



95-0002851

Department of Energy

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

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DNF SAFETY BOARD

MAY 10 1995

95-CHD-039

The Honorable John T. Conway
Chairman
Defense Nuclear Facilities Safety Board
Suite 700
625 Indiana Avenue, NW
Washington, D.C. 20004

Dear Mr. Chairman:

TRANSMITTAL OF WESTINGHOUSE HANFORD COMPANY, CHARACTERIZATION PROGRAM, JANUARY 1 - MARCH 31, 1995 QUARTERLY REPORT, IN ACCORDANCE WITH THE U.S. DEPARTMENT OF ENERGY, RICHLAND OPERATION OFFICE, IMPLEMENTATION PLAN FOR BOARD RECOMMENDATION 93-5.

Enclosed is the Westinghouse Hanford Company (WHC) Characterization Program - Quarterly Report (letter #9552171, with attachment, dated April 21, 1995). In accordance with Commitment 1.10, this report is being submitted to you to provide information and status on actions associated with the Recommendation 93-5 Implementation Plan.

During this quarter, there has been significant progress in the overall process of tank waste characterization. The projectizing of the WHC Characterization Program has enabled improvements in several key areas. Sampling productivity improvements are most notable. There has also been progress in efforts to resolve insufficient sample recovery, in improvements in sampling equipment reliability, in development of the risk acceptance criteria, in establishment of a technical basis for characterization, and in the revision of several Data Quality Objectives documents. Although these efforts have not been completed, the U.S. Department of Energy, Richland Operations (RL) is encouraged with the progress to date. Many of these efforts are projected to be completed during the upcoming third quarter.

However, RL is still deeply concerned about several key commitments that are lagging behind scheduled completion dates. RL's efforts in the review of submitted deliverables has been re-assessed and found to be deficient.



Mr. Chairman
95-CHD-039

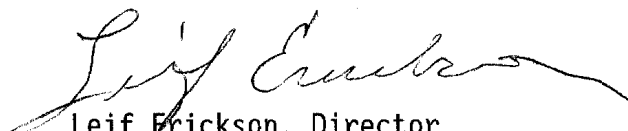
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MAY 10 1995

RL will provide the DNFSB with a monthly status of our progress in the review of deliverables. Detailed information on this quarter's accomplishments and problems are discussed in the enclosed WHC quarterly report.

If you have any questions, please contact me on (509) 376-3214 or Mr. Jim Thompson, of my staff, on (509) 373-9757.

Sincerely,



Leif Erickson, Director
Characterization Division

CHD:CAB

Enclosure

cc:

K. T. Lang, EM-362, DOE-HQ
L. F. Ermold, WHC





P.O. Box 1970 Richland, WA 99352

April 21, 1995

9552171

Mr. L. Erickson, Director
Characterization Division
Office of Tank Waste Remediation System
U.S. Department of Energy
Richland Operations Office
Richland, Washington 99352

Dear Mr. Erickson:

CHARACTERIZATION PROJECT QUARTERLY REPORT FOR THE PERIOD ENDING MARCH 31, 1995, (DEFENSE NUCLEAR FACILITIES SAFETY BOARD 93-5, COMMITMENT 1.10)

Reference: "Recommendation 93-5 Implementation Plan," U.S. Department of Energy, Richland Operations Office, DOE/RL 94-0001, dated January 1994.

Attached is Westinghouse Hanford Company's Quarterly Progress Report for Defense Nuclear facilities Safety Board 93-5 activities, for the quarter ending March 31, 1995. We request that you provide us with a copy of the final submitted to the Board.

Very truly yours,

L. F. Ermold, Director
Tank Waste Remediation System Characterization Project

klh

Attachment

DOE-HQ - C. Hilland
K. T. Lang
J. Poppiti
J. Tseng

RL - C. A. Babel
P. R. Hernandez
T. Noble
J. F. Thompson, Jr.
A. H. Wirkkala (w/o attachment)

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DOE-RL/CCC

Mr. L. Erickson
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MACTEC - M. L. Boothby
J. P. Haney

PNL - G. H. Beeman
A. F. Noonan

SAIC - H. G. Sutter

DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1995

EXECUTIVE SUMMARY

During this Quarter the Westinghouse Hanford Corporation (WHC) Characterization Project was established. Len Ermold was appointed its Director. The Project structure will provide all the assets required to carry out Waste Tank Characterization under the authority of one manager. Significant improvement was made in the rate of auger and push mode core sampling. A proposed "Approach for Tank Safety Characterization of Hanford Site Waste" (WHC-EP-0843) was issued. This approach for tank safety characterization will require validation by tank waste sampling. A dialogue concerning its validation was started with the Department of Energy (DOE) and Defense Nuclear Facilities Safety Board (DNFSB). The U.S. Army Corps of Engineers reviewed the waste tank core drilling equipment and practices and provided recommendations for improving the process. The use of the Rotary Mode Core Sampling System (RMCS) in the rotary mode was suspended until reliability improvements are installed in the system (scheduled during May 1995). Of 92 Commitments made in the DNFSB 93-5 Implementation Plan of January 1994, 68 have been submitted to DOE, 47 have been closed, and 11 are overdue as of March 31, 1995.

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DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1995

1 PURPOSE

This quarterly report provides a report on High Level Waste Tank Characterization activities at the Hanford Site related to the Defense Nuclear Facilities Safety Board (DNFSB) *Recommendation 93-5* (July 1993) during the period January 1 to March 31, 1995. This Recommendation dealt with the characterizing of wastes in both single and double-shell high level waste tanks. In January 1994, an *Implementation Plan* (WHC 1994) responding to *Recommendation 93-5* was sent to the U.S. Department of Energy for transmittal to the DNFSB. The plan was accepted by the DNFSB on March 25, 1994. The status of each open commitment is described in Section 3 of this report.

