
DOC/RECORDS CONTROL	0105	02/15/87	Closed
DOC/RECORDS CONTROL	0106	02/15/87	Closed
DOC/RECORDS CONTROL	0107	02/15/87	Closed
DOC/RECORDS CONTROL	0110	02/03/87	Closed
DOC/RECORDS CONTROL	0117	01/30/87	Closed
DOC/RECORDS CONTROL	0118	01/30/87	Closed
DOC/RECORDS CONTROL	0125	01/14/87	Closed
DOC/RECORDS CONTROL	0127	01/14/87	Closed
DEFICIENCY CONTROL	0164	12/19/86	Closed
DEFICIENCY CONTROL	0167	02/01/87	Closed
DEFICIENCY CONTROL	0172	02/01/87	Closed
DEFICIENCY CONTROL	0173	02/01/87	Closed
DEFICIENCY CONTROL	0175	02/01/87	Closed
DEFICIENCY CONTROL	0176	02/01/87	Closed
PROCUREMENT CONTROL	0200	12/19/86	Closed
PROCUREMENT CONTROL	0201	01/05/87	Closed
PROCUREMENT CONTROL	0202	01/09/87	Closed
PROCUREMENT CONTROL	0203	12/19/86	Closed
PROCUREMENT CONTROL	0204	12/19/86	Closed
PROCUREMENT CONTROL	0205	12/19/86	Closed
PROCUREMENT CONTROL	0206	12/18/86	Closed

**Discrepancies Requiring Closure Prior  
to Full Restart. (sheet 2 of 5)**

Responsible participant/ organization	Discrepancy No.	Corrective action due date	Status
PROCUREMENT CONTROL	0207	12/19/86	Closed
PROCUREMENT CONTROL	0208	12/19/86	Closed
PROCUREMENT CONTROL	0211	12/19/86	Closed
PROCUREMENT CONTROL	0212	12/15/86	Closed
PROCUREMENT CONTROL	0213	12/19/86	Closed
PROCUREMENT CONTROL	0215	12/19/86	Closed
PROCUREMENT CONTROL	0216	02/18/87	Closed
PROCUREMENT CONTROL	0217	12/19/86	Closed
TEST CONTROL	0219	02/01/87	Closed
TEST CONTROL	0220	12/16/86	Closed
TEST CONTROL	0221	12/16/86	Closed
DESIGN CONTROL	0129	12/08/86	Closed
DESIGN CONTROL	0130	02/20/87	Closed
DESIGN CONTROL	0131	02/28/87	Closed
DESIGN CONTROL	0135	02/28/87	Closed
DESIGN CONTROL	0136	02/28/87	Closed
DESIGN CONTROL	0137	01/31/87	Closed
DESIGN CONTROL	0139	12/31/86	Closed
DESIGN CONTROL	0140	12/31/86	Closed
DESIGN CONTROL	0141	02/15/87	Closed
DESIGN CONTROL	0143	02/26/87	Closed
DESIGN CONTROL	0144	02/28/87	Closed
DESIGN CONTROL	0145	02/28/87	Closed

**Discrepancies Requiring Closure Prior  
to Full Restart. (sheet 3 of 6)**

<b>Responsible participant/ organization</b>	<b>Discrepancy No.</b>	<b>Corrective action due date</b>	<b>Status</b>
DESIGN CONTROL	0146	02/15/87	Closed
DESIGN CONTROL	0147	02/28/87	Closed
DESIGN CONTROL	0148	01/31/87	Closed
DESIGN CONTROL	0149	02/28/87	Closed
DESIGN CONTROL	0152	02/28/87	Closed
DESIGN CONTROL	0153	02/28/87	Closed
DESIGN CONTROL	0154	01/17/87	Closed
DESIGN CONTROL	0158	01/17/87	Closed
DESIGN CONTROL	0160	02/28/87	Closed
QA PROGRAM	0225	02/01/87	Closed
QA PROGRAM	0226	02/28/87	Closed
QA PROGRAM	0227	02/28/87	Closed
QA PROGRAM	0233	02/28/87	Closed
QA PROGRAM	0236	01/31/87	Closed
QA PROGRAM	0237	01/01/87	Closed
COST/SCHEDULE	0239	02/19/87	Closed
COST/SCHEDULE	0243	12/19/86	Closed
COST/SCHEDULE	0244	12/19/86	Closed
COST/SCHEDULE	0248	02/28/87	Closed
SAFETY	0195	01/31/87	Closed
SECURITY	0189	12/19/86	Closed
SECURITY CON	0190	12/19/86	Closed
CONTRCT INTER	0254	02/28/87	Closed

Discrepancies Requiring Closure Prior  
to Full Restart. (sheet 4 of 6)

Responsible participant/ organization	Discrepancy No.	Corrective action due date	Status
CONTRCT INTER	0255	01/31/87	Closed
CONTRCT INTER	0257	02/15/87	Closed
CONTRCT INTER	0258	02/28/87	Closed
RESOURCE	0198	01/31/87	Closed
MGMT SYS	0330	02/28/87	Closed
MGMT SYS	0331	02/28/87	Closed
MGMT SYS	0332	02/28/87	Closed
MGMT SYS	0333	02/28/87	Closed
BCSR	0268	01/09/87	Closed
BCSR	0269	01/09/87	Closed
BCSR	0270	01/09/87	Closed
BCSR	0271	01/09/87	Closed
BCSR	0275	01/09/87	Closed
BCSR	0276	01/09/87	Closed
BCSR	0277	01/09/87	Closed
BCSR	0278	01/09/87	Closed
BCSR	0279	01/09/87	Closed
BCSR	0280	01/09/87	Closed
BCSR	0281	01/09/87	Closed
BCSR	0282	01/09/87	Closed
BCSR	0283	01/09/87	Closed
BCSR	0284	01/09/87	Closed
BCSR	0285	01/09/87	Closed

**Discrepancies Requiring Closure Prior  
to Full Restart. (sheet 5 of 6)**

<b>Responsible participant/ organization</b>	<b>Discrepancy No.</b>	<b>Corrective action due date</b>	<b>Status</b>
BCSR	0286	01/09/87	Closed
BCSR	0287	01/09/87	Closed
BCSR	0288	01/09/87	Closed
BCSR	0290	01/09/87	Closed
BCSR	0291	01/09/87	Closed
BCSR	0292	01/09/87	Closed
BCSR	0293	01/09/87	Closed
BCSR	0294	01/09/87	Closed
BCSR	0295	01/09/87	Closed
BCSR	0296	01/09/87	Closed
BCSR	0297	01/09/87	Closed
BCSR	0298	01/09/87	Closed
BCSR	0299	01/09/87	Closed
BCSR	0300	01/09/87	Closed
BCSR	0301	01/09/87	Closed
BCSR	0302	01/09/87	Closed
BCSR	0304	01/09/87	Closed
BCSR	0305	01/09/87	Closed
BCSR	0306	01/09/87	Closed
BCSR	0307	01/09/87	Closed
BCSR	0308	01/09/87	Closed
BCSR	0309	01/09/87	Closed
BCSR	0310	01/09/87	Closed

**Discrepancies Requiring Closure Prior  
to Full Restart. (sheet 6 of 6)**

<b>Responsible participant/ organization</b>	<b>Discrepancy No.</b>	<b>Corrective action due date</b>	<b>Status</b>
BCSR	0311	01/09/87	Closed
BCSR	0312	01/09/87	Closed
BCSR	0313	01/09/87	Closed
BCSR	0314	01/09/87	Closed
DESIGN CONTROL REAPPRAISAL	0337		Closed
DESIGN CONTROL REAPPRAISAL	0339		Closed
DESIGN CONTROL REAPPRAISAL	0345		Closed
DESIGN CONTROL REAPPRAISAL	0346		Closed
DESIGN CONTROL REAPPRAISAL	0347		Closed
DESIGN CONTROL REAPPRAISAL	0348		Closed
DESIGN CONTROL REAPPRAISAL	0349		Closed

**APPENDIX 0**

**WORK INITIATION PACKAGE SCHEDULES**

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WORK INITIATION PACKAGE

WIP #	TITLE	G LEVEL	SCHEDULED DATE TO MI	SCHEDULED DATE TO DOE
71110-D*1	SOLUTIONS CHARACTERIZATION ACTIVITIES (QL 1)	1	10/23/87	10/28/87
71110-E*1	SOLIDS CHARACTERIZATION ACTIVITIES (QL 1)	1	10/02/87	10/06/87
71110-F*1	SOLUTIONS CHARACTERIZATION ACTIVITIES (QL 3)	3	10/02/87	/ /
71110-G*1	SOLIDS CHARACTERIZATION ACTIVITIES (QL 3)	3	10/02/87	/ /
71110-H*1	SOLIDS AND SOLUTIONS CHAR TECH DIR (QL 1)	1	10/19/87	11/09/87
71110-I*1	SOLIDS AND SOLUTIONS CHAR TECH DIR (QL 3)	3	10/05/87	/ /
71110-J*1	CENRTC PROCUREMENT	3	09/18/87	/ /
71120-C*1	STEAM ALTERED PACKING	1	09/30/87	10/07/87
71120-G*1	2101-M GEOCHEMICAL TESTING DEVELOPMENT WORK	3	08/28/87	/ /
71120-H*1	CONTRACT ADMINISTRATION	3	08/28/87	/ /
71120-I*1	TECHNICAL DIRECTION TO CONTRACTORS	1	09/18/87	10/08/87
71120-J*1	CENRTC	3	09/18/87	/ /
71130-A*1	MOISTURE/DENSITY TESTING AND GROUT DESIGN	1	09/21/87	09/25/87
71130-B*1	SWELLING PRESSURE, HYDRAULIC COND. AND RESAT TESTS	1	10/23/87	10/30/87
71130-C*1	UNIAXIAL, TRIAXIAL SHEAR, AND CONSOLIDATION TESTS	1	10/12/87	10/22/87
71130-E*1	CONTRACT ADMINISTRATION OF DIRECT FUNDED CONTRACTS	1	10/12/87	10/23/87
71130-F	PROCUREMENT OF CENRTC	3	08/31/87	/ /
71130-G*1	TRAINING AND DEVELOPMENTAL TESTING	3	10/12/87	/ /
71130-H	COHASSETT BASALT AGGREGATE ACQUISITION	3	10/30/87	/ /
71130-I*1	CONTRACT ADMIN OF DIRECT FUNDED CONTRACTORS	3	10/23/87	/ /
71140-B*1	MTS CALIBRATION UPGRADE	1	09/16/87	09/23/87
71140-E*1	THERMO MECHANICAL PROPERTIES DEVELOPMENT TESTING	3	08/05/87	/ /
71140-F*2	UNIAXIAL/TRIAXIAL PLANNING AND DEVELOPMENT TESTING	3	10/07/87	/ /
71140-G	PROCURE CAPITAL EQUIPMENT	3	06/01/87	/ /
71140-H*1	PROCURE CAPITAL EQUIPMENT	3	09/18/87	/ /
71210-A*2	TEST COORDINATION - WCS SUPPORT/LIASON	3	10/06/87	/ /
71320-B	LHS TESTING AND SAMPLING	1	01/02/88	01/09/88
71320-C*1	KAISER SURVEYING	3	08/28/87	/ /
71350-B	SUPPORT TO NSTF TESTING	3	01/02/88	/ /
71350-C	WORKDECK DESIGN	3	12/15/87	/ /
71350-F*1	TESTING - BOREHOLE JACK, FLAT JACK, OVERCORING, ETC	3	09/25/87	/ /
71420-A*1	SUPPORT FROM KAISER ENGINEERS	3	08/19/87	/ /

WORK INITIATION PACKAGE

WIP #	TITLE	Q LEVEL	SCHEDULED DATE TO MI	SCHEDULED DATE TO DCE
71430-A*1	PORTHOLE DEVELOPMENT TEST	3	09/18/87	/ /
71530-A*1	GROUND WATER MONITORING	1	10/29/87	11/06/87
73200-B*1	DEVELOP SWIP READINESS REVIEW PROGRAM PLAN/PROC	3	08/24/87	/ /
77010-A	CONFIGURATION MANAGEMENT SYSTEM	3	05/01/87	/ /
77100-A	SURFICIAL MAPPING	3	09/15/87	/ /
77210-C*1	VALIDATION OF PA SYSTEM MODELS	1	08/24/87	08/31/87
77210-D*3	PA DATA BASE	1	09/05/87	/ /
77210-E*1	BARRIER SENSITIVITY STUDY	3	09/01/87	/ /
77210-F*1	ANALYSIS OF ES / CONSTRUCTION IMPACTS AND DISRUPT	3	08/24/87	/ /
77210-G*1	TECTONIC DEFORMATION AND HYDROLOGICAL MODELING	3	10/05/87	/ /
77220-B	DEFINITION OF CREDIBLE ACCIDENTS		01/01/88	/ /
77220-D	SELECTION, PROCUREMENT, AND QUALIFICATION OF CODES		02/01/88	/ /
77230-A*2	FINITE ELEMENT MODEL / IMPACTS OF CLIMATE	3	09/14/87	/ /
77230-B	VERIFY, BENCHMARK MAGNUM 3-D AND FECTRA	1	08/01/87	08/11/87
77230-C	FINITE HYDROCHEMICAL MIXING MODEL/COLD CREEK SYN	3	08/01/87	/ /
77240-A*1	VERIFY/BENCHMARK TSAP - CODE AND MODEL DEVELOPMENT	1	08/24/87	09/01/87
77240-C*2	ACD SENSITIVITY ANALYSIS	3	09/01/87	/ /
77240-D*1	GEOMECHANICS MODELS	3	08/17/87	/ /
77240-E*1	VERIFICATION AND BENCHMARKING OF GEOMECHANICS CODE	1	08/20/87	08/25/87
77240-G*1	DRIFT SEAL SENSITIVITY STUDY ANALYSIS	3	08/24/87	/ /
77240-K*1	CONSTITUTIVE MODEL PARAMETERS FOR ACD	3	10/14/87	/ /
77300-A*1	NON-CONFORMANCE RESOLUTION	1	09/04/87	09/11/87
77310-D*1	ADMIN SUPPORT TO CONTRACTORS	3	09/01/87	/ /
77310-E	TRADE STUDIES	3	09/18/87	/ /
77320-A*1	TECHNICAL DIRECTION OF A/E	3	11/05/87	/ /
77330-A*3	DRIFT SEAL SENSITIVITY STUDY	3	09/05/87	/ /
77330-C*4	PREPARE TDC'S/DSS'S	3	09/30/87	/ /
77330-D	PROCURE/FAB EQUIP FOR SUBSURFACE BOREHOLE SEAL	1	05/15/88	05/22/88
77340-B*2	TASK VI ACTIVITIES / MGMT OF A/E GEN SERVICES	3	08/11/87	/ /
77340-D*3	COBB ENGINEERING/ NON-WHC ORGANIZATIONS	3	10/09/87	/ /
77340-E*2	FIELD SURVEY SUPPORT FOR ESF DESIGN	3	08/11/87	/ /
77340-F*3	COMPLETE INTERFACE CONTROL DOCUMENT	3	10/12/87	/ /

WORK INITIATION PACKAGE

WIP #	TITLE	Q LEVEL	SCHEDULED DATE TO MI	SCHEDULED DATE TO DOE
77340-H*2	MANAGEMENT OF ES-1 AND ES-2	3	08/11/87	/ /
77340-J*3	DATA ACQUISITION SYSTEM/ REQ DOC, PURCHASE	3	10/12/87	/ /
77360-A*1	LLL - PROVIDE CODE DEVELOPMENT SUPPORT	3	08/11/87	/ /
77410-A*1	POSITION PAPER ON DEEP BOREHOLE	3	07/28/87	/ /
77410-C	GEOPHYSICAL EQUIPMENT PROCUREMENT	3	12/16/87	/ /
77411-B*1	OUTCROP INTRAFLOW STRUCTURE STUDY/ COHASSETT FLOW	1	09/25/87	10/19/87
77411-C*1	INTERPRET COLLING JOINT DATA FROM OUTCROPS	1	11/04/87	/ /
77411-E	INTERPRET STRATIGRAPHY - EXISTING BOREHOLE RRL-17	1	12/09/87	12/16/87
77411-F	STRATIGRAPHIC MODEL DEVELOPMENT	1	02/01/88	02/08/88
77411-G	DATA PACKAGE ON INTRAFLOW STRUCTURE, COHASSETT	1	04/12/88	04/19/88
77411-K	TDCS FOR OUTCROP MAPPING	3	10/12/87	/ /
77411-L*1	TOR FOR ESF TUNNEL MAPPING	3	10/14/87	/ /
77411-M*1	TDCS FOR MINERALOGY/PETROLOGY	1	10/08/87	10/26/87
77411-N*1	DEVELOP SEMI-QUANTITATIVE CAPABILITIES	3	11/04/87	/ /
77411-O*1	DEVELOP FRACTIONATION FACTORS	3	11/04/87	/ /
77411-P	IFS GEOSTATISTICS FOR ACD	3	04/05/88	/ /
77411-Q*1	COHASSETT INTRAFLOW STUDY	3	10/16/87	/ /
77412-A	INSTALL VELOCITY MODEL / SOFTWARE IMPROVEMENT	3	10/30/87	/ /
77412-B*1	QUATERNARY PROCESS OF PASCO BASIN/DATA ANALYSIS	3	09/08/87	/ /
77412-D	EVALUATE PALEOMAGNETIC STRAIN DATA, SHIVELY BASIN	3	10/30/87	/ /
77412-E	PHOTOGRAPH, INTERPRET VANTAGE AREA TECTONICS	3	10/30/87	/ /
77412-F*1	TDCS' FOR GEODETTIC SURVEYS, FIELD DATA COLLECTION	3	10/13/87	/ /
77412-G*1	GEOMORPHIC ANALYSIS	1	10/13/87	10/22/87
77412-H	BASIN ANALYSIS	1	05/02/88	05/09/88
77412-I*1	SEISMIC SCOPING STUDY	3	10/16/87	/ /
77412-J	ANALYZE GEOLOGIC DATA FOR DEEP STRUCTURES	3	12/30/87	/ /
77412-K	PREPARE TOP OF BASALT/SUBCROP MAP	1	12/30/87	01/06/88
77412-L	ANALYZE TECTONIC FEATURES/EXISTING CORE	1	12/30/87	01/06/88
77412-M	CORRELATE INTERBED UNITS FOR REGIONAL HYDROLOGY	3	12/30/87	/ /
77412-N	CORRELATE BASALT UNITS FOR REGIONAL HYDROLOGY	3	12/30/87	/ /
77412-O*1	SEIMIC MONITORING	1	10/15/87	10/23/87
77412-P*1	TDCS FRO GEODETTIC SURVEYS	1	11/02/87	11/12/87

