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

**APR 30 1997**

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DNF SAFETY BOARD

97-WSD-113

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

Dear Mr. Chairman:

TRANSMITTAL OF THE DEFENSE NUCLEAR FACILITIES SAFETY BOARD (DNFSB)  
RECOMMENDATION 93-5 IMPLEMENTATION PLAN (IP) QUARTERLY REPORT FOR JANUARY  
THROUGH MARCH 1997

The DNFSB 93-5 quarterly report for January through March 1997 is attached. This quarterly report addresses issues and milestones, as presented in the Recommendation 93-5 IP, Revision 1.

The last quarterly report transmitted a change to the IP which modified the list of tanks that will be sampled to satisfy two milestones for core sampling High Priority Tanks (HPT). Subsequent to this transmittal, the HPT prioritization list was again revised by the contractor, who reviews this list on at least a yearly basis. Based on the review, we may wish to pursue additional changes to the HPT list. We will propose a final HPT list when we reach agreement with DNFSB staff about which tanks should be sampled to meet the milestones.

The last quarterly report also committed to providing revised HPT sampling schedule pages for the IP, following a review of ways to recover the delays from the Flammable Gas Unreviewed Safety Question and Rotary Mode Core Sampling (RMCS) qualification for use in flammable gas tanks. This schedule will not be issued until the RMCS qualification issue is resolved and agreement, as discussed above, is reached on the final HPT list. Until that schedule is issued, the two milestones associated with the sampling of the HPTs continue to be in jeopardy.

Significant accomplishments this quarter included the resumption of field sampling activities and the completion of four IP milestones. Several other milestones, related to the Final Safety Analysis Report and to resolution of the High-Heat Safety Issue in Tank C-106, are behind schedule. The quarterly report provides details on the causes of the delays as well as projected completion dates.

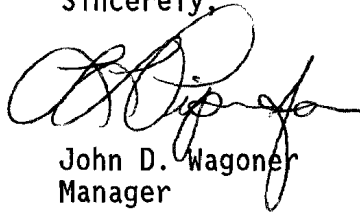
The Honorable Mr. John T. Conway  
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If you have any questions, please contact me or your staff may contact Jackson Kinzer, Assistant Manager for the Tank Waste Remediation System, on (509) 376-7591.

Sincerely,



John D. Wagoner  
Manager

WSD:NWW

Attachment

cc w/attach:  
J. Owendoff, EM-2  
J. Tseng, EM-4  
R. Erickson, EM-38  
K. Lang, EM-38  
M. Whitaker, S-3.1

The Honorable Mr. John T. Conway  
96-WSD-113

-3-

APR 30 1997

cc w/o attach:  
T. J. Kelley, LMHC  
M. A. Payne, LMHC

cc w/attach:  
L. D. Pennington, LMHC

**DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1997****EXECUTIVE SUMMARY**

Significant accomplishments this quarter included completion of four milestones and resumption of field sampling activities. In addition, the contractor has submitted the Technical Safety Requirements (TSR) and Compliance Implementation Plan (CIP) for the Basis for Interim Operations (BIO). The TSRs and CIP are being reviewed by the U.S. Department of Energy, Richland Operations Office (RL.)

The current issues discussed are the resumption of rotary mode core drilling; the schedule for core sampling the High Priority Tanks (HPT); the schedule impacts to completing the HPT core sampling milestones; Revision 3 to the "Tank Characterization Technical Sampling Basis," (formerly the "Tank Waste Characterization Basis"); a temporary hold on push mode core drilling to review the Authorization Basis (AB); the status of the Final Safety Analysis Report (FSAR); the status of the High Heat Safety Issue milestones; and the slowdown of laboratory analyses at the 222-S Laboratory because of corrective actions to findings from a State of Washington Department of Ecology (Ecology) audit.