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2 CURRENT ISSUES

2.1 Management/Administration

2.1.1 Establishment of the Characterization Project

To give a greater focus to the tank characterization program, a Tank Characterization Project has been established. Len Ermold has been named Director of the Characterization Project. The Director will report to the Executive Vice President for the Tank Waste Remediation Project. He will also report on a dotted line relationship to the President, Westinghouse Hanford Corporation. This additional communication avenue should ensure that the additional resources and support from throughout the company needed to accelerate the characterization sampling schedule and achieve excellence in field performance will be made available.

The Project structure will provide all the assets required to carry out Waste Tank Characterization under the authority of one manager. He has under his direction the following resources:

- Operations
- Technical Basis Engineering
- Process Engineering
- Equipment Engineering
- New Equipment Engineering
- Laboratory Services
- Analytical Services
- Program Management
- Environmental, Safety and Quality
- Operational Readiness Reviews and Conduct of Operations
- Regulatory Interface
- ICF Kaiser Hanford Interface
- Pacific Northwest Laboratories (PNL) Interface

Experienced managers with proven records of achievement have been recruited from throughout Westinghouse Hanford Company to fill these positions.

2.2 Technical

2.2.1 Data Quality Objectives (DQOs)

Information requirements have been developed through the Data Quality Objectives (DQO) process. The process has revealed areas where assumptions or models must be used, particularly in support of the tank safety program. Samples are required to ensure that the assumptions are valid and provide technical justification for applying the data requirements to all tanks.

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DQO documents addressing tank safety issues will be provided at the end of April 1995. Each DQO will consist of two parts; the first part (baseline) will be used in the next two years to gather sufficient sample information to prove the viability of the proposed alternate safety screening and safety issue resolution logic. The second part will consist of draft DQOs based on the proposed alternate safety screening and safety issue resolution logic. The second part will become active if the initial sampling and analysis confirm the assumptions made in the proposed alternate safety screening and safety issue resolution logic.

Data will be collected using the baseline DQOs to establish the viability of the proposed new approach. The draft DQOs will be tested, modified, and optimized during this period. They will be implemented when the new technical approach is accepted and established.

2.2.2 Overall Tank Characterization Plan

The proposed "Approach for Tank Safety Characterization of Hanford Site Waste," WHC-EP-0843, was transmitted to the Department of Energy, Richland Field Office (DOE-RL) in March. This document outlines the evolving safety screening strategy that will be confirmed by tank sampling. In parallel with a series of reviews and discussions of this approach, an interim Safety Screening Overall Tank Characterization Plan will be developed to establish the priorities for the tank sampling schedule for the next several quarters. This plan will focus on sampling those tanks that will provide the most information toward confirming the Tank Safety Characterization strategy. These tanks will primarily be bounding tanks for a group of similar waste types or unique tanks. This issue continues rapidly to evolve through discussions with DOE and the DNFSB.

2.2.3 Tank Characterization Reports

No Tank Characterization Reports (TCR) were issued during this Quarter. The analyses and evaluation of those tanks sampled during the last Quarter (October through December 1994) have been accomplished as scheduled. However, an intensive review of the content and format of a TCR has been in progress with DOE-RL and the State of Washington Department of Ecology (WDOE). Several significant issues require resolution before issuing any more TCRs. These issues are expected to be resolved during April 1995.

2.3 Personnel and Equipment

2.3.1 Army Corps of Engineer Evaluation of Core Drilling

The U.S. Army Corps of Engineers was on site January 4-5, 1995, for a two day technical workshop to evaluate the core sampling equipment, procedures, and personnel training. Also discussed were recent and planned improvements to push sampling, rotary sampling, auger sampling and status of proposed technologies (e.g.,

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cone penetrometer) under development to enhance tank waste sampling. The Corps has provided a report to DOE-RL and to WHC containing observations and recommendations. A response to the recommendations is being drafted for submittal to DOE-RL.

2.3.2 Rotary Mode Core Sample (RMCS) System Availability

In February, Rotary Mode sampling by the RMCS was suspended and the truck placed in push mode service. This decision was based on the low system availability when operating in the rotary mode. This will accelerate push sampling and contribute to gaining on the push portion of the integrated sampling schedule. Rotary sampling will not be resumed until the engineering studies for equipment reliability are completed, reviewed, and recommendations adopted to restore RMCS to efficient operating status. The best estimated date at this time for rotary sampling to resume is June 1995.

Based on a recently completed engineering study, "Rotary Mode Core Sample (RMCS) system Availability Improvement," current RMCS availability is approximately 20%. Availability is "the percent of time the unit is able to sample, excluding down time due to movement from one riser to another and planned maintenance." The study analyzed both known and potential system problems and identified 47 modifications or practices that could be implemented to improve system availability. The 47 modifications or practices were ranked and graded based on their impact on availability. It is estimated that reliability could be increased to 78% by implementing the first 13 of the 47 recommendations. These 13 recommendations have been targeted for early accomplishment during May 1995. A schedule will be developed by December 1995 for the installation of the remaining improvements.

Examples of Early Actions and their Impact on Availability:

- Eliminate or simplify the Exhauster, 16% increase
- Use land power instead of Diesel Generators, 15% increase
- Modify the Remote Latch Unit, 7% increase

Target availability for the RMCS system is 70% by June 1995 and 80% by December 1995.

2.3.3 Sampling System Recovery

Current sample recovery of auger, push mode and rotary mode core sampling systems is approximately 60%, 80%, and 40% of their theoretical maximum values, respectively. While the performance has improved significantly during the last year (up from 14% for push and 30% for auger in early 1994), improvement is still necessary to ensure that samples provide the information necessary to answer characterization program questions.