WORK INITIATION PACKAGE

WIP #	TITLE	Q LEVEL	SCHEDULED DATE TO HI	SCHEDULED DATE TO DOE
77413-A*1	GEOPHYSICAL DATA ANALYSIS	3	10/02/87	/ /
77413-B	COMP SPECS AND TRNG FOR RESTRICTED AREA DATA COLL	1	05/30/88	06/04/88
77413-C	SHALLOW STRUCTURE INTERPRETATIONS - TECTONICS	1	05/30/88	06/04/88
77413-D	CONDUCT LOGGING STUDIES	1	12/16/87	12/23/87
77414-A	DOCUMENT 3-D STRATIGRAPHIC AND STRUCTURAL MODEL	1	11/02/87	11/12/87
77414-B*1	MONITOR EXPLORATION ACTIVITIES	3	09/07/87	/ /
77414-C	TDCS' FOR RESOURCE POTENTIAL	3	12/29/87	/ /
77420-B	CONCEPTUAL DESIGNS - PORTHOLE AND SINGLE BOREHOLE	3	06/01/88	/ /
77420-D	MAINTAIN & DOC MAGNUM3D & FECTRA PRE-&POST PROCESS	3	10/31/87	/ /
77420-E	ALTERNATE COLD CREEK SYNCLINE NUMERICAL MODELS	1	12/01/87	12/08/87
77420-F	DEVELOP & DEMON 3D INVERSE/SENSITIVITY METHODOLOGY	3	12/01/87	/ /
77420-G	DEVELOP PRE-ES CHARACTERIZATION CRITERIA	1	11/02/87	11/09/87
77420-H	DOCUMENTATION AND CONFIG CONTROL OF PROMC-SF	1	02/01/88	02/08/88
77420-I	EQ. POROUS MEDIUM ANAL FOR DISPERSIVE CHARAC.	3	12/14/87	/ /
77421-D*1	ESTAB BASES FOR NUM SIMULATION - FUTURE CLIMATE	3	10/02/87	/ /
77421-E*1	REGIONAL CONCEPTUAL MODEL DEVELOPMENT	3	10/01/87	/ /
77421-G	SURFACE WATER SYSTEM & SITE FLOODING STUDIES	3	10/24/87	/ /
77421-I	MAINTAIN DATA BASES 025 AND 035	3	12/01/87	/ /
77421-J	DEVELOP PRE-TEST HYDRAULIC HEAD TRENDS	3	10/31/87	/ /
77421-K*1	TDCS FOR OUTCROP MAPPING	1	11/06/87	/ /
77421-H	PRELIMINARY LHS PRE-TEST ANALYSIS	3	10/31/87	/ /
77422-B*1	MAINTAIN/ENHANCE EXISTING BTDS	1	10/22/87	10/29/87
77423-D*1	GEOCHEMICAL DATA REVIEW AND ANALYSIS	1	10/29/87	11/05/87
77430-A*1	VERIFY AND BENCHMARK DISCRETE ELEMENT CODE	1	10/06/87	10/13/87
77430-B*1	ASSESS HOST ROCK STABILITY	3	09/21/87	/ /
77430-C1*1	OVERCORING AND HYDROFRACTURING TEST	3	08/24/87	/ /
77430-C2	ROCK SUP'T DEFORMATION MONITORING CON TEST DESIGN	3	09/01/87	/ /
77430-C3*1	MECHANICAL PROPERTIES ACTIVITIES	3	09/01/87	/ /
77430-C4*1	IN SITU STRESS ACTIVITIES	3	10/01/87	/ /
77430-C5*1	OPENING PERFORMANCE STUDIES	3	10/01/87	/ /
77430-C6*1	THERMAL/THERMOMECHANICAL STUDIES	3	10/01/87	/ /
77430-C7*1	MECHANICAL PROPERTIES STUDIES	3	10/09/87	/ /

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11/09/87

WORK INITIATION PACKAGE

WIP #	TITLE	Q LEVEL	SCHEDULED DATE TO MI	SCHEDULED DATE TO DOE
77430-D*1	ROCK MECHANICS LAB COORDINATION	3	10/13/87	/ /
77430-E*1	AWARD CONTRACTS, OVERCORING, BOREHOLE LOGGING	3	09/21/87	/ /

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### ENCLOSURE 3

This enclosure provides a summary of actions taken in response to the concerns of the original Stop Work Order (SWO). Responses to other key issues raised by the U. S. Department of Energy-Richland Operations Office (DOE-RL) Basalt Waste Isolation Project (BWIP) General Restart Team are also provided separately here as an aid to evaluating readiness for general lift of the SWO.

#### STOP WORK ORDER BSWO-86-004

The corrective action specified in the SWO requires an assessment that necessary management and technical prerequisites are in place for each work activity affected by the SWO. \*For work started prior to partial lift of the SWO (Ref: Letter, 87-AMC-437, J. H. Anttonen to P. G. Lorenzini, "BWIP Stop Work Order BSWO-86-004," dated June 10, 1987), a project directive for "Expedited Special Cases" was used to describe the necessary technical, management and quality assurance elements required to be in place (Ref: Letter, D. C. Gibbs to BWIP Document Control, "Project Directive 86-004, Project Directive for Expedited Special Cases Restart-Revision 3," dated May 22, 1987.) Since the partial lift of the SWO, a work initiation procedure (Ref: WHC-CM-7-1, Project Management Procedures Manual, (PMPM) Procedure 1-112, Rev. 4, "Work Initiation") is used to describe overall work activities. This procedure is also applied to work exempted from the SWO considered "Transition" (see exceptions section of Letter, R. D. Larson to General Manager, "BWIP Work Evaluation," dated May 1, 1986) and work determined to be QA Level 1 by a Quality Evaluation Board.

The development and documentation of the overall systems required to adequately describe work controls was undertaken during the stop work. This activity is described in detail in the BWIP Restart Readiness Report (Letter, D. C. Gibbs to J. H. Anttonen, "Basalt Waste Isolation Project Work Evaluation," dated January 4, 1987) and subsequent updates. The results of this activity are shown in the documents of the Project Document Hierarchy (Ref: Letter, E. W. Higgins to President, Westinghouse Hanford Company, "Project Plan (PP) and Project Management Plan (PMP) Rev. 01," dated July 27, 1987).

The SWO lists six prerequisites to be considered. The prerequisites, and actions taken to respond to them, are as follows:

1. "Management and technical procedures to control the work."

Satisfaction of this prerequisite is documented by the procedures of WHC-CM-7-1 "BWIP Project Management Procedures Manual," exclusive of the Quality Assurance Administrative Procedures (QAAPs) which implement the criteria of 10CFR50, Appendix B.

\* These prerequisites were also to be applied to packages of work exempted from the SWO.

Prior to initiating work, readiness must be documented according to the requirements of Procedure 1-112, "Work Initiation." This documentation includes ascertaining that the activities of the Work Initiation Package are "...specifically defined, controlled or documented..." (See Figure 1 of 1-112, "BWIP Work Initiation Checklist").

The project has also prepared a Project Requirements Implementation Matrix (PRIM) as an additional check on the adequacy and completeness of procedures. The PRIM was constructed by identifying requirements and tracing them through the project document hierarchy to implementing plans or procedures. The PRIM is a computer data base of these matrix linkages which allows tracing either down (from requirements documents to implementing documents) or up. The PRIM is maintained in a current status. (See Project Directive 87-014, Rev. 1, for responsibilities. The controlling Procedure will be issued 1/28/88).

2. "Quality Assurance programs and procedures to control the work."

Each BWIP contractor and all direct funded contractors have Quality Assurance Manuals which meet the requirements of the Basalt Quality Assurance Requirements Document (BQARD), DOE-RL 86-1, Rev. 2 and also the BWIP Quality Assurance Plan, DOE-RL 86-6, Rev. 2. Each manual has the appropriate DOE-RL or Westinghouse approvals.

For WHC as the Integrating Contractor (IC), the QA program is described in WHC-CM-7-2, "BWIP QA Program Requirements Manual." Requirements are implemented through QAAPs in WHC-CM-7-1. Quality Assurance Administrative Procedures are those procedures which describe the application of the management controls necessary for the implementation and application of the 18 Criteria of 10CFR50, Appendix B and the BQARD.

These requirements were also considered in preparing the PRIM, and traceability from requirements to implementing procedures was verified.

3. "Approved requirements traceable to project needs with appropriate performance allocation."

Requirements for the BWIP are established at the highest level by the Office of Civilian Radioactive Waste Management (OCRWM) Mission Plan (DOE-RW-005, June 1985) as amended (OCRWM Mission Plan Amendment, June 1987).

Requirements flow down from the Mission Plan through the Generic Requirements Document (OGR/B-2, "Generic Requirements for a Mined Geologic Disposal System") and the issues hierarchy (OGR/B-10, "Issues Hierarchy for a Mined Geologic Disposal System").

The Generic Requirements (OGR/B-2), together with the BWIP System Functional Analysis (SD-BWI-CR-023, March 1987) are the basis for the overall repository system requirements ("Basalt Mined Geologic Disposal System [BMGDS] Requirements," SD-BWI-RQD-001). These requirements will in turn be used to provide the design requirements of the three major subsystems; site, waste package and repository.

The requirements of the issues hierarchy are used to define the content of the Project's Study Plans, and subtier documents.

Performance allocation is required by the top level Project documents and accomplished in the BMGDS Requirements Document by allocating the requirements to accomplish the mission to the Physical Subsystems of the BMGDS.

#### 4. "Personnel training and qualification"

A personnel training and qualification plan is in place for the project (SD-BWI-TR-002, "Qualification and Training System Plan"). The plan was reviewed and approved by DOE-RL. The plan establishes responsibilities, requirements and controls for managing the training function and is implemented through the procedures in Section 13 "Training", of WHC-CM-7-1.

The project has also completed many specific training activities as prerequisites to general lift of the SWO, notably:

- 1 - creation of a BWIP dedicated training organization and program,
- 2 - project wide training on quality systems, including quality records and quality concerns,
- 3 - project wide training and testing on management systems,
- 4 - documentation and verification of completion of mandatory reading assignments for all employes (selected procedures and requirements documents), and
- 5 - preparation of auditable required reading records and qualification files for all staff.

The training program has been audited and surveilled by both WHC and the DOE-RL. The DOE-RL General Restart Team completed two reviews of employe training and qualifications. The first review covered position descriptions and personnel qualification documentation. The second review covered the reading records portion of training. There were no findings from either review.

5. "Equipment/facility records, checkout, qualification and certification."

This prerequisite was the result of a number of deficiency reports related to recurring problems with the performance and documentation of equipment calibration. Although the deficiencies were subsequently closed, during a restart-related evaluation of closed deficiency reports (Nonconformance Reports, Corrective Action Reports, Audit Findings) dating back to January 1983, it was decided to reexamine this area (see Section 3.10.3 of the Restart Readiness Report).

The intent of the reexamination was "to ensure that quality problems identified over the past four years were properly resolved and would not pose a potential carryover problem after restart."

On the basis of this reexamination it was decided that "The project equipment calibration system should be assessed prior to restart to ensure past organizational problems are resolved to avoid repeated deficiencies in calibration records." In particular, levels of authority and lines of communication were concerns.

Two actions were taken in response to past concerns. First, a statement of work giving direction and interface requirements for calibration of measuring and test equipment was prepared and issued with QA approval. Second, an audit of all BWIP calibration activities was performed. The audit confirmed past deficiencies in the system were corrected including the concerns stated previously. For work initiated under current Project procedures, Procedure 1-112, "Work Initiation" requires that equipment calibration and the calibration system be assessed with each Work Initiation Package (see Part 3, Work Initiation Checklist).

6. "Assessment of impact of open deficiencies on work and resolution of deficiencies which impact work to be started."

As noted in item 5, the Project has evaluated both open and closed deficiencies. The results of this evaluation are reported in Sections 3.10.2 and 3.10.3 of the RRR and updates. Currently open deficiencies are given in Appendix C of the latest update.

There are five remaining NCRs open. The disposition of these NCRs required the approval of Work Initiation Package 77300-A. Work Initiation Package 77300-A was approved October 14, 1987. Work is in process to close all NCRs.

There are also five CARs still open which have been assessed and determined not to be a constraint to restart. There are still 24 open surveillance reports that have been assessed and determined not to be constraints to restart. There are no open findings from previous audits which are constraints to restart.

In general, no work completed prior to approval of the first QA Level I WIP is pedigreed for "...items/activities important to public safety, waste isolation and activities important to waste placement or retrieval and items/activities designated (as QL-I) by OGR-HQ." (See 2.2.3 of DOE-RL 86-6). Should there be a need to use data collected prior to the "resolution of deficiencies" noted under the SWO, it will be necessary to requalify those data. (See "Qualification of Existing Data," DOE-RL 86-1). The project is preparing a procedure (3-112, "Qualification of Existing Data") covering this concern.

The management system at the Project requires that open deficiencies on work must be resolved before work can be started or - where hold points have been established - before work can proceed past the hold point (see Section 5.3, Procedure 1-112).

### WORK VERIFICATION AND RESULTS

It is necessary that the Project have a methodology for verifying both work initiated under the Work Initiation Process/Expedited Special Cases and work which was not stopped by the SWO. This verification is a major activity of the BWIP Quality Assurance organization. For example, prior to work initiation, Procedure 1-112, "Work Initiation", states: "The Manager BWIP Quality Assurance (QA) is responsible for verification of readiness of the defined scope of work. He/she shall document concurrences on the Signature Page" (of the Work Initiation Package). Additionally, paragraph 6.3 of the same procedure states "The Signature page shows concurrence or approval that an assessment of readiness has been completed and that prerequisites have been met and requirements for performing later work activities are in place or scheduled."

From the date the Stop Work Order was issued to the present, approximately six hundred surveillances of work continuing and exempted from the Stop Work Order were conducted. Attachment 4-1 of this enclosure is included to indicate the type and scope of surveillances conducted prior to issuance of Work Initiation/Transition Packages. Attachment 4-2 of this enclosure specifically address plans to surveil Work Initiation/Transition Packages, as well as plans to surveil participating contractors.

A recent surveillance schedule is presented as Attachment 4-3. Due to the need for surveillance activities to be responsive to schedule changes, changes in manpower availability, and requests to do special investigations, it is not practical to schedule surveillances more than two weeks in advance. Based on these variables, implementation surveillances are being scheduled to address Work Initiation/Transition Packages.

In addition to the Quality Assurance surveillances, the project conducted an evaluation of all work exempted from the Stop Work Order in either Category 1 (long term data gathering), Category 3 (safety and maintenance), or Category 6 (activities essential to the project). Items or activities which were judged to be non-quality affecting were documented in an internal memo with the concurrence of the Quality Assurance Manager.

Items or activities which were judged to be Quality Level 3 were documented in an internal memo to the Manager, Management and Integration with the concurrence of Quality Assurance. Items or activities which were determined to be Quality Level 1 were processed into Work Initiation

Packages to fully document the requirements for performing the work. Since January 1, 1987 ten audits have been conducted, covering BWIP licensing, training, calibration, SCP licensing activity, Quality Assurance, Science and Engineering, the M-K QA Program the KE/PB QA Program, WHC design control of DC 24-25, and procurement activities. Planned audits primarily address newly initiated work. Attachment 4-4 of this enclosure is the latest schedule of audits. Audit scope is defined during the audit planning stage.

The audits and surveillances conducted by WHC have covered the full range of exempted ongoing work under the SWO. As the new work and the transitioned work is started under approved Work Initiation Packages, audit and surveillance programs will verify that this work is meeting acceptable performance levels.

As part of the assessment of Restart Readiness, the Project also conducted an extensive review to determine whether the necessary management, quality assurance, and technical prerequisites were in place. A total of 27 separate appraisals and reappraisals were conducted. These appraisals resulted in the generation of 372 discrepancies. Of the 372 discrepancies, 111 were identified as constraints to partial restart and an additional 15 were identified as constraints to general restart. All constraints to partial restart and to general restart have been closed or satisfactorily resolved. This portion of the restart readiness process is fully described in the Restart Readiness Report (RRR). Appendix K of the RRR contains the status of all discrepancies. Current Discrepancy Status is included as Attachment 4-5.

The Project believes that performance is at a level acceptable for general lift of the Stop Work Order. This conclusion is supported by both the results of the appraisals (and reappraisals) conducted under for Restart Readiness and by the assessment of open and closed deficiencies (see item Number 6 above and the RRR).