RL has approved Tank Farm Operations Standing Orders for the East and West Tank Farms that implemented flammable gas controls and compensatory measures. This allowed most sampling work to resume during the quarter. Milestone 5.4.3.5f, "Letter reporting completion of AN Tank Farm ventilation upgrade," was completed in January 1997. Milestones 5.5.6.1a, "Letter reporting completion of *Tank Waste Characterization Basis* (Brown et al. 1995) High Priority Tanks sampling and analysis for the Disposal Program," and 5.6.3.1g, "Letter reporting completion of *Tank Waste Characterization Basis* (Brown et al. 1995) High Priority Tanks sampling and analysis," both due in March 1998, continue to be in jeopardy.

Push mode sampling has restarted. However, resuming Rotary Mode Core Sampling (RMCS) has been delayed. Design issues related to compliance with the RMCS Flammable Gas Safety Assessment (SA) have impacted deployment. The number of these issues and the difficulty in their resolution has required exploring many alternatives, ranging from the design and construction of an entirely new exhaustor to reevaluating the flammable gas requirements of the SA.

Milestone 5.4.3.1d, "Approved FSAR," due June 1997 is behind schedule. Review comments have been provided to the contractor by RL. A schedule and work scope for completing the FSAR have been negotiated with the contractor.

Three milestones related to resolution of the High Heat Safety Issue in Tank C-106 are behind schedule. This delay is the result of issues related to the risk of performing construction work in parallel with approval of the retrieval SA.

Change 2 to Recommendation 93-5 IP, Revision 1, was submitted with the last quarterly report. This change recommended modifying the HPT list. Revision 3 of the "Tank Characterization Technical Sampling Basis," (formerly "Tank Waste Characterization Basis,") was issued in March. New programmatic information has reduced the sampling priority of some HPTs and increased the priority of some non-HPTs. The significance of these priority changes to the core sampling HPT list is being reviewed with the Defense Nuclear Facilities Safety Board (DNFSB) staff. When agreement is reached with the DNFSB, Change 2 will be distributed.

**DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1997**

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**DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1997**

**1 PURPOSE**

This quarterly report covers High Level Waste Tank Characterization activities at the Hanford Site related to DNFSB Recommendation 93-5 during the period January 1 to March 31, 1997. The Recommendation dealt with the insufficient technical information to ensure safe storage, operation, retrieval, and disposal of the Hanford High-Level Tank wastes in both Single-Shell Tanks (SST) and Double-Shell Tanks (DST). An IP responding to Recommendation 93-5 was transmitted to the DNFSB by the Secretary of Energy in January 1994. The plan was accepted by the DNFSB on March 25, 1994. On June 17, 1996, Revision 1 to the IP was submitted to the DNFSB. Revision 1 was accepted by the DNFSB on September 4, 1996, with comments.

**DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1997**

**2 QUARTERLY HIGHLIGHTS**

**2.1 Milestones Submitted - The following milestone completion reports were submitted to the DNFSB during this quarter:**

- 2.1.1 5.4.3.5f, "Letter reporting completion of AN Tank Farm ventilation upgrade," due November 30, 1996, submitted on January 30, 1997.
- 2.1.2 5.4.3.5h, "Letter reporting completion of supporting technical document on Flammable Gas Safety Issue. (This topical report will describe the current understanding of the issue and future work for resolution,)" due December 31, 1996, submitted on January 30, 1997.
- 2.1.3 5.6.3.1c, "Letter reporting submittal of proposed content and format for tank-by-tank safety status evaluation," due January 31, 1997, submitted on January 30, 1997.
- 2.1.4 5.4.3.5k, "Letter reporting completion of retained gas sampling in tanks AW-101, AN-103, AN-104, AN-105, and A-101. If the retained gas sampling performance is satisfactory, include future deployment schedule," due March 31, 1997, submitted on March 28, 1997.