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The following actions are being taken to increase sample recovery:

- Tests are and will be done to investigate procedural and hardware changes to improve recovery. These tests are being done at labs, test sites and in the field during actual sample jobs.
- Procedural and hardware changes, recommended by outside experts, including the Corps of Engineers and the Tank Sampling Advisory Panel (TSAP), are being implemented.
- Improved planning and gathering of additional tank information, before sampling, are being done to improve tool, technique and sample location selection. This includes, but is not limited to increased use of photography, video and historical records.

It is expected that these actions will result in significant recovery rate improvements.

2.3.4 Improved Sampling Rate

A significant improvement in the rate of field sampling has occurred during this Quarter as shown on the table below:

Tanks Sampled	Vapor	Grab	Auger	Push	Rotary
2nd Quarter FY95	12	10	9	5	0.5
1st Quarter FY95	10	9	4	0.5	0
All FY 1994	33	11	3	2	0

This step improvement in Auger and Push Mode Core Sampling is the result of bringing the support resources for sampling (planning, maintenance, radiological control technicians, and safety) under the same manager. This improvement is expected to continue as support processes for getting work in the field are streamlined and the equipment reliability improvements are installed.

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3 STATUS OF OPEN COMMITMENTS

3.1 Strengthen Technical Management

3.1.1 Commitment 1.5 - Implement Plan to Improve Tech Staff Competencies:

The intent of the commitment items appears to have been met. A meeting with DOE-RL representatives will be requested in April 1995 to review whether any actions are required before requesting that this commitment be closed.

3.1.2 Commitment 1.11 - Field Schedule for Sampling All Activities FY95 & 96:

This schedule will be developed when the safety screening and safety issue resolution logic for Waste Tank Sampling is developed based on the DQOs for both Safety Screening and Disposal Requirements. The Safety Screening DQOs are currently scheduled for completion in April (see Commitment 2.2), and the Retrieval DQOs are scheduled for completion in June 1995 (see Commitments 1.21.12 and 1.21.13). The combined Overall Tank Characterization Plan for sampling will be completed in August 1995. A final FY 95 and FY 96 Sampling Schedule will be developed by October 30, 1995.

An interim schedule will be developed by June 1995 to realign the sampling effort to those tanks determined to be the bounding tanks that will validate the assumptions underlying the proposed safety screening and safety issue resolution logic. This schedule will be started in June/July 1995 when the rotary mode core sampling trucks become available.

3.1.3 Commitment 1.16 - Complete Historical Tank Layering Models:

The Tank Layer Model for the Northeast, Southwest and Northwest quadrants of the Hanford tank farms was delivered in February 1995. This document (LA-UR-94-4269) from Los Alamos National Lab (LANL) describes the Model for all single shell tanks. The Tank Layer Model for the Southeast quadrant (double shell tanks) was delivered by LANL at the end of March 1995. However, WHC review has found improvements that need to be made. The best estimate for submittal to DOE-RL is now May 1995.

3.1.4 Commitment 1.18 - Historical Tank Content Reports NW/SE:

The Historical Tank Contents Estimate (HTCE) for the tanks in the northwest quadrant of the Hanford 200 West area was released March 27, 1995. This document (WHC-SD-WM-ER-351) compiles the historic process records and provides estimates of the contents of 40 single shell tanks. HTCEs for the other 109 single shell tanks were released in 1994 and were revised March 9, 1995. The HTCEs for the Southeast quadrant (double shell tanks) were delivered in 90% draft form at the end of March. The final version of this document will be delivered in June 1995.

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3.1.5 Commitment 1.19 - Develop Statistical Tools for Samples Needed:

A multiple contractor meeting was held March 27 and 28 to review the tools and methods needed to do the technically driven process of characterization planning. The process of planning was applied to three tanks. The process showed most points where incomplete information is currently available, requiring assumptions to continue. There was no step in the process identified where additional development of statistical tools or methods was required to continue. It was concluded that the necessary statistical tools and methods are available and additional sampling is required to augment the database to the point where complete statistical models of tanks can be generated. WHC letter 9458694 dated December 29, 1994 was submitted to DOE-RL requesting that this commitment be closed.

3.1.6 Commitment 1.20 - Develop TWRS Risk Acceptance Criteria:

A draft of the proposed Risk Acceptance Criteria is being reviewed in-house. Submittal to DOE-RL for approval is now scheduled for May 5, 1995.

3.1.7 Commitment 1.21.01 - Ferrocyanide Safety Issue DQO

This DQO was forwarded to DOE-RL in 1994. However, a revision based on new information is being prepared. The revision is scheduled to be submitted to DOE-RL in April 1995.

3.1.8 Commitment 1.21.02 - C-103 Vapor DQO Draft Report

WHC letter 9451694, dated March 25, 1994, forwarded this DQO to DOE-RL. The DQO was not forwarded to DNFSB. C-103 vapor samples were taken and analyzed using this DQO and the safety issue was closed by the issuing of WHC-EP-780. This commitment can be closed when the DQO is forwarded to DNFSB.

3.1.9 Commitment 1.21.03 - C-103 Dip Sample DQO

WHC letter 9451694, dated March 25, 1994, forwarded this DQO to DOE-RL. DQO was not forwarded to DNFSB. However, the C-103 Dip Samples were analyzed using the submitted DQO. The information from the analysis was adequate to resolve the C-103 floating Organic Layer Safety Issue and no further Dip Samples from C-103 are required. This commitment can be closed when the DQO is forwarded to DNFSB by DOE-RL.

3.1.10 Commitment 1.21.04 - C-106 High Heat DQO Final Report

WHC letter 9450464, dated January 19, 1994, forwarded this DQO to DOE-RL. However, the DQO was not forwarded to DNFSB. Neither the Waste Tank Safety Program nor the Retrieval Program requires core sampling of C-106 prior to retrieval. A letter will be submitted to DOE-RL requesting that this commitment be closed.