#### ASSESSMENT OF IMPACT OF DEFICIENCIES

The procedures which control the conduct of the Project's Quality Assurance Program (See part 4.0 of WHC-CM-7-1) uniformly require that the impact of identified deficiencies be assessed and that corrective action be taken where necessary. The evaluation and documentation of corrective actions "... shall verify that the root cause of each finding has been identified, the corrective action described and the impacts of the findings on completed work has been addressed..." (Procedures 4-101, Part 6.10.1 "Evaluation", Procedure 4-103, Part 6.3 "Surveillance Reporting", and similar sections in other applicable procedures. See especially Figure 7 of 4-104 "Quality Assurance Audits"). In addition, work initiation planning requires that closure or resolution of open deficiencies affecting the task be identified as prerequisites to work start or that justification be stated in defense of their omission (PMPM 1-112).

Deficiencies requiring procedure changes are corrected using the change process of Procedure 1-101, "Preparation and Control of Project Management Procedures."

In those rare instances where it is necessary to modify the Project Description Baseline (DOE/RL 87-03 Part 4.4, "Project Baseline"), changes are controlled through the Project's Configuration Management system by Procedure 5-101, "Change Proposal Processing." The process mandated by this procedure requires "... that a proposed change be identified, documented, reviewed, approved or disapproved, and that implementation of all approved changes provide traceability by change records."

Change control is coordinated through the Change Control Administrator (CCA) within the Configuration Management organization. The CCA gathers impact inputs from the change initiator, the End Function Managers, and other affected organizations. Inputs include cost impacts and supporting data, such as resource-loaded schedules, cost estimates, schedule and milestone impact projections. All data are provided by WBS, organization code, and contractor.

This package of impact data is provided to the Project Change Board (PCB) members. The PCB is responsible for evaluation of the data in view of Project requirements, priorities, resources, schedules and funding. Final disposition and direction is provided by the PCB and documented by the Change Control Coordinator, who also makes necessary input to the Configuration Tracking System.

#### PROJECT DIRECTIVES

Project directives are prepared where it would not be appropriate to issue a procedure because the process described is expected to be applicable for only a limited time. Project directives are controlled by Procedure 1-110. This procedure requires that the directive comply with the QA requirements of WHC-CM-7-2.

The current status of Project Directives still in effect is shown in Attachment 4-6. Of the 10 in use, one (PD 86-011) is beyond the procedurally imposed duration of one year. A new Project Directive has been written to supersede PD 86-011 and to reflect current DOE guidance on the Q-List. The new PD is in final approval. It was necessary to maintain the Q-List Task Force for longer than originally expected because of delays in issuing the Site Characterization Plan.



Rockwell Hanford Operations  
 P.O. Box 800  
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Rockwell  
 International

OUTGOING LTR. NO. R87-1410			
INCOMING LTR. NO.			
ACTION			
REPLY DUE			
DISTR:		LTR.	ENCL.
		APPL.	
Albough, J.F.			
Bellafante, M.			
Cawy, J.M.			
Crowford, A.C.	X		
Davis, M.R.			
Deichman, J.L.			
Dipol, C.V.			
Fitch, L.R.			
Gibbs B.C.			
Gilland, J.C.			
Gruke, R.S.			
Heineman, R.E.			
Lancaster, J.L.			
Leranzini, P.E.	X		
McCourt P.E.			
McDermott, R.J.			
Perkins, J.D.			
Prater, R.D.			
Roberts, W.J.			
Rocher, J.H.			
Walt, V.R.			
Wedrich, B.D.			
Contract Administrator			
Central Files			
DE Noland			
CD Taylor			
TW Noland			
Kim Tamina			
RJ Johnson			
AR Hawkins			
C. Walker			
RJ Henry			
WD Blair			
RT Hill			
RV Vins			
OT Mubayi			
PH Schaefer			
MA Quinn			
L Jensen			
LS File			
DMC on [unclear]			
DATE			

April 1, 1987

In reply, refer to R87-1410

Mr. J. H. Anttonen, Assistant Manager  
 Commercial Nuclear Waste  
 Department of Energy  
 Richland Operations Office  
 Richland, Washington 99352

Dear Mr. Anttonen:

**BASALT WASTE ISOLATION PROJECT QUALITY ASSURANCE SURVEILLANCE PROGRAM ACTIVITIES**  
 (Contract DE-AC06-77RL01030)

Enclosed is a report of the Basalt Waste Isolation Project (BWIP) Quality Assurance Surveillance Program Activities. This report includes a summary of the surveillances performed during the second quarter of fiscal year (FY) 1987 (Section I).

The "second quarter" of this report covers the period January 1 through March 15, 1987. The early cut-off date is used to ensure distribution of the report to Department of Energy-Richland Operations Office (DOE-RL) prior to the due date of April 1, 1987. To avoid the problem of partial quarter reporting, we are proposing that future reports cover the entire quarter, and be prepared and distributed to DOE-RL prior to the 15th of the following month. The surveillances performed during March 16-31 will be included in the third quarter FY 1987 Surveillance Program Activities report.

Discussion of Follow-on Deficiency Documents generated as a result of surveillance activities has been added as a new portion of Section I. Section II describes the projected surveillance activities for the third quarter FY 1987 for Rockwell Hanford Operations, and Section III describes the projections for the project participating contractors. Program Enhancement Activities, Section IV, is a new addition to the report.

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J. H. Anttonen  
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April 1, 1987

You and your staff are welcome to observe or participate in surveillances. If you wish to observe or participate, please contact Ms. K. M. Tominey, Manager of BWIP Quality Assurance Surveillance Group, to confirm the dates, times, and locations. Ms. Tominey can be reached on 376-4816. If further questions should arise, contact Mr. A. R. Hawkins on 376-8386.

Very truly yours,

D. C. Gibbs, Director  
Basalt Waste Isolation Project

DCG/CDT/ctk

Enc.

cc: J. J. Keating - DOE-RL  
A. W. Kellogg - DOE-RL  
R. J. Light - DOE-RL

Basalt Waste Isolation Project  
Surveillance Program Activities

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I.

**Basalt Waste Isolation Project Integrating Contractor**

**Surveillance Program Performance**

**Second Quarter FY 1987**

A. Summary

During this period, 79 surveillances were performed by the Basalt Waste Isolation Project (BWIP) Integrating Contractor Quality Assurance Surveillance Group (QASG).

Figure 1 and 2 show the rate of bi-weekly surveillance performance contrasted with the projected surveillance performance throughout the quarter. The 79 surveillances actually performed is double the number originally projected in the Surveillance Program Activities Report dated January 8, 1987. The increased surveillance effort was necessary to meet the needs of the project in preparation to restart.

Table 1 is a compilation of surveillances performed during FY 1987 to date and the rate of unsatisfactory reports written. The high rate of unsatisfactory surveillances in the multiple end function category is due to requests for project-wide surveillances received from various individuals including the BWIP Director's Office. Eleven requests have been received since January 1, 1987, resulting in 17 reports being written, 65% of which were unsatisfactory.

The responsibilities of groups within the Project Administration organization included many of the areas of focus emphasized during this period. Thus, almost a third of the surveillances were performed on that organization. The Project Administration organization performs work primarily for the L1 end function, which also has a high rate of unsatisfactory surveillances. This indicates a project wide acceptance and usage of surveillances to identify and allow corrections of suspected problem areas thus becoming a preventative vehicle.

A corrective action report BCAR 87-001 was issued to the BWIP Director regarding records. This high level issuance of BCAR 87-001 was to allow corrective action across the organizational structure. A positive response has been received from the director and is being evaluated.

Five surveillances were performed on organizations which provide safety and computer system support to BWIP. All of these surveillances were unsatisfactory. This high unsatisfactory rate may be indicative of a lack of management controls on organizations matrixed to BWIP. This area will be addressed further in future surveillances.

B. Restart Readiness Areas of Focus

Surveillances performed on the restart readiness activities emphasized five areas of focus during this period. These areas of focus included training, organization, interface control, procedures/instructions/drawings, and document control. The following reflects the statistics on each of the areas of focus:

<u>Area of Focus</u>	<u>Number of Surveillances Performed</u>
Training	24
Organization	9
Interface Control	7
Procedures/Instructions/ Drawings	18
Document Control	13

Since multiple areas of focus may have been included in each surveillance report, the total of this list represents selected surveillance and does not equal the total number of surveillance reports written during this period. Each of the areas of focus are described in detail in the following pages.

A matrix was developed based on the organizations surveilled and the areas of focus. The matrix developed for Program Administration is shown in Table 2. The matrix shows at a glance the requirements and performance. The information displayed may also serve as a pathway to other data. Similar matrices have been prepared for each organization. These will be used for planning in the future.

#### 1. Training

Twenty-four (24) surveillances were performed in the area of training with fifteen of them unsatisfactory. Almost half of these surveillances were related to training records. Forty-six percent of the surveillances were performed on the Project Administration organization, Project Qualification and Training Department specifically their control of training records. All BWIP organizations, including Quality Assurance, BWIP support services, and one participating contractor, PNL, were also surveilled in this area.

Examples of other deficiencies in the area of training include:

1. required reading lists appeared to be inadequate and incorrectly approved by management;
2. no administrative controls were in place to ensure new revisions of procedures on the reading lists are distributed for reading;
3. no documented evidence that the training coordinator for a particular group had read the applicable training procedures;
4. job positions within the department do not appear to be broken down into sufficient detail to facilitate effective training;
5. job/task analysis had not been performed and there was no plan to perform it in the future;

6. no documented evidence that informal training sessions had been performed (i.e., no attendance sheets prepared); and
7. discrepancies in the overall training matrix for one group surveilled, including incorrect signatures.

Deficiencies in training records appear to be spread throughout the organization, thus the area of training will be emphasized again during bi-weekly surveillance period April 13-26, 1987.

## 2. Organization

Nine (9) surveillances included the area of organization with three of them unsatisfactory. All BWIP organizations, and one participating contractor, KE/PB, were surveilled. The three unsatisfactory reports were written against Construction, Operations and Test, and Science and Engineering organizations.

The deficiency identified within the BWIP Construction organization was related to lack of evidence of a designation for a functional membership on the Procedure Review Committee. The unsatisfactory surveillance performed on the Operations and Test organization concerned failure to appoint the BWIP Integrating Contractor Calibration Coordinator nor the BWIP Calibration Coordinator. The deficiency within the Science and Engineering organization concerned work activities continuing which are included in the general stop work order, BSWO-86-004. This work is enhancements and maintenance of the Hydrochemistry database.

This area of focus will be emphasized again during bi-weekly surveillance period April 27-May 10, 1987.

## 3. Interface Control

Seven (7) surveillances were related to the area of interface control, with five of them unsatisfactory. Only three of the BWIP organizations, Project Administration, Operations and Test, and Science and Engineering, were surveilled in this area, and three unsatisfactory reports were written to the Project Administration organization. An external BWIP support organization was surveilled as was KE/PB. Both of these surveillances were unsatisfactory.

The surveillance of KE/PB was determined to be unsatisfactory because, although the Quality Assurance plan and implementing procedures had been reviewed and approved by the appropriate individuals, revisions to these documents had not been reviewed or approved.

The remaining unsatisfactory surveillances were written to the Records Management Unit for not filing the complete transmittal from KE/PB and for missing KE/PB transmittals; to Information Process Management for using a desk instruction which delineated responsibilities to persons external to the organization; and to Project Assurance and Training for using an unapproved form for documents being passed between the Document Control Unit and the Procedure Review Committee.

Due to the high unsatisfactory rate of this area of focus, additional emphasis on interface controls will continue to be incorporated into surveillance activities during the balance of the fiscal year. In addition, interface control will be an area of focus again during the bi-weekly surveillance period May 11-24, 1987.

4. Procedures/Instructions/Drawings

Eighteen (18) surveillances were performed on the area of procedures/instructions/drawings, with seven of them unsatisfactory. All BWIP organizations except Construction and Management and Integration, including one participating contractor, PNL, and one Rockwell BWIP support organization were surveilled.

Examples of the types of deficiencies found are:

1. desk instructions contain responsibilities and actions for others outside of the particular department;
2. missing or incomplete sections within PMPMs;
3. desk instructions not being followed;
4. time periods were discovered for which no controlling procedures were in effect; and
5. use of draft procedures.

This area of focus will be emphasized again during the bi-weekly surveillance period May 25-June 6, 1987.

5. Document Control

Thirteen (13) surveillances included the area of Document Control with seven of them unsatisfactory. All BWIP organizations except Construction, including one participating contractor, PNL, were surveilled. Again, a relatively large portion, 38.5%, of the surveillances were performed on the Project Administration organization, all of which were unsatisfactory.

Examples of some of the deficiencies found are:

1. missing information on log sheets and checklists;
2. lack of log for control of BWIP forms;
3. use of incorrect form for tracking receipt acknowledgements; and
4. project-wide problem in manual maintenance.

This area of focus will be emphasized again during the bi-weekly surveillance period June 6-21, 1987.

C. Follow-on Deficiency Documents

A BWIP Corrective Action Report BCAR 87-001 was issued on January 29, 1987 regarding quality assurance records. The corrective action report was issued to the BWIP Director as corrective action was needed across the organizational structure. Issuance of BCAR 87-001 was predicated upon results of analysis performed on seven previous surveillances reports on quality assurance records. A positive response has been received and is presently being evaluated.

Immediately upon receiving BCAR 87-001 corrective actions across the organizational structure were initiated by the Director. This front end identification of a quality problem, with positive corrective actions across the organizational structure, will provide the desired results.

II

**Basalt Waste Isolation Project Integrating Contractor**

**Surveillance Program Projections**

**Third Quarter FY 1987**

A. Summary

Sixty surveillances are being projected to be performed by Basalt Waste Isolation Project (BWIP) Integrating Contractor Quality Assurance during the third quarter FY 1987. "Third quarter," for purposes of this report, refers to the period March 16 through June 7, 1987.

This period encompasses six bi-weekly surveillance periods, and ten surveillances are projected for each bi-weekly period. The area of focus or emphasis for each bi-weekly period is listed below:

<u>Bi-weekly Period Beginning</u>	<u>Area of Focus</u>
03/16/87	Records Control
03/30/87	Deficiency Control
04/13/87	Training
04/27/87	Organization
05/11/87	Interface Control
05/25/87	Procedures/Instructions/Drawings

Weak areas identified by the Restart Readiness Report Management Control System Discrepancy Reports will receive greater attention during the third quarter. The database and analysis process described in Part IV, Program Enhancement Activities, of this report will facilitate inclusion of these weak areas into surveillance planning.

Results of previous surveillances are currently being provided to other BWIP QA verification groups as requested. This exchange of information has proved to be helpful, and will continue.

The internal surveillance program will continue to emphasize overview of the management controls that are critical to readiness for restart of stopped work, start of new work, and transition of exempted work. These critical management controls include organization; interface control; instructions, procedures and drawings; training and qualification; and document and records control. In addition, the internal surveillance program will actively cover expedited special case work activities.

Surveillances of participants are structured to: (1) ensure that each participant audit and surveillance program is providing adequate coverage of participant management control systems; and (2) review a sample of actual work performed to verify compliance with established requirements.

Actions are being conducted by the Surveillance Group to verify compliance in the areas which have been identified as potential candidates for NRC mini-audits. The following list describes those actions planned by the Surveillance Group to identify deficiencies and allow correction prior to the NRC mini-audit:

<u>Potential NRC Audit Area</u>	<u>Actions Taken/Planned</u>
1. Core Handling and Storage	Conduct core handling and storage surveillance during the Records Control area of emphasis scheduled for the bi-weekly period from 03/16/87 to 03/29/87.
2. Basalt Records Management Center	Conduct Basalt Records Management Center surveillances during the Records Control area of emphasis scheduled for the bi-weekly period from 03/16/87 to 03/29/87.
3. Rockwell Appraisal Process	Conduct surveillance on appraisal process, including transmittal of final records to BRMC, during the bi-weekly period from 04/13/87 to 04/26/87.
4. Rockwell Audit and Surveillance Program	Conduct audit program surveillances during the Deficiency Control area of emphasis scheduled for the bi-weekly period from 3/30/87 to 4/12/87.
5. Training Program	Continue to plan surveillances in the area of training, specifically during the bi-weekly period 04/13/87 to 04/26/87.
6. Design Control at KE/PB and Rockwell, including Interface Controls	Conduct surveillances on design control including interfaces during the Interface Control area of emphasis scheduled for the bi-weekly period from 05/11/87 to 05/24/87.
7. BWIP Laboratories (2101M)	Continue to plan surveillances of Laboratory operations, specifically during May.
8. Hydrologic Baseline Monitoring	Focus surveillance coverage on this area in July 1987.
9. SCP Production Control	Continue to plan to surveill each of the SCP procedures and all groups providing input to the SCP for training to the SCP procedures by July.

10. Systems Engineering Process

Continue to plan to include the Systems Engineering Group in each of the areas of focus prior to July 1987.

B. Reporting

Bi-weekly surveillance performance will continue to be reported, and another Interim Status Report will be written midway through the third quarter. The Interim Status Report will include the first three areas of focus.

III

BASALT WASTE ISOLATION PROJECT

PARTICIPATING CONTRACTORS'

SURVEILLANCE PROGRAM PROJECTIONS

THIRD QUARTER FY 1987

The following surveillance plans have been provided by the participating contractors.

A. BCS RICHLAND, INC. (BCSR)

BCSR does not anticipate surveillance activity during the third quarter of fiscal year (FY) 1987.