**2.2 BIO Update - Conditional approval of the Tank Waste Remediation System (TWRS) BIO and completion of Milestone 5.4.3.1c, "Approved BIO," was reported to the DNFSB on December 30, 1996. During this quarter, the contractor submitted several items in response to RL requests. These items included a revision to the BIO to incorporate comments and actions requested in the BIO Safety Evaluation Report, revised TSRs, a Compliance Implementation Plan (CIP) for the BIO, and an additional set of BIO text revisions to ensure consistency with the revised TSRs and CIP. These documents are being reviewed for approval by RL.**

DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1997

**3 CURRENT ISSUES**

**3.1 Management/Administration**

3.1.1 222-S Ecology Audit Impact - An Ecology audit during February 1997 outlined problems with waste storage and disposal. As a result Rust Federal Services Hanford suspended waste generating work at the 222-S Laboratory to clarify procedures and train personnel. A plan to close the issues raised by Ecology is being implemented. Fifty percent of the analytical processes were returned to operation at the end of March 1997. Full production capability is expected to be restored during April 1997. The impact on Characterization sample analysis has been limited to approximately a 30-day delay in the issuance of five laboratory final analytical reports.

**3.2 Technical**

3.2.1 Resumption of Rotary Core Drilling - As reported to the DNFSB on April 4, 1997 in a separate letter, the resumption of RMCS operation continues to be delayed. An RL Independent Operational Readiness Review (ORR) was completed in early December 1996. Authorization to start RMCS in flammable gas tanks was granted by RL pending completion of three prestart items identified during the ORR. These items were completed during February 1997, and RL approval of their resolution has been given. However, during resolution of these items, several additional design issues related to compliance with the SA were discovered. Resolution of these items has proven to be quite difficult. Alternate paths are being evaluated to either 1) adapt for use a similar exhauster designed for operation during the pumping of waste tank saltwells, or 2) revise the AB to allow operation of the existing exhauster (with small modifications) in lower risk flammable gas tanks. These issues and the estimated schedule impacts will continue to be updated during weekly conference calls.

3.2.2 HPTs Core Sampling Schedule - The last Quarterly Report forwarded Change 2 to the Recommendation 93-5 IP, Revision 1. This change adjusted the core sampling HPT list to reflect the tank sampling priorities in Revision 2 to the "Tank Waste Characterization Basis," WHC-SD-WM-TA-164, and committed to providing revised sampling schedule pages following a review of ways to recover the delays from the Flammable Gas Unreviewed Safety Question and RMCS qualification for use in flammable gas tanks. Subsequent to transmittal of this change, the HPT list was again revised by the contractor. RL will propose a final HPT list when agreement is reached with DNFSB staff on this topic. This schedule will be issued when the change discussed above is agreed upon, and the RMCS exhauster is qualified for service on flammable gas tanks.

3.2.3 HPT Milestones Completion Delayed - Sampling delays, discussed in Paragraph 3.2.1 above, will prevent on-time completion of Milestones 5.5.6.1a, "Letter reporting completion of "Tank Waste Characterization Basis (Brown et al. 1995) High Priority Tanks sampling and analysis for the Disposal Program," due March 1998, and 5.6.3.1g, "Letter reporting completion of "Tank Waste Characterization Basis (Brown et al. 1995) High Priority Tanks sampling and analysis," also due March 1998. Once the RMCS is deployed and operational, a revised completion date will be provided.

3.2.4 Revised Technical Sampling Basis Issued - Revision 3 of "Tank Characterization Technical Sampling Basis," HNF-SD-WM-TA-164, (formerly "Tank Waste



## DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1997

Characterization Basis," WHC-SD-WM-TA-164) was issued in March. This document provides integrated sampling priority lists for all types of sampling based on programmatic needs. The title was changed to more clearly convey this document's purpose. New programmatic information has reduced the sampling priority of some HPTs and increased the priority of some non-HPTs. The significance of these priority changes to the core sampling HPT list is being reviewed with the DNFSB staff. When agreement is reached with the DNFSB staff, Change 2 to the IP, Revision 1, will be distributed.