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3.1.11 Commitment 1.21.05 - Organic Safety Issue DQO Report

WHC letter 9453093, dated May 4, 1994, forwarded this DQO to DOE-RL. The DQO was not forwarded to DNFSB. A revision is in progress and scheduled for completion and submittal to DOE-RL on April 28, 1995.

3.1.12 Commitment 1.21.06 - Safety Screening Module DQO

WHC letter 9451671, dated March 8, 1994, forwarded this DQO to DOE-RL. The DQO was not forwarded to DNFSB. A revision is in progress and scheduled for completion and submittal to DOE-RL on April 28, 1995.

3.1.13 Commitment 1.21.07 - Waste Compatibility DQO Report

WHC letter 9451694, dated March 25, 1994, forwarded this DQO to DOE-RL. The DQO was not forwarded to DNFSB. A revision is in progress and scheduled for completion and submittal to DOE-RL on April 28, 1995.

3.1.14 Commitment 1.21.08 - In-tank Generic Vapor DQO Final

WHC letter 9451694, dated March 25, 1994, forwarded this DQO to DOE-RL. The DQO was not forwarded to DNFSB. Thirty-three of thirty-four tanks have been sampled using this DQO. Eleven final reports based on this DQO have been accepted by DOE-RL and the Washington State Department of Ecology (WDOE). This commitment can be closed when the DQO is forwarded to DNFSB.

3.1.15 Commitment 1.21.09 - Vapor Rotary Core DQO Final Draft Report

WHC letter 9451694, dated March 25, 1994, forwarded this DQO to DOE-RL. The DQO was not forwarded to DNFSB. This DQO is will be needed when rotary core drilling is resumed in June, if the exhauster instrumentation is retained. It is being reviewed for whether an revision is required prior to its use.

3.1.16 Commitment 1.21.10 - Hydrogen Generating DQO Final Report

WHC letter 9451694, dated March 25, 1994, forwarded the crust burn DQO to DOE-RL. WHC letter 9453471, dated May 16, 1994, forwarded to DOE-RL both the revision to the crust burn DQO and the DQO for core sampling requirements to resolve the flammable gas safety issue. Neither DQO was forwarded to DNFSB. A revision is in progress and scheduled for completion and submittal to DOE-RL on April 28, 1995.

3.1.17 Commitment 1.21.12 - HLW Immobilization DQO Draft Report

WHC letter 9455386, dated August 22, 1994, forwarded this DQO to DOE-RL. The DQO was not forwarded to DNFSB. This DQO, and the LLW Immobilization and

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previously submitted Pretreatment DQO has been restructured into a Retrieval DQO and a Disposal DQO. Both DQOs are scheduled to be submitted to DOE-RL on June 30, 1995.

3.1.18 Commitment 1.21.13 - LLW Immobilization DQO Draft Report

WHC letter 9455386, dated August 22, 1994, forwarded this DQO to DOE-RL. The DQO was not forwarded to DNFSB. This DQO, and the HLW Immobilization and previously submitted Pretreatment DQO have been restructured into a Retrieval DQO and a Disposal DQO. Both DQOs are scheduled to be submitted to DOE-RL on June 30, 1995.

3.2 Accelerate Safety Related Characterization

3.2.1 Commitment 2.1 - DQOs for all Six Safety Issues

WHC letter 9453471, dated May 16, 1994, reported these DQOs complete to DOE-RL. The DQOs were not forwarded to DNFSB. The need for a Criticality DQO was removed when the Criticality USQ was closed, however, analysis for fissile content will be included in the Safety Screening DQO to provide information to support Criticality issue closure. The Tank Vapor issue is now covered by two safety DQOs besides the In-Tank Generic Vapor DQO: 1) Safety Screening DQO, and 2) Hazardous Vapor Safety Screening DQO. The Ferrocyanide, Organic, and Flammability DQOs are being revised under Commitment 1.21 items. A letter will be submitted to DOE-RL requesting closure of this commitment when all Safety Issue DQOs revisions have been submitted to DOE-RL.

3.2.2 Commitment 2.2 - Safety Screening Module DQO Report

WHC letter 9451671, dated March 8, 1994, forwarded this DQO to DOE-RL. The DQO was not forwarded to DNFSB. A revision is in progress and scheduled for completion and submittal to DOE-RL on April 28, 1995.

3.2.3 Commitment 2.3 - Complete Sampling & Analysis of All Watch List Tanks

The completion date for this commitment depends upon the numbers and types of samples required by the sampling Overall Safety Screening Tank Characterization Plan, scheduled to be completed in August 1995. The date for completing this commitment will be determined by the FY 95/96 Sample Schedule. This schedule is expected to be complete by October 30, 1995.

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3.3 Improve the Quality and Quantity of Sampling

3.3.1 Commitment 3.2 - Review Characterization Field Procedures/DOE Conduct of Operations

Review Characterization Field Procedures: A series of table top reviews of all Characterization Operating Procedures was started on March 15, and will be completed by June 30, 1995. These reviews are being done by Certified Operators, Procedure Writers, Equipment Engineers, Industrial and Nuclear Safety representatives, and Characterization Operations Managers. When each review is completed, the changes developed are incorporated into the procedure. A field validation Walkdown of the procedure will then be conducted by Certified Operators and Persons In Charge (PICs). The required changes identified by this field validation will then be incorporated into the procedure. The field validation of all active procedures is scheduled to be completed by August 1995.

Conduct of Operations Assessment: A Conduct of Operations Assessment was performed by the newly formed Characterization Operational Readiness Assessment and Field Conduct of Operations Group. This Group consists of management and personnel from the WHC Conduct of Operations Directorate, and other personnel from East and West Tank Farms. An assessment was conducted of both field sampling operations and analytical laboratory operations during March. Several corrective phases remain, including formulation of an action plan, implementation of the necessary corrective action, and reassessment. These actions are scheduled to be completed by August 31, 1995.