B. KAISER ENGINEERS/PARSONS BRINKERHOFF (KE/PB)

Work Activity Planned: Initiate a thorough surveillance review of all procedures in the BWIP procedures manual to assure detailed compliance. This will require the preparation of new checklists and modification of existing checklists as may be appropriate.

Surveillance Planned: This activity will be conducted on a priority basis, the most used/important procedures will be surveilled first.

Quality Level Assessed: None at this time.

Work Activity Planned: Review KE/PB BWIP Procedures Manual as required to comply with Revision No. 2 to BQARD and the DOE QA Plan Revision.

Surveillance Planned: One or two surveillances, as applicable.

Quality Level Assessed: None at this time.

Work Activity Planned:

- o Retrievability Study
- o Geotechnical Modeling Study
- o Rod Consolidation
- o Design Methodology document

Surveillance Planned: These activities will be surveilled to assure project procedure compliance.

Quality Level Assessed: None at this time.

C. MORRISON-KNUDSEN COMPANY, INC. (M-K)

M-K does not anticipate surveillance activity during the third quarter of FY 1987.

D. PACIFIC NORTHWEST LABORATORIES (PNL)

Cost Account/Scope: L2D4P

Work Activity Planned: Hydrothermal Materials Testing

Surveillance Planned: CT-62; Technical Report - Title unknown due to unconfirmed FY '87 SOW and milestones.

CT-62; Observation of sampling method to revised procedure CT-62-1.

Quality Level Assessed: None at this time.

Cost Account/Scope: L3E2C

Work Activity Planned: Uranium/Thorium Disequilibrium

Surveillance Planned: CT-86; Disequilibrium Study of Natural Radionuclides of Hanford Groundwater.

PAP-801 Sample Identification and Control (follow-up to DR-87-017)

Quality Level Assessed: None at this time.

Cost Account/Scope: Undefined

Work Activity Planned: PNL-MA-60 (BWIP, SRPO, etc.)

Surveillance Planned: QAP-1001 Compliance of QEs to Surveillance procedure verified by participation on one of their surveillances.

PAP-601 Procedure compliance by Document Control personnel.

Quality Level Assessed: None at this time.

Cost Account/Scope: Undefined

Work Activity Planned: BWIP

Surveillance Planned: PAP-601 Document Control Technical Procedures (QAP ENV-21)

PAP-602 Document Change Control of TPs and TIs (QAP ENV-21)

PAP-801 Sample Identification and Control  
(OAP ENV-21)

PAP-1701 Monthly Transfer of Records (OAP  
ENV-21)

PAP-70-1701 Verify accuracy of Project File  
Index and monitor transfer of  
completed project records to  
the PNC Records Center and  
client (QA Plans ED-46 & ED-74)

Quality Level Assessed: None at this time.

E. WESTINGHOUSE HANFORD COMPANY (WHC)

Task Authorization No: WANE

Work Activity Planned: Statements of work are currently being  
negotiated.

Surveillance Planned: Calibration status of instrumentation/displays  
Completion of prerequisites  
Legibility, accuracy, identification and  
timeliness of logs and records  
Adherence to approved sequence of operations  
Correction of deficiencies  
System restoration  
Completion of retests  
Data, sample traceability

Quality Level Assessed: None at this time.



**Basalt Waste Isolation Project  
Surveillance Program Activities**

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I.

**Basalt Waste Isolation Project Integrating Contractor**

**Surveillance Program Performance**

**Third Quarter FY 1987**

## A. SUMMARY

During this period, 119 surveillances were performed by the Basalt Waste Isolation Project (BWIP) Integrating Contractor Quality Assurance Surveillance Group (QASG). As reported in the Interim Status Report, dated May 28, 1987, this is over 50% more than initially projected for the third quarter FY 1987.

Twenty-five, or 21%, of the surveillances performed identified unsatisfactory conditions. This unsatisfactory ratio is lower than the 30% rate reported in the Interim Status Report for the first half of the quarter, and almost 30% lower than the unsatisfactory rate for the second quarter. The focus of surveillance performance is system-oriented rather than product-oriented, thus the decreasing unsatisfactory rate depicts a maturing system. In general, procedures have been written and are being implemented. Training has been accomplished, and the infrastructure is becoming more solid. Finally, since surveillance emphasis was placed on restart activities, this decrease is indicative of a general readiness on the project for restart.

Table 1 shows a breakdown of surveillances performed by QASG on internal BWIP functional organizations including the participating contractors. Totals for the quarter and FY '87 to date are given along with the numbers of unsatisfactory surveillance reports for each period.

A graph showing the rate of surveillance performance as compared with the projected numbers is included as Figure 1. Figure 2 shows this same information for the entire fiscal year.

## B. RESTART READINESS AREAS OF FOCUS

This quarter completes the "area of focus" method for surveillance emphasis, which was begun in early January. Using this method, the QASG emphasized one of the seven quality assurance infrastructure management control systems during each bi-weekly surveillance planning period. During this six-month period (second and third quarters FY 1987), each of the seven management control systems was emphasized twice.

The area of focus method of surveillance planning proved to be effective. Six of the seven areas showed decreases in the unsatisfactory rates from the second quarter, and one decrease was as high as 71.4%. This was in the area of interface control. The areas of training, organization, and procedures/instructions/drawings improved by approximately 30%. As stated above, the production of BWIP procedures, desk instructions, and other requirements documents is in full swing. Many have been written and are being implemented. Training is being performed. Improvements in document and records control are being noted, but on a much smaller scale. Decreases in the unsatisfactory rates were under 8% for these areas. The only increase in unsatisfactory rate was in the area of deficiency control. The increase was only 6.6% and can be attributed to twice as many surveillances performed in the area. Table 2 is a breakdown of numbers performed in each area of focus and the percentage of decrease or increase in unsatisfactory rate.

Figure 2 shows the total number of surveillances performed on each area of focus for third quarter FY 1987 and cumulative totals. Figures 4 and 5 show the ratio of satisfactory to unsatisfactory surveillances within each area of focus for the quarter and the fiscal year respectively.

The following is a brief description of the surveillances performed on each area during the third quarter.

#### 1. Records Control

During the third quarter FY 1987, six surveillances were performed emphasizing the area of Records Control. Of these surveillances, one, or 16.6% were unsatisfactory. This unsatisfactory surveillance was performed to verify the completeness and legibility of the Appraisal Discrepancy Report records prior to their transmittal to BRMC. The condition of these records was found to be in violation of RHO-BW-17, PMPM 8-103, "BWIP Records Management System", and PMPM 8-105, "Recording Data and Corrections for Quality Records". The poor condition of the records (i.e., white outs, erasures, writing over and typeovers, scribbling, use of pencil and colored ink, etc.) makes them unacceptable for storage in BRMC. A satisfactory report was written addressing the content of the appraisal interim reports.

A satisfactory surveillance was performed to verify control of geotechnical samples, security, receipt of samples from the Geotechnical Sample Library, and storage of sample chips.

A surveillance to verify documentation of qualification records for Issue Resolution Strategy authors was found to be satisfactory. This surveillance verified corrective action of a previous audit finding.

PNL storage and management of completed research records was surveilled and found to be satisfactory.

#### 2. Deficiency Control

During the third quarter FY 1987, fifteen surveillances were performed emphasizing the area of Deficiency Control. Of these surveillances, four, or 26.6%, were unsatisfactory.

Two of the unsatisfactory reports were written to the BWIP QA Department. The BWIP QA Procurement Quality Unit was found to be lacking a tracking system for the performance of audits, and for not including the root cause in the corrective action of surveillance reports.

The Interim Problem Report (IPR) system was surveilled and found to be satisfactory, however, an observation was noted that the IPR procedure failed to provide a method for entering IPRs into the project Action Tracking System.

Westinghouse Hanford Company was surveilled to verify compliance to requirements regarding audit transmittal letters. This surveillance was performed to verify implementation of corrective action for an appraisal discrepancy report. The surveillance was determined to be satisfactory.

A surveillance was performed to verify completeness of corrective action on ECAR-84-002. It was found to be satisfactory. Ongoing surveillances on a monthly basis will be performed in the future.

Also, the Action Tracking System (ATS) was surveilled to ensure that a random sample of seven ATS forms had been inputted into the system. This surveillance was determined to be satisfactory.

### 3. Training

During the third quarter FY 1987, thirty surveillances were performed emphasizing the area of Training. Of these surveillances, nine, or 30%, were unsatisfactory.

In addition to those unsatisfactory surveillance reports described in the Interim Status Report, two new unsatisfactory reports were written to Science & Engineering function. The most serious of the two was written after no documented qualification records could be found for the Quality Evaluation Board members. The procedure governing this activity, RHO-BW-MA-17, PMPM 4-121, Graded Quality Assurance, was found to be deficient. A concern in the unsatisfactory report suggests that to have no documented evidence of board qualifications could leave the quality of the board's action indeterminate.

The other unsatisfactory report was written on incomplete training records.

A Work Initiation Package (WIP) surveillance was performed to determine if the authors of the Deep Borehole Position Paper have fulfilled the minimum training requirements specified within the WIP. This surveillance was found to be satisfactory.

The qualification records of Westinghouse Hanford Company personnel performing the 90% completion design review outlined in the Statement of Work for Boreholes DC-23GR, DC-24CX, DC-25CX, DC-32CX, and DC-33CX were surveilled and found to be satisfactory.

### 4. Organization

During the third quarter FY 1987, six surveillances were performed emphasizing the area of Organization. All six of these surveillances were satisfactory.

Two of these surveillances were performed on BCSR to verify the organizational structure and responsibilities delineated in their procedures are being followed, specifically for the Quality Assurance Liaison. These reports were to verify implementation resulting from corrective action taken during the appraisal process.

Another surveillance was performed to verify performance of responsibilities by the Information Management Librarian. It was found to be satisfactory.

Also, the BWIP Systems Engineering Management Plan was surveilled as it applies to the decision support process involved with making technical decisions. It was also found to be satisfactory.

#### 5. Interface Control

During the third quarter FY 1987, seven surveillances were performed emphasizing the area of Interface Control, all of which were satisfactory.

Two of the surveillances were performed on PNL; one to verify Rockwell contractual requirements for control of software discrepancies while verifying and benchmarking BWIP Performance Assessment computer codes, and the other to verify training assignment forms and briefing documentation (Appraisal Discrepancy Report DR-0076).

A surveillance was performed on Westinghouse Hanford Company to verify implementation of Appraisal Discrepancy Report No. DR-0017. The subject of this satisfactory surveillance was the issuance of meeting minutes.

BWIP Operations and Test organization was surveilled to ensure the preparation of a Statement of Work for the general corrosion studies and to ensure compliance to Letter of Instruction No. R87-2023 to the Westinghouse Hanford Company Standards Laboratory.

Another surveillance was performed to verify the control of interfaces between KE/PB and M-K for procedures, instructions, and drawings. The interface definition between outside agencies (specifically DOE/RL) and BWIP with respect to deficiency documents was observed. Both of these surveillances were found to be satisfactory.

#### 6. Procedures/Instructions/Drawings

During the third quarter FY 1987, thirty-three surveillances were performed emphasizing the area of Procedures/Instructions/Drawings. Of these surveillances, four, or 12%, were found to be unsatisfactory.

The unsatisfactory conditions identified included the following:

1. A noncompliance to QA Department Desk Instruction DI-QA-03-01 as it pertains to technical document reviews;
2. A discrepancy involving the procedure establishing how vendor shop drawings and data submittals are controlled and reviewed by the Architect-Engineer;
3. RHO-BW-MA-17, PMPM 2-102 was not used for conducting a Conceptual Technical Review of software and documentation; and
- 4.. Inadequate definitions of verification and validation in the Project Glossary and inconsistencies between those definitions and the RHO-BW-MA-17, 14 series procedures and industry standards.

Twenty surveillances were performed on various functional areas to verify the use of checklists for technical document reviews. Half of those were related to Boreholes DC-23GR, DC-24CX, DC-25CX, DC-32CX, and DC-33CX, and all were satisfactory.

Four surveillances were performed on a random sample of supporting documents and design review packages to assure compliance with regard to dispositioning of Review Comment Record (RCR) forms. These surveillances were requested by Surveillance Request No. 87-012, and were found to be satisfactory.

A satisfactory surveillance was performed on WHC to verify compliance to the requirements for distribution of WHC Testing Procedures.

#### 7. Document Control

During the third quarter FY 1987, eleven surveillances were performed emphasizing the area of Document Control. Six of those surveillances, or 46.2%, were unsatisfactory.

Half of the unsatisfactory surveillances were performed to verify compliance with regard to receiving, processing, and transmitting external work orders to BRMC.

Two surveillances performed on BWIP functional organizations identified an inadequate procedure relative to M-K transmittal of data. The procedure currently does not stipulate a requirement for a reference to ensure traceability. This condition was determined to be unsatisfactory.

A surveillance was performed to confirm that no project directive had been in existence for longer than one year. PD86-002 was found to be in noncompliance and was cancelled immediately.

Satisfactory surveillances were performed on the following subjects:

1. effectivity dates for issued procedures;
2. formal transmittal of approved procedures to DOE/RL;
3. control of documented training records; and
4. control of processing, issuing, and distributing revisions to approved requirements documents.

#### C. BOREHOLE ACTIVITIES DC-24CX/DC-25CX

Sixteen surveillances were performed on activities associated with Boreholes DC-23GR, DC-24CX, DC-25CX, DC-32CX, and DC-33CX. Ten of these surveillances focused on the area of Procedures/Instructions/Drawings; specifically verification of the use of checklists during technical document reviews. All of these surveillances were found to be satisfactory.

The remaining six surveillances of borehole activities focused on the area of training. Three of these surveillances were unsatisfactory when it was found that training matrices for the DC-24CX and DC-25CX Test Data Collection Specification and Drafting Document authors were incorrectly completed. Two of the three satisfactory reports were written to Westinghouse Hanford Company after verifying evidence of documented training, indoctrination and qualification records for personnel performing design reviews on boreholes DC-23GR, DC-24CX, DC-25CX, DC-32CX, and DC-33CX.

#### D. APPRAISAL DISCREPANCY REPORTS

Emphasis has been placed on performing follow-up surveillances to verify implementation of the corrective action committed to in closing the Appraisal Discrepancy Reports.

Of the 333 initial discrepancy reports written during the appraisal process, 55 were non-quality assurance management control systems and not applicable to be surveilled. Of the remaining 278 discrepancy reports, 21 are still open and cannot be surveilled for implementation until closed. Of the closed discrepancy reports, 37 have been surveilled and 23 surveillance reports have been written. Only one has been unsatisfactory, indicating a pattern of implementation of the corrective action committed to in the closed discrepancy reports. This pattern provides enough assurance that implementation is occurring so that emphasis on surveillances of discrepancy reports will be relaxed during the fourth quarter.

#### E. ORGANIZATIONAL COVERAGE

Surveillance coverage of the BWIP functional organizations and BWIP support service organizations has broadened with the use of the Surveillance Coverage Matrix. An update of this matrix is included as Table 3 in Action IV of this report.

The matrix has made it easy to see at a glance which organizations have been surveilled, in which area of focus, and the outcome or results of the surveillance. The requirements documents used during the surveillance have been included for information, however, a new matrix of all requirements documents and the surveillance coverage of each is currently under development.

This broadened coverage can also be seen in Table 1 as evidenced by more even coverage of the BWIP functional organizations.

F. SURVEILLANCE CLOSURES

Twenty-eight follow-up surveillances were performed to close out unsatisfactory surveillances during the third quarter FY 1987. An average of 9.5 days was used between the time the corrective action was completed and the follow-up surveillance performed, which is an increase from the 3.2 days averaged during the second quarter. This is still within the 30-day goal set in the self-evaluation earlier this year. The increase is largely attributable to the emphasis by the QASG to performing new surveillances. Personnel resources have also been assigned to prepare verification plans and perform work initiation/transition plan reviews in large numbers throughout the quarter.

II.

**Basalt Waste Isolation Project Integrating Contractor**

**Surveillance Program Performance**

**Fourth Quarter FY 1987**

A. SUMMARY

Sixty surveillances are being projected to be performed by BWIP QASG during the fourth quarter FY 1987. As was mentioned earlier in this report, surveillance planning will not focus on only one area each bi-weekly period, but have four main areas each period. The following is a schedule of areas to be emphasized each period:

<u>Bi-Weekly Period</u>	<u>Emphasis Areas</u>
7/6-7/19/87	Training/Qualification Design Control DC-24/DC-25 Work Initiation/Transition
7/20-8/2/87	Interface Control Procurement Suppliers DC-24/DC-25 Work Initiation/Transition
8/3-8/16/87	Document Control Deficiency Control DC-24/DC-25 Work Initiation/Transition
8/17-8/30/87	Organization Test Control DC-24/DC-25 Work Initiation/Transition
8/31-9/13/87	Records Control Verification Control DC-24/DC-25 Work Initiation/Transition
9/14-9/27/87	Procedures/Instructions/Drawings Training/Qualification DC-24/DC-25 Work Initiation/Transition

Ten surveillances are planned each bi-weekly period. Input is received from the BWIP QA Audit Group and the Program Administration and Development Group on areas they have identified as potential problems. This input is received during the Bi-weekly Surveillance Planning meetings, which are held the Friday before the new bi-weekly period begins. Also during this meeting, information is exchanged regarding the results found during the surveillances performed.