- 3.2.5 Push Mode Core Sampling Safety Basis - RL placed a hold on push mode core sampling on February 27, 1997, pending a determination that a clear AB existed for push mode sampling. A letter issued by RL March 8, 1997, added two controls to the AB for push mode core sampling and granted authority to restart sampling. One control requires that the hydraulic bottom detector safety interlock be tested and functional before core sampling a tank, and that it be activated before taking the final sample. The second control specifies that the core drilling trucks will not be modified to allow more hydraulic down force on the drill string than the present maximum limit of 5,300 lbf (pounds force). Both controls were previously in the contractor's operating procedures. Push core sampling was restarted on March 12, 1997. No milestones have been impacted by this issue.
- 3.2.6 FSAR - Milestone 5.4.3.1d, "Approved FSAR," due June 1997, is behind schedule. A draft was submitted by FDH in November 1996 to RL for review. Review comments have been provided to the contractor by RL. A schedule and work scope for completing the FSAR have been negotiated with the contractor. The estimated milestone completion date is December 1997.
- 3.2.7 High Heat Safety Issue - Three milestones related to resolution of the High Heat Safety Issue are behind schedule. Milestone 5.4.3.6b, "Letter reporting completion of tank C-106 retrieval safety assessment," due July 1997, will require additional time to complete the three tiered review program before its approval. The best estimate for completion of this milestone is September 1997. Milestone 5.4.3.6c, "Letter reporting initiation of tank C-106 waste retrieval," due October 1997, will be delayed by the SA and by the installation of equipment modifications required by the SA (previously scheduled in parallel) to eliminate the risk of potential rework resulting from SA changes. The proposed date to complete this milestone is September 1998. Milestone 5.4.3.6d, "Letter reporting completion of topical report to resolve the High Heat Safety Issue," due May 1998, will be delayed by the previous two milestones. The best estimate for submission of this milestone is September 1999. Dates for the last two milestones will be finalized at completion of the SA in September 1997.

### 3.3 Personnel and Equipment: None

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**4 STATUS OF REVISION 1 MILESTONES DUE WITHIN SIX MONTHS OR COMPLETED DURING THE REPORTING QUARTER. INCLUDES DELAYED AND LATE MILESTONES.**

**4.1 Safe Storage of Tank Wastes and Safe Operation of Tank Farms**

**Commitment**  
**Number**

**5.4.3.1 TWRS Manage Tank Waste Function Authorization Basis**

Statement: Upgrade the AB for the TWRS Manage Tank Waste Function

Responsible Manager: Assistant Manager, TWRS

Applicable facilities and programs: TWRS

Milestone deliverables/due dates:

**d. Approved FSAR.**

Due Date: June 1997

Status: Behind schedule. Review comments have been provided to the contractor by RL. A schedule and work scope for completing the FSAR have been negotiated with the contractor. The estimated milestone completion date is December 1997.

**5.4.3.3 Organic Complexants**

Statement: Complete testing and evaluation confirming simulant results with real waste.

Responsible Manager: Assistant Manager, TWRS

Applicable facilities and programs: TWRS

Milestone deliverables/due dates:

**a. Letter reporting completion of supporting technical document on Organic Complexant Safety Issue. (This topical report will describe the current understanding of the issue and future work for resolution).**

Due Date: December 1996

Status: Overdue. Document will be revised to incorporate DNFSB comments by June 1997.

**5.4.3.4 Organic Solvents**

Statement: Use vapor samples to identify organic solvent tanks.

Responsible Manager: Assistant Manager, TWRS

Applicable facilities and programs: TWRS

Milestone deliverables/due dates: None

**5.4.3.5 Flammable Gas**

Statement: Complete analytical evaluations and steady-state vapor samples to determine which flammable gas tanks require mitigative actions. Qualify saltwell pumping and RMCS for flammable gas environments.