3.3.2 Commitment 3.10 - Qualify Two Additional Push/Rotary Mode Crews

Two additional Rotary Mode Core Sampling crews are scheduled to be trained and Certified by October 1995. This will be accomplished by training an existing Push trained crew on the Rotary Truck, and by training an existing Auger trained crew on both the Push and Rotary Trucks. This will provide a total of one Push Mode and three Rotary Mode trained crews. Rotary Mode crews are also trained in Push Mode as a prerequisite. Meeting this schedule is contingent on the impact of the continuing Involuntary Reduction of Force on the existing Certified Sampling Crews.

3.3.3 Commitment 3.11 - Additional Rotary Mode Core Systems

Rotary Mode Core Sample Trucks Numbers three and four have been completed in fabrication and are undergoing acceptance testing. Completion of Acceptance Testing, Operational Testing, Permitting, and Readiness Assessment is scheduled to complete by the end of June 1995. Evaluations, planning and scheduling are currently underway for additional modifications to improve the reliability of these trucks.

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3.3.4 Commitment 3.12 - Hire/Train/Qualify Four Additional Rotary Mode Crews

When the Implementation Plan was developed, DOE planned to have four sampling trucks and an adequate number of crews to operate those trucks around-the-clock, if necessary, to meet the aggressive two and three year sampling schedules agreed to with the Board. The schedule was dependent on having one rotary-mode core sampling truck in March 1994, two additional units in October, and completing the sampling technical basis in parallel. The first unit was nearly eight months late and experienced significant reliability and sampling problems. The second and third trucks are also significantly behind schedule. Until the reliability and sampling problems associated with the first truck is resolved it would not be cost efficient to hire, train, and qualify and maintain additional crews. In addition, WHC and DOE are evaluating a new strategy that has the potential to significantly reduce the number of core samples needed to characterize the tanks. This strategy would also affect the number and training of crews required to perform the work. Once the tank sampling requirements are established, the required number of trucks will be re-evaluated to determine the need for trained and qualified crews.

3.3.5 Commitment 3.13 - Deploy Prototype Cone Penetrometer

Procurement activities for the Cone Penetrometer are currently on hold while the cost, schedule, and technical options for this work are reevaluated. A Value Engineering Review is scheduled for the end of April to decide the need and form of this instrument. The current schedule commitment to deploy this instrument is September 1996. However, this schedule will be reassessed when the Value Engineering Review is complete.

3.3.6 Commitment 3.14 - Installation of Flammable Gas Monitors

Installation of Standard Hydrogen Monitoring Systems (SHMS) on all Flammable Gas Watch List Tanks was completed on March 27, 1995. A letter is being submitted to DOE-RL documenting this completion.

3.3.7 Commitment 3.16 - Direct Drill Bit Temperature Monitoring

Laboratory testing of a prototype drill bit temperature monitor has been complete at Sandia National Laboratory. Plans are underway to test the prototype on a drill string at Hanford. The remaining cost and schedule is under evaluation, together with a determination of the need for this device. The earliest that this device could be deployed in a waste tank will be April 1996 or later.

3.3.8 Commitment 3.18 - Develop Means for Measuring Complete Sample Recovery

An X-Ray imaging system for determining core sample recovery is being procured and is scheduled for field deployment in September 1995.

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3.4 Streamline Tank Access

All Commitments are Closed.

3.5 Improve the Quality and Quantity of Analyses

3.5.1 Commitment 5.1 - Install Core Scanning in Hot Cell

WHC letter 9455940, dated September 1, 1994, requested deletion of this commitment. DOE-RL letter 94-CHD-109, dated October 25, 1994 states that DOE will be requesting deletion of this commitment. DOE EM-36 letter of March 9, 1995 reported to DNFSB that this capability was not needed and recommended deletion of this commitment.

3.5.2 Commitment 5.2 - Complete Renovation of 325 'A' Hot Cell

When the 93-5 Implementation Plan was developed, substantial sampling and analysis capacity were projected to be needed. However, the anticipated work load has not been realized because of the inability to take samples reliably and the lack of a safety screening and safety issue resolution logic for sampling. With the new 222-S hot cells operational, 222-S has sufficient hot cell capacity, making 325 hot cells unnecessary. A transition plan is being developed to place the 325 hot cells in a safe configuration. DOE EM-36 letter of March 9, 1995 reported to DNFSB that the 325 hot cells will not be needed until the safety screening and safety issue resolution logic is completed and the final sampling needs are evaluated.

3.5.3 Commitment 5.4 - Cyanide Speciation Technical Transfer (PNL)

WHC letter 9455940, dated September 1, 1994, requested deletion of this commitment. DOE-RL letter 94-CHD-109, dated October 10, 1994 states that DOE-RL will be requesting deletion of this commitment. DOE EM-36 letter of March 9, 1995 reported to DNFSB that Cyanide Speciation will not be needed and recommended deletion of this commitment.

3.5.4 Commitment 5.13 - Upgrade Los Alamos National Laboratory (LANL) Lab to Ready To Serve Mode:

Due to the inability to take tank samples reliably and a lack of safety screening and safety issue resolution logic for sampling, the anticipated analytical workload has not been realized. Consequently, the role of the Los Alamos National Laboratory (LANL) was reevaluated and changed to support ongoing pretreatment and process development studies. This commitment was closed by the submittal of DOE-RL letter 95-CHD-025 to DNFSB, J.T. Conway, dated April 10, 1995 to DNFSB.

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3.5.5 Commitment 5.14 - Two PAS-1 Casks will be ready for use Jan. 1995

The Safety Analysis Report for Packaging amendment was prepared by VECTRA Technologies. The report was submitted to DOE-RL and forwarded to DOE-HQ for approval. Lawrence Livermore National Laboratory (contracted to support the technical review with EH-332) has issued a second round of questions. The answers have been drafted by WHC and will be submitted to DOE-HQ in April. DOE-RL letter 95-CHD-023 states that the Certificate of Compliance is expected by May 31, 1995. The casks will be used to ship pretreatment process samples to LANL, not characterization samples as originally planned.