## B. WORK INITIATION/TRANSITION PACKAGES

The Quality Assurance Surveillance Group (QASG) has had the responsibility for the review and concurrence in the Work Initiation and Transition of Exempted Work process since March 1987. The development of these representative work packages is governed by a Project Management Procedure and a Project Directive, respectively. The purpose, of these packages, is to either initiate work that has been stopped under the general "Stop Work Order" or transition the "exempted" (on-going) work so that it meets the current and applicable Quality Assurance requirements.

The Quality Assurance Department's review and concurrence, for each package, is accomplished in two steps. First, the Department reviews each of the submitted packages to ensure that required prerequisites have been identified. Secondly, the Department establishes the needed level of verification of those items and activities identified by the package, which is required before the work can begin. The verification may take the form of a "surveillance", or "hold" or "witness" points. The QA department works with the "initiating organization" in establishing the required level of verification.

The review process, itself, is governed by a Quality Assurance Department "Desk Instruction," this desk instruction provides the necessary guidance to the reviewer, so that a thorough and consistent review of each package takes place. The heart of the desk instructions is a comprehensive checklist.

The development of the review process has required the cooperation of the initiating organization, of the Quality Assurance Department, of Management and Integration representatives, and of reviewers for the Department of Energy. The process is iterative and continually strives to meet the needs of all of those directly involved in the development and verification processes.

To date, a total of 21 Work Initiation Packages and 12 Transition of Exempted Work Packages have been submitted to the Quality Assurance Department for its review and concurrence. Of those submitted, 12 of the Work Initiation Packages and four Transition of Exempted Work Packages have received QA concurrence. The balance of the submitted packages are currently undergoing a comment resolution process.

It is expected that over 100 Work Initiation Packages and over 40 Exempted Work Transition Packages will be submitted to the QA Department for its review and concurrence. This submittal process will extend into the beginning of calendar year 1988.

**III.**

**Basalt Waste Isolation Project Participating Contractor**

**Surveillance Program Planning**

**Fourth Quarter FY 1987**

A. CHANGES TO THE METHOD OF PLANNING

During the third quarter FY 1987, a new method for reporting surveillance plans and results for the participating contractors was developed by BWIP QASG. The new method follows closely the method used by BWIP QASG for planning surveillances on a bi-weekly basis, which has been successful for almost a year.

The method was developed by devising a form that could be used for both planning on a quarterly basis for the purposes of this report, and reporting surveillance results on a monthly basis for other reporting cycles. Meetings were held with each of the participating contractors to gain their input to the form. Agreement was reached in time to implement the planning portion (i.e., the left-hand side) of the form beginning this quarter. At the end of each month during the fourth quarter, the form will be used to report the surveillance report number and surveillance results, comments, or status. These results will then be integrated into the quarterly integrated surveillance plan for the fourth quarter.

B. SPECIFIC PLANS

The following are the surveillance plans submitted by the participating contractors for inclusion into this quarterly report.

**Basalt Waste Isolation Project  
Integrated Surveillance Plan/Status**

Contractor: Rockwell/KE/PEM-KPNL/WHC  
(Circle Reporting Contractor)

Quarter: 1 2 (3) 4  
(Circle Applicable Quarter)

Month: May Year: 1988  
Fiscal Year/Calendar Year

Approved by: RKD RKD  
(Print Name/Signature/Title) KRAM



Quarterly Surveillance Planning		Surv/ Report No.	Surveillance Results
Activity	Surveillance Activity Projected		Comments/Status/Results
Generic Surveillance of select KE/PE procedures to verify compliance	Procedure Numbers 2.3, 6.3, 6.7, 6.8 and 6.13 are scheduled for surveillance in accordance with an applicable checklist for each procedure	/	
Task 877 Corestorage building	Surveillance to procedure 2.1		
Task 694 Procedure Preparation	Surveillance to procedure 2.3		

14

6

06/12/1987

15:14

KAISER ENGINEERS, INC.

415 288 5355 P.02

**Basalt Waste Isolation Project  
Integrated Surveillance Plan/Status**

Contractor: <span style="border: 1px solid black; padding: 2px;">Rockwell/KE/PB/①-OPNL/WHC</span> <small>(Circle Reporting Contractor)</small>	Quarter: <span style="border: 1px solid black; padding: 2px;">1 2 ③ 4</span> <small>(Circle Applicable Quarter)</small>	Month: <u>May</u> Year: <u>1987</u> <small>Fiscal Year/Calendar Year</small>
Prepared by: <u>N/A</u> <small>(Print Name/Signature/Title)</small>	Approved by: <u>N/A</u> <small>(Print Name/Signature/Title)</small>	

Surveillance Planning		Surv/ Report No.	Surveillance Results
Activity	Surveillance Activity Projected		Comments/Status/Results
—	—	—	Surveillances to be planned/scheduled upon RHO/DOE review and approval of QAP 18.2 "Site Surveillances"

15

The deficiencies identified in the Restart Readiness Report have been analyzed to assist in surveillance focus and planning. The following is a description of the process used to perform this analysis.

#### A. Development Phase

A dictionary of keywords was developed from the Management Control System (MCS) checklist questions. The intent of the keywords was to code the area of focus associated with the questions. There was no intent to use them as a weighting tool or for impact analysis. The development of the keywords and the subsequent coding of the questions was done by a single senior individual to ensure consistency. It was determined that twelve keywords were needed to define the checklist questions adequately. Figure 3 shows the description and frequency of occurrence of each keyword.

Each deficiency was reviewed and the keywords related to the associated checklist question were entered into the database. In most cases multiple keywords, 2 to 4, were used.

#### B. Analysis Phase

A series of sorts on the database were performed to determine whether the areas of focus could be identified by keywords indicating specific weaknesses. The use of multiple keywords to code the questions increased the use inventory by 67.9%. From this first sort "procedures/instruction adequacy (PIA)" appears to be the major problem area. The difference between the first, second and third ranked keywords was so great that further analysis was necessary to determine what other factors may be at work. It was found that the impact of multiple keyword usage was greater than initially anticipated.

The association of keywords (pairing) was investigated to resolve the impact of multiple keyword usage. A series of sorts was used to develop a matrix of keywords having a frequency of use greater than 3%. These sorts included 94.3% of all usage and therefore the keywords COM, SMI, FES, and DEL were considered insignificant to this effort. Table 3 is the resulting matrix of the keyword associations. The frequency of association (pairing) was ranked and is shown in Table 4.

The ranking of PIA remained dominant whether alone or in association with other keywords. As shown in Table 4 QAA and ORG are generally ranked second or third. A cursory review of the appraisal deficiencies confirmed that the procedure adequacy problem is real. This was expected based on the developmental stage of the BWIP organization surveilled.

Further analysis will be performed to determine the impact of the MCS checklist questions used for the appraisal may have had on high percentage of procedure associated deficiencies reported.

Other sorts and analysis will be performed to determine the efficacy of the corrective actions as they are completed. This effort can only be performed after the corrective actions have been completed, the discrepancy reports closed, and the surveillances on them performed. This phase of effort will not be reported on until the mid Fiscal Year 1988 timeframe.

v

**Tables and Figures**

V. Tables and Figures

The unsatisfactory percentages listed on Table 1 are a result of a conscious focusing on areas of suspected problems during the project start-up phase. This high rate of unsatisfactory surveillances is expected until the project matures and stabilizes.

As was previously noted, Table 2 is only the Project Administration portion of the BWIP Surveillance Coverage Matrix, which is being included as an example. The requirements surveilled are listed below each surveillance number on the matrix.

Table 1

BWIP Organizations	FY 1987 To Date	
	No. Performed	% Unsat
<u>Internal</u> (by End Function)		
L1	20	65.0
L2	2	0
L3	25	24.0
L4	1	0
L5	3	0
L6	7	42.9
L7	0	0
L9	17	29.4
Multiple End Functions	23	91.3
<u>Internal</u> (by Organization)		
Construction	3	66.7
Management & Integration	7	28.6
Operations & Test	26	26.9
Project Administration	35	62.9
Quality Assurance	8	50.0
Rockwell (BWIP Support)	5	100.0
Science & Engineering	14	42.9
<u>External</u>		
Rockwell Science Center (L2 Support)	3	33.3
Seismic Array Systems (L3 Support)	2	50.0
KE/PB	2	50.0
M-K	0	0
PNL	6	16.7
WHC	1	0



Table 3 KEYWORD ASSOCIATIONS (Pairing Frequency) %

	P I A	Q A A	O R G	R E C	V E R	D E S	T R N	S Q L
PIA	[23.7]	21.0	12.6	5.7	5.7	8.1	3.0	2.1
QAA		[0.0]	3.0	1.5	0.9	2.1	0.6	0.6
		ORG	[1.2]	0.3	2.4	0.3	0.0	0.3
			REC	[0.6]	1.2	0.0	0.3	0.3
				VER	[0.0]	2.1	0.0	0.3
					DES	[0.0]	0.3	0.3
						TRN	[0.0]	2.1
							SQL	[0.0]

Note: 1. These associations are for keywords which have a frequency of occurrence above 3%.

2. [ ] indicates the frequency at which the keyword is not associated with any other keyword.

Key

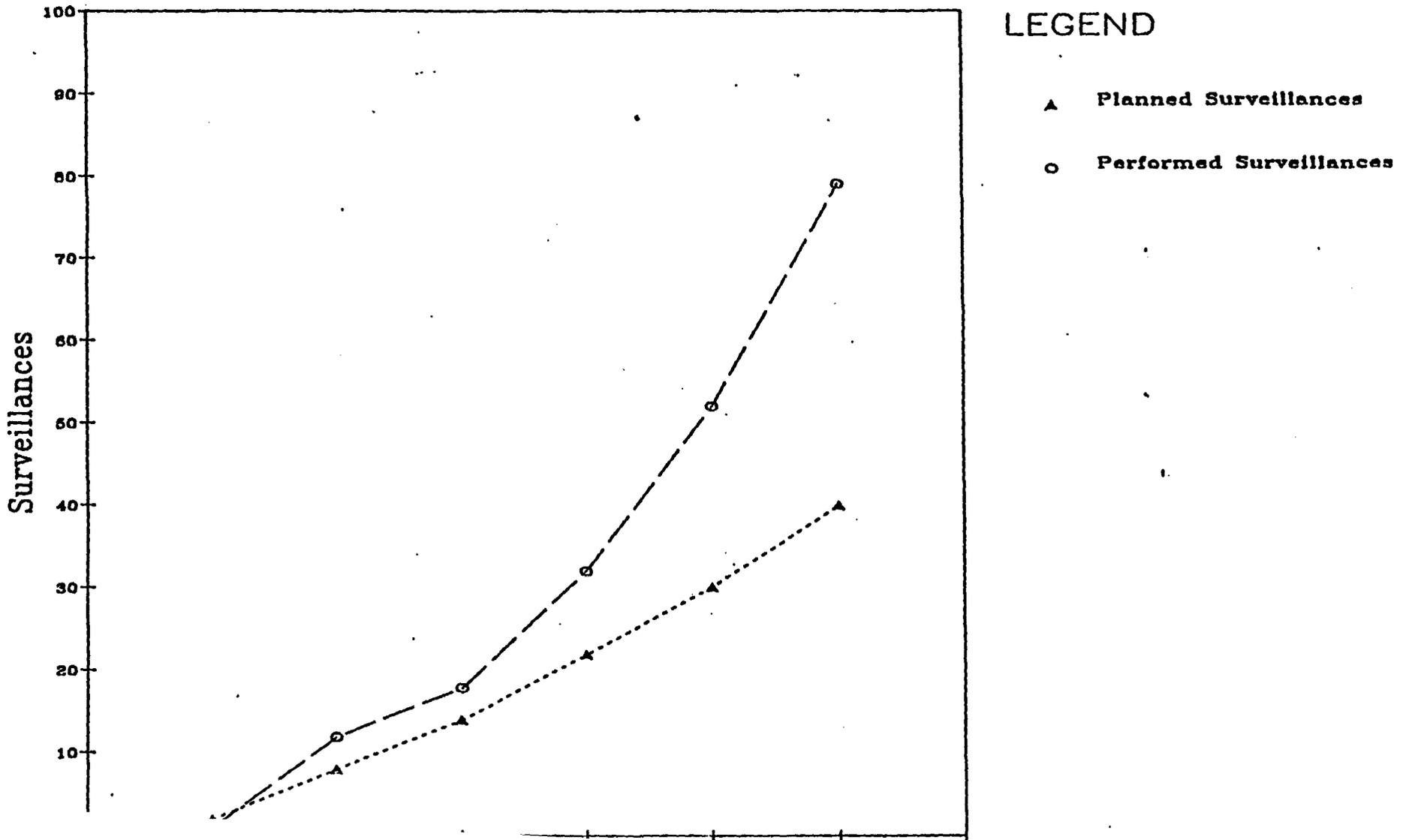
Keyword

Description

PIA	Procedures/Instructions Adequacy
QAA	Quality Assurance Awareness
ORG	Organization Charts/Responsibilities/Authorities
REC	Records Adequacy
VER	Verification/Independence Adequacy
DES	Design Control Adequacy
TRN	Training Adequacy
SQL	Staffing/Qualification Levels Adequacy
COM	Communications
SMI	Senior Management Involvement
FES	Facilities/Equipment Support Adequacy
DEL	Delegation of Activities

**Figure 1**  
**BWIP**

**Rate of Bi-Weekly Surveillance Performance**  
**Second Quarter FY 1987**





**Battelle**

Pacific Northwest Laboratories  
P.O. Box 999  
Richland, Washington U.S.A. 99352  
Telephone (509)

Telex 15-2874

376-0460

QE-330-JCL

June 15, 1987

Harry Tuthill, Manager  
Basalt Waste Isolation Project  
Quality Assurance Program Integration  
Rockwell Hanford Operation  
FMIT/MO 996  
RHO/300

Dear Mr. Tuthill:

Subject: Surveillance Planning by PNL QAD - 4th Quarter FY 1987

Attached are the PNL Quarterly Surveillance Plans for BWIP projects for the 4th quarter of FY 1987. These plans are subject to continued authorization to work on these projects. Should work on these projects be stopped by BWIP, these surveillance plans will be suspended until work is authorized to restart.

If you have any questions, please contact R. C. (Roger) Pratt, PNL-Quality Assurance Department (376-0570).

Very truly yours,

D. J. Bradley, Manager:  
Waste Package and Performance  
Assessment Department

cc: NS Conrad  
JC Langford

BASALT WASTE ISOLATION - QUARTERLY SURVEILLANCE PLAN/STATUS

Contractor: PNL Quarter: 1 2 3 0 Month: \_\_\_\_\_ Year: 1987

Prepared by: VC Lauhala QE 6/12/87  
(Print Name/Signature/Title)

Approved by: RC Pratt RC. Poth QE Tech Ldr.  
(Print Name/Signature/Title)

*VC Lauhala*

Surveillance Planning

Surveillance Results

Activity	Topic <sup>1</sup>	Surveillance Activity Projected	Report #	Comments/Status
QAP WTC-001 L2F1CR	C	PAP-1701 Project Records for Submittals and transmittals		
QAP WTC-021 (EPD-021) L2E2DP	RT,C	Survey Tensile Test and Compressive Strength Test when performed. PAP-1201 M&TE Listing; PAP-201 Training Records; PAP-1701 Record Transmittals		
QAP WTC-024 (EPD-163) L1E2C	C	PAP-201 Training records		
QAP EPD-206/207 L2F1P	C	PAP-1701 Project record transmittals to record center		

Input for this planning obtained from:

A. Staff Contacted

T.E. Gates  
S.H. Bian  
M.J. Budden

B. Documents Reviewed

L2E2DP  
L2F1CR  
L1E2C

1. Topic Codes:

DT = Data Traceability  
RT = Real Time  
C = Compliance  
TX = Technical Expert Included

BASALT WASTE ISOLATION PROJECT - QUARTERLY SURVEILLANCE PLAN/STATUS

Contractor: PNL      Quarters: 1 2 3 **4**      Month: \_\_\_\_\_ Year: FY 1987/CY 1987  
 (Circle)      Fiscal Year/Calendar Year  
 Prepared by: RC Pratt/RC Pratt /AE Tech Ldr      Approved by: RC Pratt/RC Pratt /AE Tech Ldr  
 (Print Name/Signature/Title)      (Print Name/Signature/Title)

Surveillance Planning				Surveillance Results
Activity	Topic <sup>a</sup>	Surveillance Activity Projected	Report #	Comments/Status
DE Surveillance	C	Compliance of DEs to Surveillance procedure verified by participation on one of their surveillances.		
Records Center	C	Procedure Compliance by Records Center personnel.		

Input for this planning obtained from:  
 A. Staff Contacted

DE Ryder  
Debbie Alasia  
 \_\_\_\_\_  
 \_\_\_\_\_

B. Documents Reviewed

PAF-1001  
RCP-1701  
 \_\_\_\_\_  
 \_\_\_\_\_

1. Topic Codes:  
 DT = Data Traceability  
 RT = Real Time  
 C = Compliance  
 Tx = Technical Expert Included

C: JC Langford

BASALT WASTE ISOLATION - QUARTERLY SURVEILLANCE PLAN/STATUS

Contractor: PNL Quarter: 1 2 3 ④ Month: \_\_\_\_\_ Year: 1987

Prepared by: L.E. Thompson *L.E. Thompson* /OE Approved by: R.C. Pratt *R.C. Pratt* /OE Tech Ldr.  
 (Print name/Signature/Title) Print Name/Signature/Title

Surveillance Planning

Surveillance Results

Activity	Topic <sup>1</sup>	Surveillance Activity Projected	Report #	Comments/Status
For JJ McCown's Analytical Service Laboratory in the 325 Building.	C	PAP-201, Personnel Training Records		
" "	C	PAP-901, Personnel and Procedure Qualification		
" "	RT	Evaluate compliance to an HTA-series analytical procedure during an analysis conducted in accordance with an approved SOW/RFAS. Specific procedure, sample type and SOW will be determined once McCown's group become PNL employees and receive an approved RFAS.		