Responsible Manager: Assistant Manager, TWRS

Applicable facilities and programs: TWRS

Milestone deliverables/due dates: None

**DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1997**

- d. Letter reporting qualification of RMCS system for use in Flammable Gas Tanks.**  
Due Date: September 1996  
Status: Overdue. Independent ORR completed on December 12, 1996. Open items from ORR resolved in February 1997. Completion requires resolution of design issues identified subsequent to the ORR.
- f. Letter reporting completion of AN Tank Farm ventilation upgrade.**  
Due Date: November 1996  
Status: Complete. Reported to the DNFSB on January 30, 1997.
- h. Letter reporting completion of supporting technical document on Flammable Gas Safety Issue. (This topical report will describe the current understanding of the issue and future work for resolution).**  
Due Date: December 1996  
Status: Complete. Reported to the DNFSB on January 30, 1997.
- k. Letter reporting completion of retained gas sampling in Tanks AW-101, AN-103, AN-104, AN-105, and A-101. If the retained gas sampling performance is satisfactory, include future deployment schedule.**  
Due Date: March 1997  
Status: Complete. Reported to the DNFSB on March 28, 1997.
- l. Letter reporting refinement of flammable gas generation/retention models using void meter and retained gas sampling data.**  
Due Date: May 1997  
Status: On schedule

**5.4.3.6 High Heat**

Statement: Retrieve wastes from tank C-106.

Responsible Manager: Assistant Manager, TWRS

Applicable facilities and programs: TWRS

Milestone deliverables/due dates:

- b. Letter reporting completion of Tank C-106 retrieval safety assessment.**  
Due Date: July 1997  
Status: Behind schedule. Delayed until September 1997 to allow for independent review and approval process.
- c. Letter reporting initiation of Tank C-106 waste retrieval.**  
Due Date: October 1997  
Status: Behind schedule. Equipment modifications will be delayed until the SA is approved (previously scheduled in parallel) to eliminate the risk of potential rework resulting from SA changes. The proposed milestone completion date is September 1998.

**5.4.3.7 Criticality**

Statement: Resolve the Criticality Safety Issue.

Responsible Manager: Assistant Manager, TWRS

Applicable facilities and programs: TWRS

Milestone deliverables/due dates: None

**DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1997**

**4.2 Disposal Program**

**5.5.6.1 Disposal Program Characterization**

Statement: Complete sampling and analysis of "Tank Waste Characterization Basis," (Brown et al. 1995) tanks for disposal.

Responsible Manager: Assistant Manager, TWRS

Applicable Facilities and Programs: TWRS

Milestone deliverables/due date: None

**4.3 Technical Basis for Characterization**

**5.6.3.1 Complete Tank Waste Characterization Basis Sampling and Analysis**

Statement: Complete the sampling and analysis specified by the Tank Waste Characterization Basis (approximately 28 tanks) to provide the highest priority information requested by the programmatic DQOs.

Responsible Manager: Assistant Manager, TWRS

Applicable facilities and programs: TWRS

Milestone deliverables/due dates: None

**c. Letter reporting submittal of proposed content and format for tank-by-tank safety status evaluation.**

Due Date: January 1997

Status: Complete. Reported to the DNFSB on January 30, 1997.

**d. Updated HTCEs.**

Due Date: June 1997

Status: On schedule.