3.6 Improve Data Management

All Commitments are Closed.

3.7 Change Control

3.7.1 Commitment 7.1 - Formally Submit Changes to Commitments

A Change Request is expected to be submitted to DOE-RL in May 1995. This request will provide new milestone dates based on the best knowledge of tank sampling needs derived from both draft and completed DQOs and the draft Sampling alternate safety screening and safety issue resolution logic. It will also reflect the current and planned equipment and staff resources.

3.7.2 Commitment 7.2 - Address Changes to Milestones in Quarterly

This commitment is ongoing. A status of all open milestones with new expected completion dates is provided in this report.

DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1995

4 APPENDICES

4.1 Sampling Schedule for Second Quarter (January - March) 1995 (Report Quarter)

Inserted following this page.

ACTIVITY ID	LEVELED ES	LEVELED EF	1995											
			JAN			FEB				MAR				
			9	16	23	30	6	13	20	27	6	13	20	27
GS61-4 Completed AS 21FEB95 AF 22FEB95	9JAN95 7:00	11JAN95 14:59	<input type="checkbox"/> AZ-102 Grab Sample Process\Compability - Jones											
AS06-4 Completed AS 14FEB95 AF 17FEB95	11JAN95 7:00	17JAN95 14:59	<input type="checkbox"/> AX-104 Auger Sample 2 (Obtained 0)											
VS03-4 Completed AS 17JAN95 AF 18JAN95	12JAN95 7:00	16JAN95 14:59	<input type="checkbox"/> T-107 Vapor Sample (3)											
GS62-4 Completed AS 27FEB95 AF 3MAR95	16JAN95 7:00	18JAN95 14:59	<input type="checkbox"/> AZ-101 Grab Sample Compability - Jones											
RS01-4 Completed AS 19JAN95 AF 20JAN95	16JAN95 7:00	10FEB95 22:59	<input type="checkbox"/> BY-105 Rotary Sample 2 Segment 9											
VS09-4 Completed AS 19JAN95 AF 20JAN95	17JAN95 7:00	19JAN95 14:59	<input type="checkbox"/> T-111 Vapor Sample (3)											
GS06-4 Completed AS 15DEC94 AF 15DEC94	23JAN95 7:00	25JAN95 14:59	<input type="checkbox"/> AP-101 Grab Sample Compatability - Jones											
AS37-4 Completed AS 21FEB95 AF 24FEB95	25JAN95 7:00	31JAN95 14:59	<input type="checkbox"/> TY-104 Auger Sample 2 Segment 1											
VS45-4 Completed AS 7FEB95 AF 8FEB95	27JAN95 7:00	31JAN95 14:59	<input type="checkbox"/> B-103 Vapor Sample (3)											
GS15-4 Completed AS 14FEB95 AF 15FEB95	30JAN95 7:00	1FEB95 14:59	<input type="checkbox"/> AN-102 Grab Sample Compatability - Jones											
AS25-4 Completed AS 27FEB95 AF 3MAR95	1FEB95 7:00	7FEB95 14:59	<input type="checkbox"/> TY-106 Auger Sample 2 Segment 1											
GS33-4 Completed AS 14MAR95 AF 16MAR95	6FEB95 7:00	8FEB95 14:59	<input type="checkbox"/> BX-106 Grab Sample Compatability - Jones											
AS30-4 Completed AS 6MAR95 AF 10MAR95	8FEB95 7:00	14FEB95 14:59	<input type="checkbox"/> BY-103 Auger Sample 2 Segment 1											
VS10-4 Completed AS 13FEB95 AF 15FEB95	8FEB95 7:00	10FEB95 14:59	<input type="checkbox"/> U-103 Vapor Sample (3)											
GS29-4 Completed AS 21MAR95 AF 22MAR95	13FEB95 7:00	15FEB95 14:59	<input type="checkbox"/> BY-105 Grab Sample Compatability - Jones											
RS23-4 Completed AS 16FEB95 AF 17FEB95	13FEB95 7:00	27FEB95 14:59	BY-106 Rotary Sample 1 Segment 13 (2nd Riser) <input type="checkbox"/>											
VSOA-4 Completed AS 16FEB95 AF 17FEB95	13FEB95 7:00	15FEB95 14:59	<input type="checkbox"/> U-107 Vapor Sample (3)											
TC15-4 Completed AS 23FEB95 AF 24FEB95	15FEB95 7:00	17FEB95 14:59	<input type="checkbox"/> TY-101 Thermocouple Installation											
VS14-4 Completed AS 23FEB95 AF 24FEB95	16FEB95 7:00	21FEB95 14:59	<input type="checkbox"/> U-105 Vapor Sample (3)											
GS30-4 Completed AS 22MAR95 AF 23MAR95	21FEB95 7:00	23FEB95 14:59	BY-103 Grab Sample Compatability - Jones <input type="checkbox"/>											
AS21-4 Completed AS 13MAR95 AF 17MAR95	23FEB95 7:00	1MAR95 14:59	<input type="checkbox"/> B-112 Auger Sample 2 Segment 1											

Plot Date 17APR95 07:35
 Data Date 15SEP94 7:00
 Project Start 10CT93 7:00
 Project Finish 8JAN98 22:59

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

WESTINGHOUSE HANFORD COMPANY
 TANK FARM OPERATIONS
 SAMPLING SCHEDULE

Sheet 1 of 2

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Date	Revision	Checked	Approved