Cost for this planning obtained from:

A. Staff Contacted

JJ McCown 6-11-87  
AC Leaf 6-11-87

B. Documents Reviewed

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
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1. Topic Codes:

- DT = Data Traceability
- RT = Real Time
- C = Compliance
- TX = Technical Expert Included

BASALT WASTE ISOLATION - QUARTERLY SURVEILLANCE PLAN/STATUS

Page 1 of 1

Contractor: PNL Quarter: 1 2 3 ④ Month: June Year: 1987

Prepared by: R.C. Scherke Jr. R. Scherke, QE  
(Print Name/Signature/Title)

Approved by: RC Pruthi, QE Tech. Ldr.  
(Print Name/Signature/Title)

Surveillance Planning

Surveillance Results

Activity	Topic <sup>1</sup>	Surveillance Activity Projected	Report #	Comments/Status
WTC-019	-	No planned surveillance, plan is not approved by BWIP		

Input for this planning obtained from:

A. Staff Contacted

B. Documents Reviewed

\_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_

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\_\_\_\_\_  
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\_\_\_\_\_

1. Topic Codes:

DT = Data Traceability

RT = Real Time

C = Compliance

TX = Technical Expert Included

BASALT WASTE ISOLATION - QUARTERLY SURVEILLANCE PLAN/STATUS

Contractor: PNL Quarter: 1-2 3④ Month: June Year: 1987

Prepared by: SL English  
 (Print Name/Signature/Title)  
 Quality Engineer

Approved by: RC Pratt *RC-Pratt*  
 (Print Name/Signature/Title)  
 Technical Leader

Surveillance Planning

Surveillance Results

Activity	Topic <sup>1</sup>	Surveillance Activity Projected	Report #	Comments/Status
L3E2C (CT-86)	C	PAP-401, Procurement		
L3E1 (CT-83)	-	Project has no funds. Closure of the QA Plan is being discussed. No surveillance planned.		
L2D4P (CT-62)	RT	Sampling in compliance with recently revised procedure (CT-62-1)		
L3E2A 810-70 } L2D3R 810-72 }	-	Project currently does not have any samples or work request. Previous work has been reported. No planned surveillance unless situation changes.		

Input for this planning obtained from:

Staff Contacted

J Burnell

F Hodges  
I Ioste

B. Documents Reviewed

PR S 6715

monthly reports

1. Topic Codes:

BT = Data Traceability

RT = Real Time

C = Compliance

TX = Technical Expert Use



**BASALT WASTE ISOLATION - QUARTERLY SURVEILLANCE PLAN/STATUS**

Contractor: PNL Quarter: XXXX 4 Month: \_\_\_\_\_ Year: 1987

Prepared by: DR DAHL / R. C. Pruthi / QE  
(Print Name/Signature/Title)

Approved by: R. C. Pruthi / R. C. Pruthi / QE Tech Ldr.  
(Print Name/Signature/Title)

**Surveillance Planning**

**Surveillance Results**

Activity	Topic <sup>1</sup>	Surveillance Activity Projected	Report #	Comments/Status
QAP ED-46 (10607, SOW L3D1A)	NA	Due to the nature of this activity no surveillances are planned.	NA	NA

Input for this planning obtained from:

**A. Staff Contacted**

MP Bergeron  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**B. Documents Reviewed**

QAP ED-46  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**1. Topic Codes:**

- DT = Data Traceability
- RT = Real Time
- C = Compliance
- TX = Technical Expert Included

BASALT WASTE ISOLATION - QUARTERLY SURVEILLANCE PLAN/STATUS

Contractor: PNL Quarter: XX:XX 4 Month: \_\_\_\_\_ Year: 1987

Prepared by: DR DAHLI [Signature]  
 (Print Name/Signature/Title)

Approved by: R.C. Pratt [Signature] QE Tech. Ldr.  
 (Print Name/Signature/Title)

Surveillance Planning

Surveillance Results

Activity	Topic <sup>1</sup>	Surveillance Activity Projected	Report #	Comments/Status
QAP ED-74 (11785)	C	Upon Project Manager notification that records package is ready for turnover to client, check a sample of the package to verify that client requirements have been met per RCP-1704.		

Input for this planning obtained from:

A. Staff Contacted

BA Napier  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

B. Documents Reviewed

QAP ED-74  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

1. Topic Codes:

DT = Data Traceability

RT = Real Time

C = Compliance

TX = Technical Expert Included

IV.

Tables and Figures

Table 1

BWIP Organizations	3rd Qtr.		FY to Date	
	Total	Unsat	Total	Unsat
<u>Internal</u> (by End Function)				
L1	11	2	35	16
L2	2	0	5	1
L3	28	3	54	9
L4	2	0	3	0
L5	5	2	12	2
L6	11	4	18	7
L7	0	0	2	0
L9	18	5	36	11
Multiple End Functions	15	7	36	26
<u>Internal</u> (by Functional Organization)				
BWIP Support Services	3	2	8	7
Construction	3	1	6	3
Management and Integration	11	2	21	4
Operations and Test	18	2	46	10
Project Administration	18	4	57	28
Quality Assurance	6	3	17	9
Science and Engineering	33	9	49	16
<u>External</u>				
BCSR	2	0	2	0
KE/PB	1	0	3	1
M-K	0	0	0	0
PNL	6	0	13	1
WHC	12	0	14	0
Others	0	0	5	2

**Table 2**

**Surveillance Coverage - Areas of Focus**

Area of Focus	Third Qtr. FY '87		Second Qtr. FY '87		Unsatisfactory Percentage
	Total Performed	No. of Unsat	Total Performed	No. of Unsat	Increased/ Decreased
Training	30	9	24	15	Decreased 32.5%
Organization	6	0	9	3	Decreased 33.3%
Interface Control	7	0	7	5	Decreased 71.4%
Procedures/Instructions/Drawings	33	4	18	7	Decreased 26.8%
Document Control	11	6	13	7	Decreased 7.6%
Records Control	6	1	13	3	Decreased 6.5%
Deficiency Control	15	4	8	2	Increased 6.6%



Table 3

Surveillance Coverage Matrix

ORGANIZATION (CONSTRUCTION)	TRAINING		ORGANIZATION		INTERFACE CONTROL		INSITS./PROCS./DRESS.		DOCUMENT CONTROL		RECORDS CONTROL		DEFICIENCY CONTROL	
	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT
CONSTRUCTION (73000)		07-071 3/13 NA-3 17.0 SEC 3.12		07-027 2/14 PMPH 1-101				07-153 5/27 NA-3 CH 5,6,7		07-153 5/27 NA-3 CH 5,6,7		07-071 3/13 NA-3 17.0 SEC 3.12		
ES Construction (73100)		07-011 1/16 PMPH 13-100 PMPH 13-113 PMPH 13-121						07-215 6/26 PMPH 2-102 07-105 6/12 PMPH 2-102						
Prerequisite Plan (73200)														

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Table 3

Surveillance Coverage Matrix

ORGANIZATION	TRAINING		ORGANIZATION		INTERFACE CONTROL		INSTRS./PROCS./DRGMS.		DOCUMENT CONTROL		RECORDS CONTROL		DEFICIENCY CONTROL	
	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT
INTEGR & INTEGRATION	07-128 4/27		07-032 2/14											07-108 4/13
(7800)	PMPH 13-106		PMPH 1-101											PMPH 4-120
IL1 Systems	07-094 3/30											07-094 3/30		
	PMPH 13-116											PMPH 13-116		
IL2 Hosts Package														
IL3 Site														
IL4 Repository					07-178 6/8									
					MA-3, S.B									
IL5 Licensing	07-006 1/14						07-102 6/12		07-006 1/14	07-197 6/15	07-098 3/27			
	PMPH 13-116						PMPH 2-102		PMPH 0-112	PMPH 1-110	PMPH 13-116			
	07-090 3/27										07-126 4/24			
	PMPH 13-116										PD-06-006			
	07-125 4/24													
	PD-06-006													
	07-129 4/27													
	PMPH 13-106													
IL6 Exploratory Shells	07-009 3/27										07-175 5/4	07-009 3/27		
	PMPH 13-116										MA-3, CH-3	PMPH 13-116		

3  
C)



Table 3

Surveillance Coverage Matrix

ORGANIZATION (OPERATIONS AND TEST)	TRAINING		ORGANIZATION		INTERFACE CONTROL		INSTRS./PROC./DRUGS.		DOCUMENT CONTROL		RECORDS CONTROL		DEFICIENCY CONTROL	
	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT
			07-029 2/14	07-016 1/20										07-142 5/14
(71000)			PMPH 1-101	PMPH 7-100										PMPH 7-109
Laboration		07-122 5/4			07-007 1/14		07-036 2/25	07-002 3/20	07-075 3/13				07-001 1/2	
(71100)		PMPH 13-121			PMPH 6-105		PMPH 1-102	PMPH 6-114	DOP C-4.71				PMPH 8-105	
					07-154 5/20			PMPH 6-121					PMPH 8-107	
					PMPH 6-105			PMPH 6-122	PMPH 6-105				DMP 17-101	
					07-155 5/20			PMPH 8-103					DMP 17-102	
					PMPH 6-105			PMPH 8-105						
NSIF & ES Operations		07-151 4/20			07-043 2/27									
(71200)		PMPH 13-116			ED-MS-604									
		PMPH 13-123												
Site Charact		07-037 2/24	07-019 1/22				07-030 2/25			07-057 3/4				07-037 2/24
Field Insect		PMPH 13-116	PMPH 13-116				TOP MS-ES-200			PMPH 7-119				PMPH 3-116
(71300)		07-056 3/4	07-090 4/02				07-056 3/4							
		PMPH 13-121	PMPH 13-121				PMPH 7-119							
							07-151 5/24							
							PMPH 1-102							
							07-107 6/15							
							PMPH 2-102							
							07-193 6/16							
							PMPH 2-102							
							07-200 6/17							
							PMPH 2-102							

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Table 3

Surveillance Coverage Matrix

ORGANIZATION PROJECT (M/F)	TRAINING		ORGANIZATION		INTERFACE CONTROL		INSTRS./PROCS./DMS.		DOCUMENT CONTROL		RECORDS CONTROL		DEFICIENCY CONTROL		
	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	
Acquis & Procur Mgmt (72020)									07-000 3/20			07-190 6/17			
									PMP 6-114			PMP 6-114			
									PMP 6-121			PMP 6-116			
									PMP 6-122						
									PMP 8-108						
									PMP 8-105						
Resource Mgmt (72030)															
									07-179 6/12						
									PMP 02-102						
Information Mgmt (72100)	07-059 3/6	07-060 3/10	07-200 6/19					07-016 1/29	07-044 2/27	07-023 2/6	07-115 4/17	07-014 1/20	07-066 3/27	07-016 1/29	07-207 6/19
	PMP 13-121	PMP 13-121	PMP 14-102					PMP 6-101	PMP 1-111	PMP 1-102	PMP 1-101	PMP 1-101	PMP 8-103	PMP 8-123	NA-3, 16
	07-127 4/28	07-070 3/13						07-023 2/6	07-042 3/11	07-052 2/27	07-116 4/20	07-055 3/5	PMP 13-121	07-065 3/12	07-209 6/19
	PMP 13-121	NA-3, 17.3						PMP 1-102	SWIP RESTART	NA-3, 5.0	PMP 1-101	PMP 8-125	07-052 3/27	PMP 8-105	PMP 1-111
	07-168 6/3							REPORT 3.12	07-077 3/13	07-117 4/23	07-077 3/13	PMP 8-103	PMP 8-107		
	PMP 13-116							07-102 4/7	PMP 1-101	PMP 8-105	PMP 1-101	07-102 4/7	07-072 3/13		
	PMP 13-121							PMP 8-110	PMP 8-105	PMP 13-116	PMP 8-105	PMP 8-110	NA-3 5.0		
								07-141 6/1	07-072 3/13	07-173 6/5	07-070 3/13		07-073 3/13		
								PMP 1-110	NA-3, 5.0	NA-3, 3.6	PMP 1-101		PMP 1-101		
								07-172 6/5	07-205 6/10	PMP 1-101	PMP 8-105		PMP 8-105		
								PMP 1-101			PMP 8-113		07-064 3/25		
												07-201 6/17		PMP 8-103	
												PMP 8-121		PMP 8-107	
														PD07-003	
														07-070 3/13	
														NA-3, 17.0	

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Table 3

Surveillance Coverage Matrix

ORGANIZATION	TRAINING		ORGANIZATION		INTERFACE CONTROL		INSTR./PROC./DRUGS.		DOCUMENT CONTROL		RECORDS CONTROL		DEFICIENCY CONTROL	
	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT
QUALITY ASSURANCE (12100)			07-030 2/14									07-002 1/6		
			PMP 1-101									PMP 8-105		
												PMP 8-107		
												SNPP 17-101		
												SNPP 17-102		
QA Prog Dev & Admin (12140)	07-000 3/27	07-042 2/27					07-041 9/27	07-040 2/27	07-041 2/27	07-040 2/27	07-000 3/27	07-044 3/12		
	PMP 13-116	PMP 13-112					NA-S, 01-0A-	NA-S, 01-0A-	NA-S, 01-0A-	NA-S, 01-0A-	PMP 13-116	PMP 8-105		
		PMP 13-116					05-01	05-01	05-01	05-01		PMP 8-107		
							07-053 2/3	07-140 5/7						
							PMP 1-102	PMP 2-102				07-075 2/27		
							07-104 6/12	07-140 5/7				PMP 00-103		
							PMP 2-102	PMP 2-102				PMP 00-107		
												NA-14		
												SNPP 17-101		
Surveillance Group (12170)														
Program Integration (12190)								07-001 3/20					07-103 1/8	07-210 6/24
								PMP 6-114					PMP 4-107	NA-3, 10
								PMP 6-121						07-211 6/24
								PMP 6-122						NA-3, 10
								PMP 8-103						
								PMP 8-105						

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Table 3

Surveillance Coverage Matrix

ORGANIZATION	TRAINING		ORGANIZATION		INTERFACE CONTROL		INSTS./PROCS./DRWS.		DOCUMENT CONTROL		RECORDS CONTROL		DEFICIENCY CONTROL	
	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT
SCIENCE/ENGINEERING (77600)	07-091 3/27	07-206 6/19	07-020 2/14				07-107 5/20	07-074 3/12			07-091 3/27			
	PMPH 13-116	PMPH 4-121	PMPH 1-101				PMPH 2-102	MM-3 2.0,3.0			PMPH 13-116			
							07-150 5/20							
							PMPH 2-102							
Configuration Mgmt (77010)							07-020 2/26							
							MM-3 5.0,6.0							
							07-109 6/15							
							PMPH 2-102							
Systems Engineering (77100)	07-113 4/16	07-109 4/14					07-170 6/12		07-120 4/21	07-136 5/4				
	PMPH 13-121	PMPH 13-121					PMPH 2-102		PMPH 2-101	MM-3, 3.0				
	07-204 6/10						07-191 6/16							
	PMPH 13-121						PMPH 2-102							
Performance Assess (77200)		07-060 3/13					07-054 3/4		07-076 3/13		07-060 3/13		07-103 4/24	
		MM-3, 3.1,17					PMPH 1-102		MM-3 3.1,17		MM-3 3.1,17		5000.3,5401.1	
													5401.20	

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Table 3

Surveillance Coverage Matrix

ORGANIZATION	TRAINING		ORGANIZATION		INTERFACE CONTROL		INSTS./PROCS./DRGMS.		DOCUMENT CONTROL		RECORDS CONTROL		DEFICIENCY CONTROL	
	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT
Engineering/Design (77300)	07-016 4/02	07-097 4/02			07-043 2/27		07-160 5/20	07-045 2/27	07-045 2/27		07-100 4/03			
	PMPH 13-121	PMPH 13-121			EO-NS-604		PMPH 2-102	NS-3, S.O	PMPH 0-163		PMPH 13-116			
	07-111 4/14	07-099 4/02					07-101 6/12							
	PMPH 13-116	PMPH 13-121					PMPH 2-102							
	07-112 4/14	07-100 4/03												
	PMPH 13-116	PMPH 13-116												
		07-213 6/25												
		PMPH 1-112												
		PMPH 13-121												
Site (77400)	07-010 1/16	07-047 2/27	07-010 1/30		07-034 2/23	07-150 5/26		07-043 2/27	07-046 2/27	07-047				
	PMPH 13-100	PMPH 13-121	PMPH 4-115		NS-3	PMPH 2-102		NS-3, Sec. C	PMPH 13-116	PMPH 13-116				
	PMPH 13-113					07-150 5/20								
	PMPH 13-121					PMPH 2-102								
	07-046 2/27					07-152 6/16								
	PMPH 13-121					PMPH 2-102								
	07-112 4/14					07-159 6/17								
	PMPH 13-116					PMPH 2-102								
	07-214 6/26					07-103 6/12								
	PMPH 13-116					PMPH 2-102								
	PMPH 13-121					07-100 6/15								
						PMPH 2-102								