ACTIVITY ID	LEVELED ES	LEVELED EF	1995											
			JAN				FEB				MAR			
			9	16	23	30	6	13	20	27	6	13	20	27
RS03-4	27FEB95 15:00	13MAR95 14:59	BY-104 Rotary Sample 1 Segment 7 <input type="checkbox"/>											
GS17-4	28FEB95 7:00	2MAR95 14:59	AW-106 Grab Sample Compatability - Jones <input type="checkbox"/>											
Completed AS 7MAR95 AF 9MAR95														
PS68-4	1MAR95 7:00	29MAR95 14:59	C-107 Push Sample 3 Segment 5 <input type="checkbox"/>											
C-107 Sludge\saltcake sample - 2000 ml scaling Additional sludge\saltcake 1000ml additio Completed AS 1MAR95 AF 10MAR95														
RS04-10	1MAR95 7:00	25APR95 14:59	Engineering Window to Enhance System Operability <input type="checkbox"/>											
AS15-4	2MAR95 7:00	8MAR95 14:59	C-111 Auger Sample 2 Segment 1 <input type="checkbox"/>											
GS54-4	3MAR95 7:00	7MAR95 14:59	244A DCRT Grab Sample Compatability - Jones <input type="checkbox"/>											
Completed AS 23MAR95 AF 23MAR95														
PS16-4	6MAR95 7:00	31MAR95 14:59	U-201 Push Sample 3 Segment 2 (Rotary Truck) <input type="checkbox"/>											
Completed AS 8MAR95 AF 21MAR95														
VS66-4	8MAR95 7:00	10MAR95 14:59	U-111 Vapor Sample (3) <input type="checkbox"/>											
Completed AS 27FEB95 AF 28FEB95														
AS07-4	9MAR95 7:00	15MAR95 14:59	C-101 Auger Sample 2 Segment 2 <input type="checkbox"/>											
VS89-4	13MAR95 7:00	15MAR95 14:59	U-106 Vapor Sample (3) <input type="checkbox"/>											
Completed AS 6MAR95 AF 8MAR95														
RS25-4	13MAR95 15:00	10APR95 14:59	BY-108 Rotary Sample 2 Segment 5 <input type="checkbox"/>											
GS10-4	15MAR95 7:00	17MAR95 14:59	AN-106 Grab Sample Process Control - Jones <input type="checkbox"/>											
TC14-4	16MAR95 7:00	20MAR95 14:59	TY-104 Thermocouple Installation <input type="checkbox"/>											
Completed AS 6MAR95 AF 6MAR95														
EFLW016	21MAR95 7:00	23MAR95 14:59	FIELD WORK: INSTALL LOW BY106 <input type="checkbox"/>											
AS17-4	23MAR95 7:00	29MAR95 14:59	C-203 Auger Sample 2 Segment 1 <input type="checkbox"/>											
VS0S-4	23MAR95 7:00	27MAR95 14:59	S-102 Vapor Sample (3) <input type="checkbox"/>											
Completed AS 13MAR95 AF 14MAR95														
VS07-4	28MAR95 7:00	30MAR95 14:59	S-111 Vapor Sample (3) <input type="checkbox"/>											
Completed AS 15MAR95 AF 21MAR95														
PS25-4	29MAR95 7:00	25APR95 14:59	C-105 Push Sample 2 Segment 3 <input type="checkbox"/>											
Completed AS 13MAR95 AF 23MAR95														
TC16-4	30MAR95 7:00	3APR95 14:59	TY-103 Thermocouple Installation <input type="checkbox"/>											

Plot Date 17APR95 07:35
 Data Date 15SEP94 7:00
 Project Start 10CT93 7:00
 Project Finish BUAN98 22:59

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

SAMS

WESTINGHOUSE HANFORD COMPANY
 TANK FARM OPERATIONS
 SAMPLING SCHEDULE

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4.2 Tanks Sampled during Second Quarter (January - March) 1995

<u>Tank</u>	<u>Type</u>	<u>Date Sampled</u>
241-C-102	Auger	01/13/95
241-T-107	Vapor	01/18/95
241-T-111	Vapor	01/20/95
241-BY-106 ¹	Rotary	01/25/95
241-AW-101	Auger	01/27/95
241-AP-107	Grab	02/02/95
241-B-103	Vapor	02/08/95
241-C-103	Push	02/09/95
241-AX-102	Auger	02/14/95
241-AN-102	Grab	02/15/95
241-U-103	Vapor	02/15/95
241-AX-104 ²	Auger	02/17/95
241-U-107	Vapor	02/17/95
241-TY-104	Auger	02/24/95
241-AZ-102	Grab	02/24/95
241-U-105	Vapor	02/24/95
241-U-111	Vapor	02/28/95
241-TY-106	Auger	03/03/95
241-AZ-101	Grab	03/03/95
241-U-106	Vapor	03/08/95
241-AW-106	Grab	03/09/95
241-BY-103	Auger	03/10/95
241-C-107	Push	03/10/95
241-S-102	Vapor	03/14/95
241-BX-106	Grab	03/16/95
241-B-112	Auger	03/17/95
241-U-201	Push	03/21/95
241-S-111	Vapor	03/21/95
241-BY-105	Grab	03/22/95
241-BY-103	Grab	03/23/95
241-A-244	Grab	03/23/95
241-C-105	Push	03/23/95
241-SX-103	Vapor	03/23/95
241-U-202	Push	03/24/95
241-SX-106	Vapor	03/24/95
241-C-111	Auger	03/25/95
241-C-101	Auger	03/30/95
241-AP-101	Grab	03/30/95