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Table 3

Surveillance Coverage Matrix

ORGANIZATION	TRAINING		ORGANIZATION		INTERFACE CONTROL		INSRS./PROCS./DIRMS.		DOCUMENT CONTROL		RECORDS CONTROL		EFFICIENCY CONTROL	
	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT
BWP Safety (12900)													07-007 3/12	
													PMP 0-105	
Indust Mgt/Safety (12910)													07-003 1/4	
													PMP 0-106	
													PMP 0-107	
													BWP 17-101	
													BWP 17-102	
Computer Sys Supp (15300)														
			07-005 1/13				07-014 2/23							
			PMP 13-116				MA-3, 3.0							
			PMP 13-123											
Tech Data Sys Supp (15320)														
									07-004 1/12					
									MA-3, 5.0					
									07-203 6/10					
									PMP 14-100					
BWP Control & Repl (16700)													07-196 6/16	
													PMP 0-103	



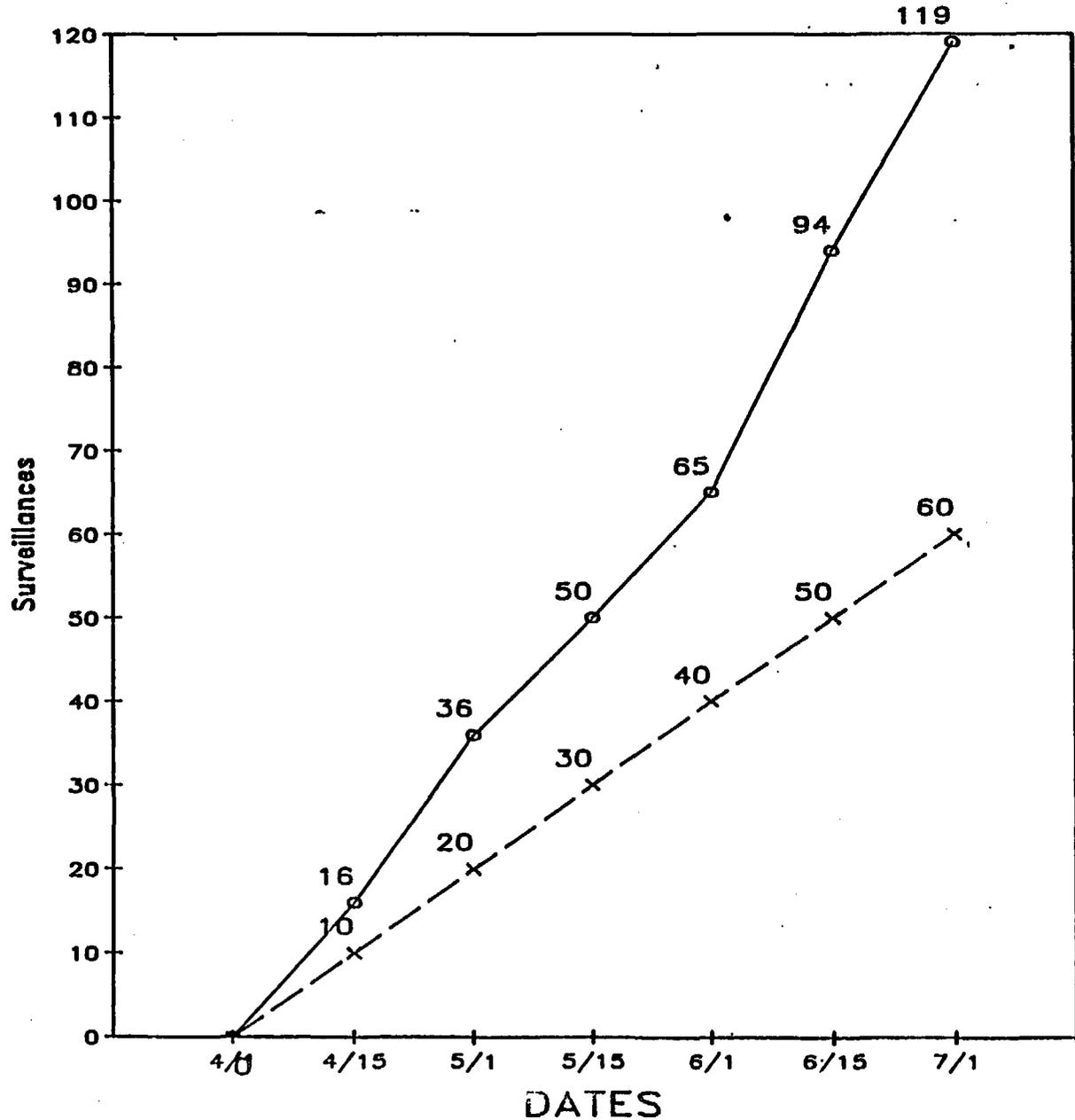
Table 3

Surveillance Coverage Matrix

ORGANIZATION	TRAINING		ORGANIZATION		INTERFACE CONTROL		INSTS./PPCS./DRUGS.		DOCUMENT CONTROL		RECORDS CONTROL		DEFICIENCY CONTROL	
	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT	SAT	UNSAT
MHC	07-114 4/17		07-120 5/6		07-143 5/14		07-142 5/24			07-005 3/27		07-022 1/10		
	001 2.4		MHC 14-01		INOS No. 2-01		INOS No. 2-01			001-17.2		001-19.2		
	07-110 4/15											07-161 5/29		
	001 19.1											001-10.2		
	07-119 4/15											07-212 6/24		
	001 19.1											001-10.1		
	07-137 5/4													
	001 19.1													
	07-137 5/4													
	001 19.1													
	07-167 6/3													
	001 19.1													
	07-198 6/16													
	001 19.1													
	00-104, 0-1													

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### BWIP Rate of Surveillance Performance



#### LEGEND

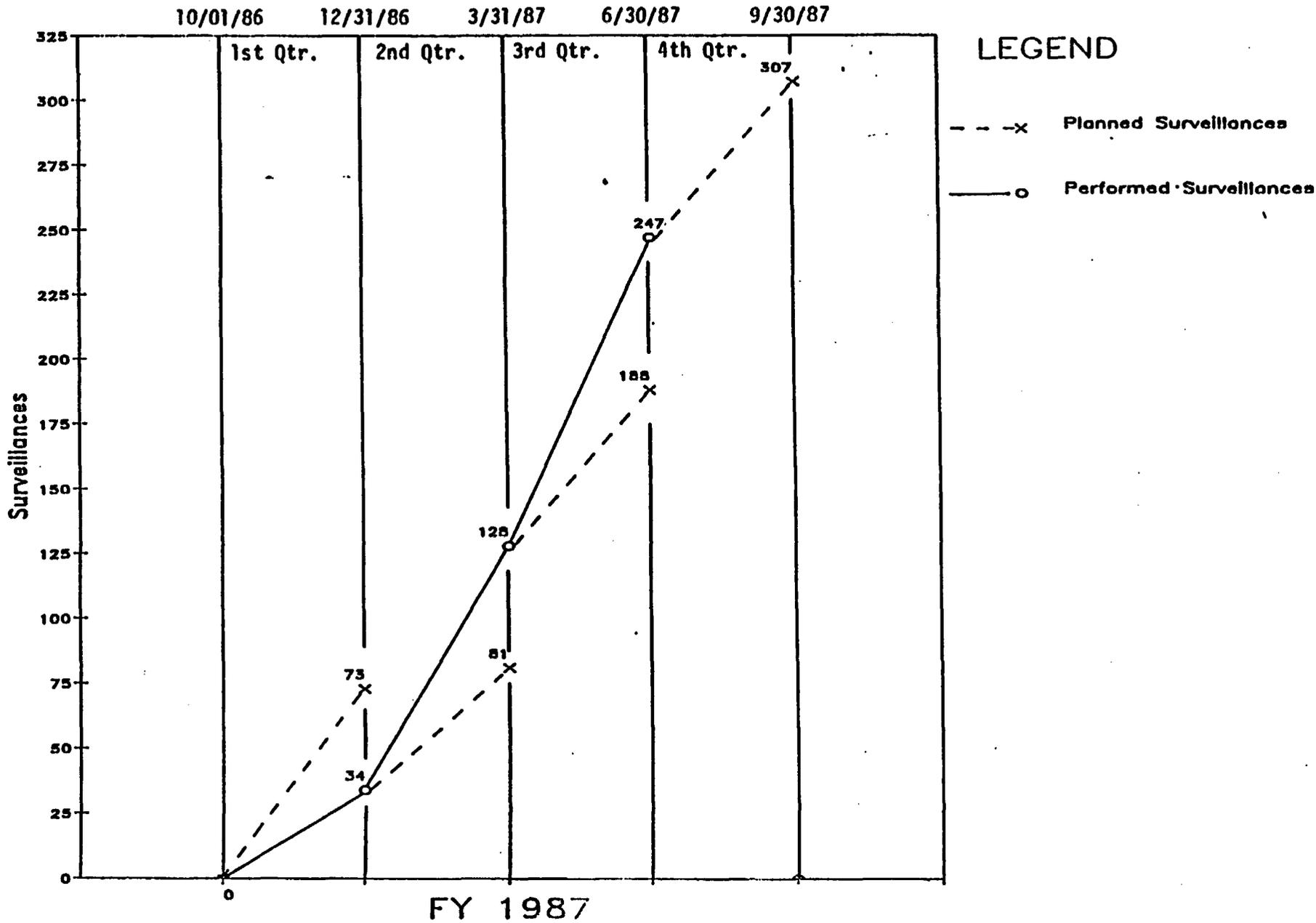
- x Planned Surveillances
- o Performed Surveillances

42

Figure 1

# CUMULATIVE TOTALS

## SURVEILLANCES PLANNED VS. PERFORMED



43

Figure 2

**LEGEND**

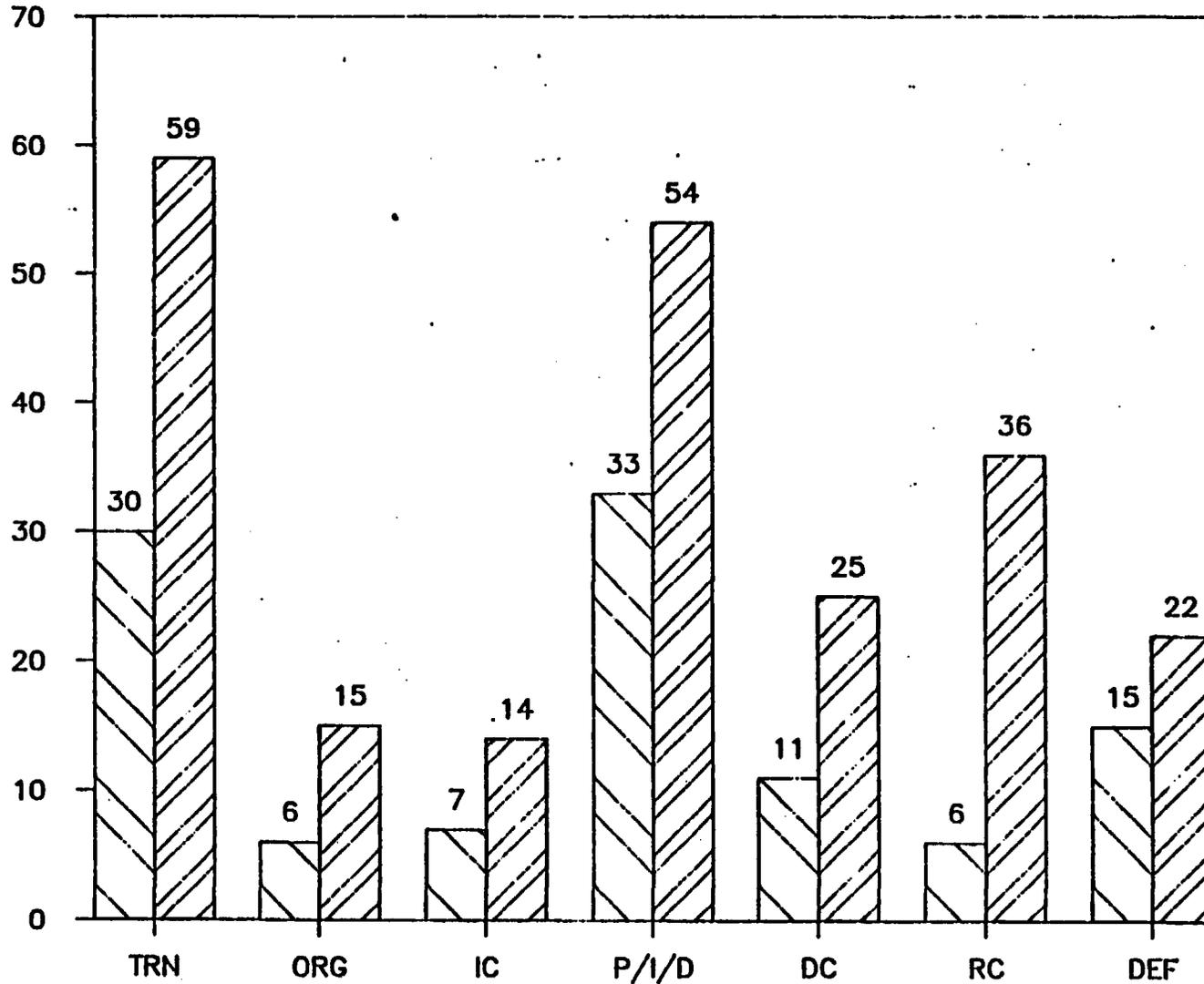
TRN Training  
 ORG Organization  
 IC Interface Control  
 P/I/D Procedures/Instructions  
 Drawings  
 DC Document Control  
 RC Records Control  
 DEF Deficiency Control

**SURVEILLANCE COVERAGE OF AREAS OF FOCUS**

Total Surveillances

44

Surveillances



Areas of Focus

☐ Total 3rd Quarter

▨ Total To Date

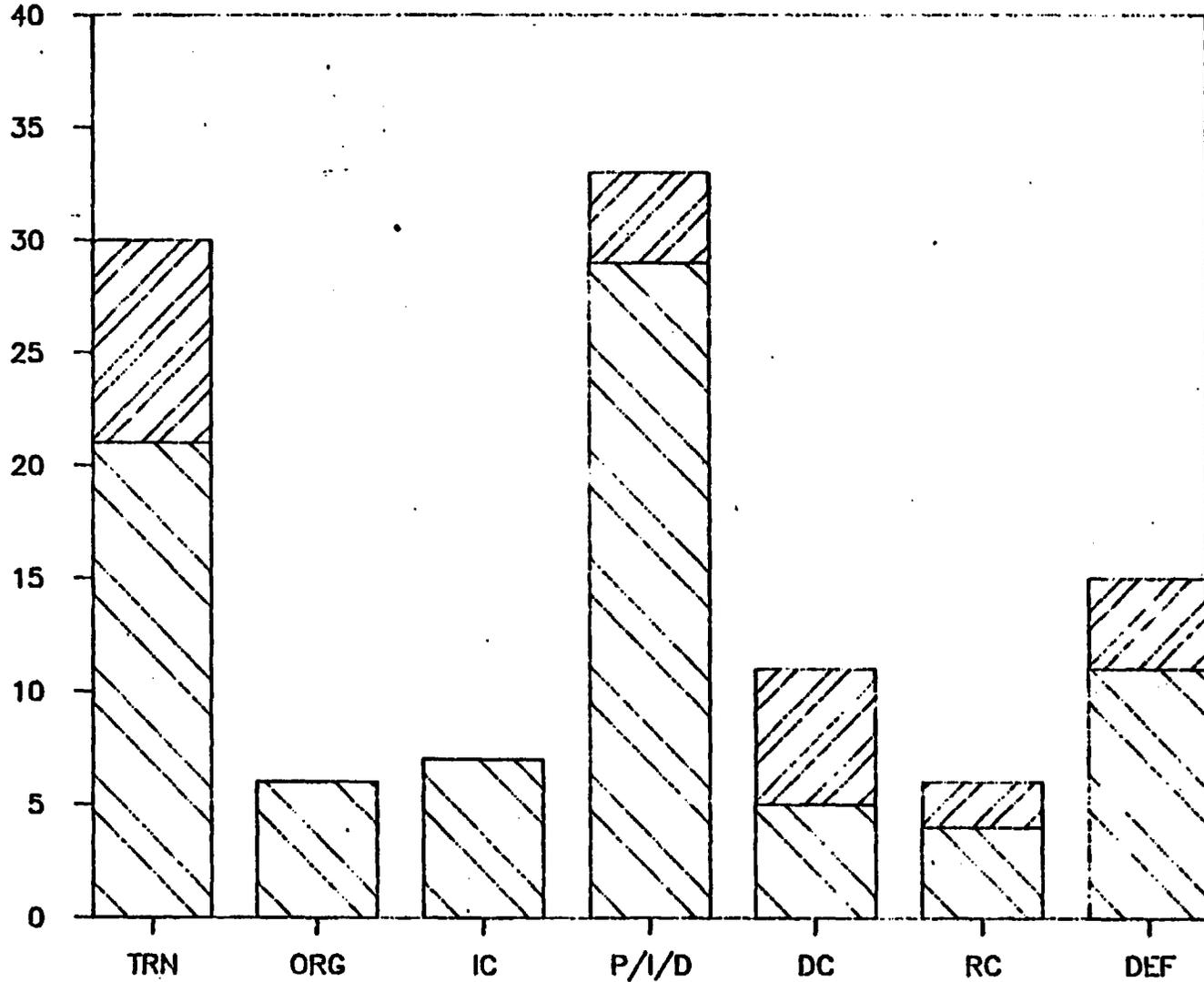
Figure 3

# SURVEILLANCE COVERAGE OF AREAS OF FOCUS

3rd Quarter 1987

LEGEND	
TRN	Training
ORG	Organization
IC	Interface Control
P/I/D	Procedures/Instructions Drawings
DC	Document Control
RC	Records Control
DEF	Deficiency Control