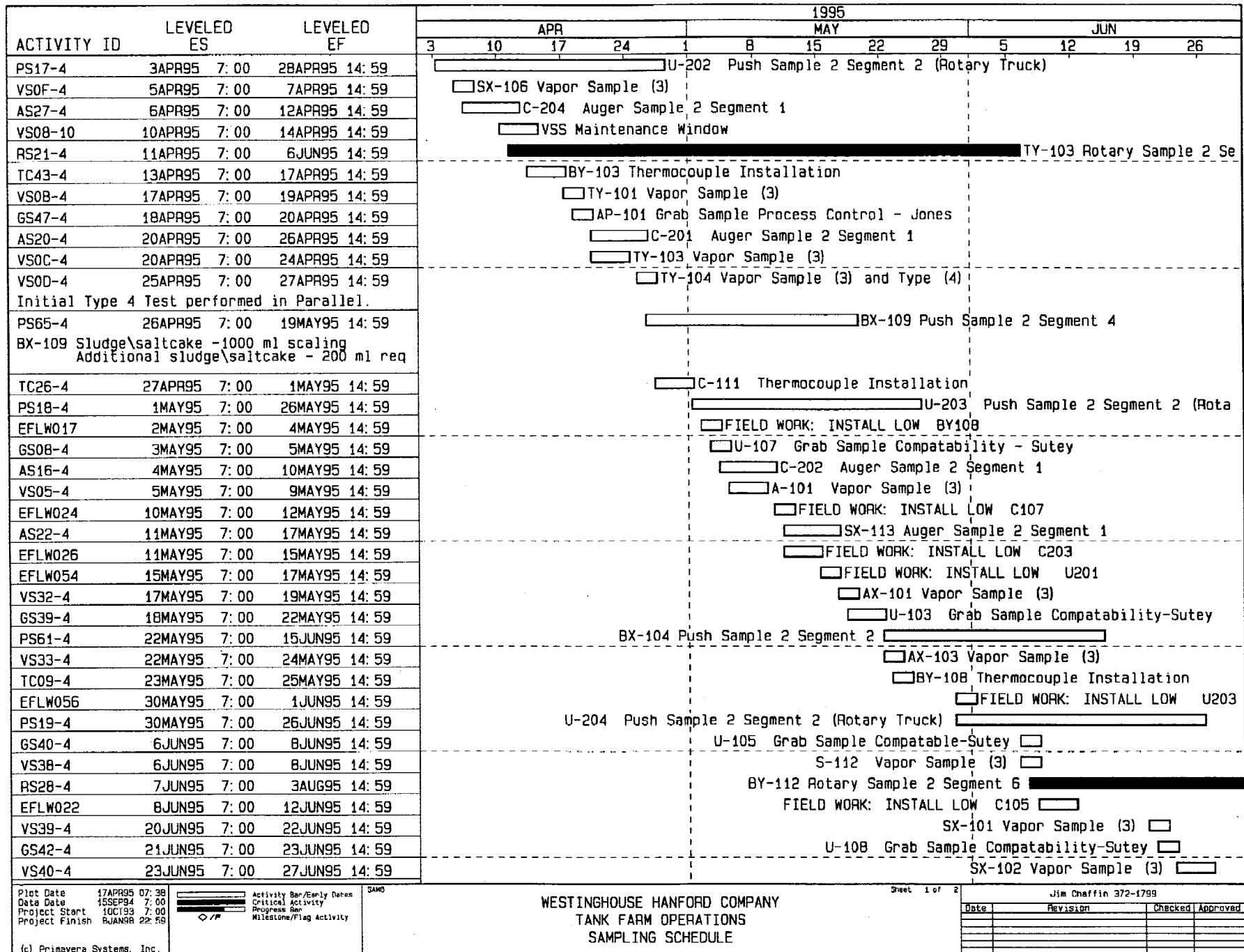
¹ Second riser to be sampled at a later undetermined date.

² Tank will be auger sampled again at a later date due to poor recovery. This tank will not count as a tank sampled.

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4.3 Sampling Schedule for Third Quarter (April - June) 1995 (Following Quarter)

Inserted following this page.



Plot Date 17APR95 07:38
 Data Date 16SEP94 7:00
 Project Start 10CT93 7:00
 Project Finish 02JAN98 22:59

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

SAMS

WESTINGHOUSE HANFORD COMPANY
 TANK FARM OPERATIONS
 SAMPLING SCHEDULE

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Date	Revision	Checked	Approved

ACTIVITY ID	LEVELED ES	LEVELED EF	1995											
			APR				MAY				JUN			
			3	10	17	24	1	8	15	22	29	5	12	19
EFLW057	27JUN95 7:00	29JUN95 14:59	FIELD WORK: INSTALL LOW U204 <input type="checkbox"/>											
VS41-4	28JUN95 7:00	30JUN95 14:59	SX-104 Vapor Sample (3) <input type="checkbox"/>											

Plot Date 17APR95 07:36
 Data Date 15SEP94 7:00
 Project Start 10CT93 7:00
 Project Finish 02JAN98 22:59

Activity Bar/Early Dates
 Critical Activity
 Progress Bar
 Milestone/Flag Activity

SMB

WESTINGHOUSE HANFORD COMPANY
 TANK FARM OPERATIONS
 SAMPLING SCHEDULE

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4.4 Tank Characterization Plan Completion Schedule

A current schedule for issuing Tank Characterization Plans (TCP) is not available. TCPs are being issued to support the Sampling Schedule on a "just in time" basis. When the ongoing review of the alternate safety screening and safety issue resolution logic alternate safety screening and safety issue resolution logic has been completed, a schedule for issuing TCPs based on the Safety Screening DQO will be developed. It is anticipated that this scheduled will be published before the end of the next Quarter (June 1995).

4.5 List of Tank Characterization Reports issued during the Quarter

No Tank Characterization Reports were issued during this Quarter. See Paragraph 2.2.2 for a discussion of this issue.

4.6 List of Commitments submitted to DOE-RL during the Quarter

5.13 Upgrade LANL Laboratory to "Ready to Serve" Mode 2/6/95

4.7 List of Commitments Recommended by DOE as Closed during the Quarter

1.23 Identify Bounding Tanks for Disposal 3/8/95

5 REFERENCES

None.