Surveillances



45

Figure 4

SAT SURVEILLANCES

UNSAT SURVEILLANCES

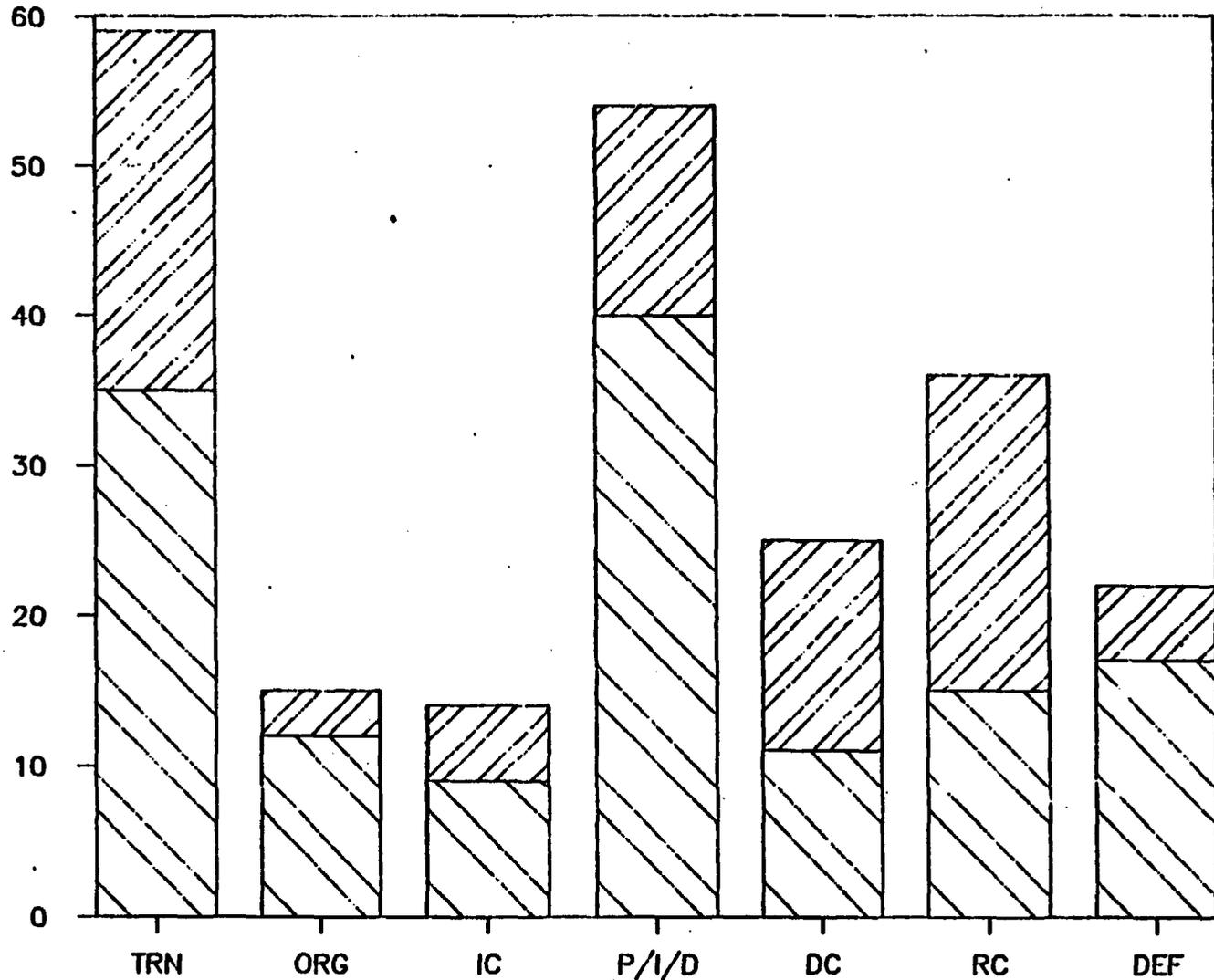
Areas of Focus

LEGEND	
TRN	Training
ORG	Organization
IC	Interface Control
P/I/D	Procedures/Instructions Drawings
DC	Document Control
RC	Records Control
DEF	Deficiency Control

### SURVEILLANCE COVERAGE OF AREAS OF FOCUS

Cumulative To Date

Surveillances



☐ SAT SURVEILLANCES

▨ UNSAT SURVEILLANCES

## ATTACHMENT 4-3

### Summary

Nine new surveillances and follow-ups to close two previous unsatisfactory surveillances were performed during this bi-weekly period. This makes a total of 15 surveillances performed for this quarter and fiscal year.

Two of the surveillances performed were unsatisfactory. The first examined control of contracts for laboratory services, and found that organizations other than the BWIP Laboratory Group have been issuing and supervising contracts. The second examined supporting documentation for SD-BWI-CM-001, and determined that there was failure to comply with the Configuration Management Plan and PMPM 5-101.

Satisfactory surveillances were performed on the following areas:

- o Acceptance of 20" casing for DC-24/25CX
- o Reinstallation and verification of Westbay MP System in Borehole RRL-14
- o BCAR 87-001 records correction activities
  - o Training activities
  - o PMPM corrections
  - o Response items 2.1 and 2.2 of Table 4
- o BWIP computer systems compliance to PMPM 14-101
- o Compliance of DFCs for DC-24/15 to PMPM 2-104

Surveillance Performance

Period:

Report

10/12 - 10/25/87

Total Number of Surveillances Performed:

9

Satisfactory:

7

Unsatisfactory:

2

Planned:

5

Satisfactory:

4

Unsatisfactory:

1

Unplanned:

4

Satisfactory:

3

Unsatisfactory:

1

Number of Previous Unsats Closed During This Period:

2

Unit Mgrs. 1. W.D. Stewart 10/26/87  
 ND Blair/TH Noland

BWIP

Period 3. 10/26 - 11/8/87

Approved By: 2. DP Trott 10/26/87

BI-WEEKLY SURVEILLANCE PLAN

Page 4. 1 of 1

5. WBS No.	6. Performing Org/Dept.	7. Description of Surveillance/ Reference Documents	8. Uni/ QA Engr	9. Applicable Criteria	10. Surv. No.	11. Date	12. Remarks
A11	HHC	Application & Adequacy of DI's Controlling Quality Work Surv Req #87-125 (DC Gibbs)	RPAS/ECOS DPT/JGF/KED	5 (HHC-01-7-2) P/PM 1-102			In process from previous bi-weekly period.
L4019	HHC	BCAR-87-001, Response Items 1.3, 1.4 and 2.3 of Table 4  Surv. Req. #87-122	ECOS/JGF	2, 3, 5			Transferred from previous bi-weekly period.
L4019	HHC	BCAR-87-001, Response Items 1.1, 1.2 of Table 4  Surv. Req. 87-120	ECOS/BKS	2, 17			Transferred from previous bi-weekly period.
L9	HHC/S&E	QEB Compliance with P/PM 04-121 para 3.416.0 requirements  Surv. Req. #87-034	ECOS/R/R/ DJA/TJH	5			In process from previous bi-weekly period.
L4/L6	HHC/System Engineering	Organizational Responsibilities	ECOS/S/M	1, 2			In process from previous bi-weekly period.
A11	A11	Assess the impact of a procedure change	ECOS/O/D/ DJA	5			In process from previous bi-weekly period.
L3	HHC Site	Training of Site Dept. Support Personnel for DC-24CX	RPAS/DLF	2			



Unit Mgrs. 1. W. D. Blair/T. H. Holard <sup>10/12/87</sup> T. W. ... <sup>10/12/87</sup>

BWIP

Period 3. 10/12-10/25/87

Approved By: 2. D. P. Trott D. P. Trott

BI-WEEKLY SURVEILLANCE PLAN

Page 4. 1 of 3

WBS No.	Performing Org/Dept.	Description of Surveillance/ Reference Documents	Unit/ QA Engr	Applicable Criteria	Surv. No.	Date	Remarks
5. A11	6. IHC	7. Application & Adequacy of DI's Controlling quality related work. Surv Req #87-125 (DC Gibbs)	8. RPAS/ECOS DPT/JGF/ KED	9. 5, 1A-3 P:PA 1-102	10.	11.	12. <i>IN-PROCESS. TRANSFER to NEXT bi-weekly period.</i>
L1D3	IHC	Control of laboratory services contract Special Request, DC Gibbs <i>Surv. Request # 87-126</i>	RPAS/REB	4	BSRP- 87-292	10/19/87	<i>Unsatisfactory</i>
L5	IHC/Gearhart Drilling	Personnel qualifications for Gearhart personnel	RPAS/AM	2	BSRP- 87-290	10/13/87	<i>Satisfactory</i>
L9	IHC	Microfilm records defects testing	RPAS/DF	17 P:PA 8-103			ORGANIZATION TO BE SURVEILLED NOT PRESENTLY PREPARED. EXTENSION REQUESTED. TEST- DUE INDEFINITELY. <i>RDW 10/21/87</i>
	IHC	Compliance of DFC's for DC-24/25 to P:PA 2-104  Surv. Req #87-124	ECOS/SH	3	BSRP- 87-298	10/23/87	<i>Satisfactory</i>
L4019	IHC	BCAR-87-001, response items 1.3, 1.4 and 2.3 table 4.  Surv Req # 87-122	ECOS/O'D	2, 3, 5			<i>TRANSFER to NEXT bi-weekly PERIOD. CHANGE IN schedule. wds initials?</i>
L4019	IHC	BCAR-87-001 response items 2.1, 2.2 of table 4.  Surv Req #87-121	ECOS/JF	5	BSRP 87-300	10/23/87	<i>Satisfactory</i>

Unit Mgrs. 1. *W.D. Blair* #10/12/87  
 II.D. Blair/T.H. Roland *T.H. Roland* 10/12/87

BWIP

Period 3. 10/12-10/25/87

Approved By: 2. *D.P. Trott* *D.P. Trott*

BI-WEEKLY SURVEILLANCE PLAN

Page 4. 2 of 3

WBS No.	Performing Org/Dept.	Description of Surveillance/ Reference Documents	Unit/ QA Engr	Applicable Criteria	Surv. No.	Date	Remarks
5. L4019	6. IHC	7. BCAP-87-001 response items 1.1, 1.2 of table 4 Surv. Req #87-120	8. ECOS/BKS	9. 2, 17	10.	11.	12. TRANSFER TO NEXT BI-WEEKLY PERIOD. CHANGE IN SCHEDULE. WDB 10/12/87
L1	IHC	Surveillance of Performance Assessment Activities for SOL LIE2C	RPAS/EDK	3			CANCEL - LACK OF FUNDING FOR SW TUN 10/26/87
L9	IHC/Science & Engineering	QEB compliance with PPM 4-121 paragraph 3.4/6.0 requirements.  Surv. Req. #87-064	ECOS/R/R/ DJA/T.H	5			Transferred from previous bi-weekly - in process. TRANSFER TO NEXT BI-WEEKLY. IN PROCESS. WDB 10/12/87
L4/L5	IHC/System Engineering	Organizational responsibilities.	ECOS/S/H	1, 2			Transferred from previous bi-weekly - in process. TRANSFER TO NEXT BI-WEEKLY. IN PROCESS. WDB 10/12/87
A11	IHC/Management & Integration	Organizational responsibilities	ECOS/WF	1, 2			Transferred from previous bi-weekly - in process. WDB 10/12/87
A11	A11	Assess the impact of a procedure or change  Surv. Req. #87-033	ECOS/C/D/ DJA	5			Transferred from previous bi-weekly. TRANSFER TO NEXT BI-WEEKLY. IN PROCESS. WDB 10/12/87
L1	IHC	BSRP Computer Systems Compliance to PPM 14-101	RPAS/PP1	5	BSRP 87-299		Transferred from previous bi-weekly TUN 10/26/87

Unit Mgrs. 1. W.D. Blair 10/12/87  
H.D. Blair/T.H. Noland T.H. Noland 10/12/87

BWIP

Period 3. 10/12-10/25/87

Approved By: 2. D. P. Trott David O. Trott

BI-WEEKLY SURVEILLANCE PLAN

Page 4. 3 of 3

WBS No.	Performing Org/Dept.	Description of Surveillance/ Reference Documents	Uni/ QA Engr	Applicable Criteria	Surv. No.	Date	Remarks
5.	6. PML	7. Technical review of software	8. PPAS/CEK	9. 3	10.	11.	12. CANCEL - lack of Transferred from previous bi-weekly. <sup>and 12/6/87</sup> funding to conduct work (PML)

AUDIT SCHEDULE FY 88 PROPOSED

Pacific Northwest Laboratory

Performance Assessment and  
System Engineering

Gerhart Logging  
(DC-23,24,25,32,33)

Morrison-Knudsen

BWIP Management and  
Integration

BWIP Construction

BWIP Laboratory  
Department

Hydrogeologic Testing  
Department

Site Department

Engineering and Design  
Department

Configuration Management

Quality Assurance Group

KE/PB

BWIP Document Control

Software Development and  
Control

Procurement

BWIP Training Department

Licensing Department SCP

BRMC

Calibration

MANAGEMENT CONTROL SYSTEM	DISCREPANCIES			
	TOTAL	CLOSED	CONSTRAINT TO FULL LIFT OF STOP WORK ORDER	
			TOTAL	CLOSED/RESOLVED
PNL-RA-001 (QUALITY ASSURANCE)	29	29	0	0
PNL-RA-001A (ADMINISTRATIVE)	0	0	0	0
WHC-RA-002 (QUALITY ASSURANCE)	40	40	0	0
WHC-RA-002A (ADMINISTRATIVE)	3	3	0	0
MK-RA-003 (QUALITY ASSURANCE)	9	9	0	0
MK-RA-003A (ADMINISTRATIVE)	3	3	0	0
KE/PB-RA-004 (QUALITY ASSURANCE)	23	23	0	0
KE/PB-RA-004A (ADMINISTRATIVE)	1	1	0	0
BCSR-RA-005 (QUALITY ASSURANCE)	47	47	42	42
BCSR-RA-005A (ADMINISTRATIVE)	0	0	0	0
DOCUMENT/RECORDS RHO-RA-006	27	22	10	10
QUALITY ASSURANCE RHO-RA-007	16	16	6	6
DESIGN RHO-RA-008	32	30	21	21
REAPPRAISAL RHO-RA-008R	39	29	7	7
PROCUREMENT RHO-RA-009	19	19	15	15
REAPPRAISAL RHO-RA-009R	0	-	0	-

MANAGEMENT CONTROL SYSTEM	DISCREPANCIES			
	TOTAL	CLOSED	CONSTRAINT TO FULL LIFT OF STOP WORK ORDER	
			TOTAL	CLOSED/RESOLVED
VERIFICATION RHO-RA-010	8	8	0	0
DEFICIENCY RHO-RA-011	17	17	6	6
TEST RHO-RA-012	4	4	3	3
COST/SCHEDULE RHO-RA-013	11	11	4	4
SAFETY RHO-RA-014	2	2	1	1
SECURITY RHO-RA-015	5	5	2	2
CORRESPONDENCE RHO-RA-016	3	3	0	0
ACTION RHO-RA-017	1	1	0	0
CONTRACTOR INTERFACE RHO-RA-018	11	11	4	4
RESOURCE RHO-RA-019	3	3	1	1
PMP/SEMP RHO-RA-020	19	8	4	4
TOTALS	372	344	126	126

ATTACHMENT 4-5

## ATTACHMENT 4-6

P.D. No.	TITLE	EFFECTIVE DATE	CURRENT STATUS
86-004	Expedited Special Case Restart	5/22/87	This PD will be in effect until DC-24, 25 etc. drilling starts. Expected closure date 11/30/87
86-010	Readiness Appraisals of BWIP Participants Project Management Control System	1/16/87	PMPM 4-123 will replace this PD, effective 1/16/88 (J. A. Rivera)
86-011	Q-List Task Force	9/18/86	A PD is in final signoff to supersede PD 86-011. The new PD will reflect current DOE Q-List guidance (D. Harrison).
87-004	Processing Change Requests	7/14/87	This PD will stay in effect until the completion of the Project Baseline (A. Morrissette)
87-006	Installation, Maintenance and calibration of Seismic Arrays	3/24/87	Due to unavailability (due to hiring freeze) of personnel to conduct req'd tests ; this PD will stay in effect thru March 1988. But if required, an interim TOP (Technical Operating Procedure) could be written to satisfy the requirement.(N.Rasmussen)
87-009	Computer Hardware Configuration Control	5/15/87	PD expiration date is being extended to 3/31/88 due to difficulties in getting PMPM 14-3XX procedures issued. (R. Harum)

87-010	Treatment of BWIP documentation following takeover by WHC.	6/4/87	This PD authorizes WHC to continue using Rockwell procedures and manuals after the change of contract on 6/28/87. This PD will be obsolete, when all the procedures have been revised at least once through normal revision process.
87-012	Locating Test Boreholes	6/16/87	PD will stay in effect until study plans are issued and approved; estimated completion date 6/15/88 (J. Grimes)
87-013	Dispositioning External Agency's Comments	6/26/87	Replacement PMPM is being drafted; estimated completion date is 3/31/88 (K. Hadley )
87-014	Matrix Development and Maintenance	7/31/87	Replacement PMPM is in writing-will be complete by 1/31/88 as required by DOE.