**e. Letter reporting verification of headspace homogeneity and evaluation of variations in headspace vapor concentrations in passively ventilated tanks with changing atmospheric temperatures.**

Due Date: October 1997

Status: On schedule

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5 APPENDICES

5.1 HPT Core Sampling and Analysis Status

Tank	Rank	Planned Samples	Samples Obtained	Sampling Completed	Lab Analysis Completed	Tank Characterization Report (TCR)
BY-105	100	2R	1 partial rotary core.			WHC-SD-WM-ER-598
U-105	93	3R	3 cores	3/18/96	6/25/96	WHC-SD-WM-ER-617
U-109	91	3R	3 cores	1/18/96	6/29/96	WHC-SD-WM-ER-609
BY-103	86	2R				
U-108	84	3R	3 cores	5/6/96	11/6/96	HNF-SD-WM-ER-639
U-107	76	3R	3 partial push cores. Need rotary.			WHC-SD-WM-ER-614
BY-106	74	2R	2 cores	12/19/95	4/29/96	WHC-SD-WM-ER-616
S-102	74	2R	2 cores	3/8/96	7/12/96	WHC-SD-WM-ER-611
SX-103	67	2R				
BY-108	65	3R	3 cores	8/18/95	2/12/96	WHC-SD-WM-ER-533
A-101	62	3R	2 RGS cores	7/25/96		
TX-118	61	3R				
SX-104	61	2R				
BY-110	52	3R	9 cores	10/20/95	4/25/96	WHC-SD-WM-ER-591
TX-111	51	2R				
BY-104	51	2R	2 cores	11/15/95	5/2/96	WHC-SD-WM-ER-608
C-104	50	2R	2 cores	7/31/96	1/10/97	
S-107	50	3P	3 cores	9/28/95	3/15/96	WHC-SD-WM-ER-589
S-101	50	2R	2 cores	4/3/96	7/23/96	WHC-SD-WM-ER-613
TY-103	50	2R				
SX-101	49	2R				
S-110	47	2R	1 partial push core. Need rotary.			
AW-101	47	2P	2 RGS cores	5/6/96	12/6/96	WHC-SD-WM-ER-470
AN-104	46	2P	2 RGS cores	9/12/96		
AX-101	43	3R				
AN-105	37	2P	2 RGS cores	6/28/96	1/24/97	
AN-103	36	2P	2 RGS cores	9/23/96		
B-104	15	2P	2 cores	6/14/95	10/1/95	WHC-SD-WM-ER-552

Notes:

P = push mode core sample

R = rotary mode core sample

RGS = Retained Gas Sample (RGS). RGS can only be used with truck #1 (push mode truck).

**DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1997**

**5.2 Tanks Sampled during Second Quarter FY 1997 (January through March 1997)**

<b>SAMPLE</b>	<b>Actual Start</b>	<b>Actual Finish</b>
U-103 Push Samples 2 Segments 9 RGS (HPT)	9/24/96	1/23/97
T-110 Grab Sample - Salt Wells	1/6/97	1/8/97
SY-102 Grab Sample - Compatibility	1/14/97	1/14/97
T-110 Rotary Sample 1 Segments 8	1/15/97	2/10/97
A-106 Vapor Sample (Type 4)	1/15/97	1/16/97
AN-107 Grab Sample	1/20/97	1/28/97
AX-104 Vapor Sample (Type 4)	1/23/97	1/24/97
BY-108 Temporal Vapor Sample (Type 3)	1/28/97	1/30/97
S-151 Diversion Box Grab Sample	2/4/97	2/4/97
S-106 Push Samples 2 Segments 10 (HPT)	2/4/97	3/21/97
C-107 Temporal Vapor Sample (Type 3)	2/6/97	2/7/97
BX-104 Temporal Vapor Sample (Type 4)	2/6/97	2/6/97
S-102 Temporal Vapor Sample (Type 3)	2/10/97	2/11/97
T-112 Rotary Sample 2 Segments 1	2/11/97	3/19/97
S-109 Vapor Sampling (Type 4)	2/17/97	2/18/97
TX-106 Vapor Sample (Type 4)	3/5/97	3/5/97
AP-103 Grab Sample (Caustic Verification)	3/19/97	3/19/97
TX-114 Vapor Sample (Type 4)	3/25/97	3/25/97

**5.3 Chart of Samples Taken vs. Samples Scheduled**

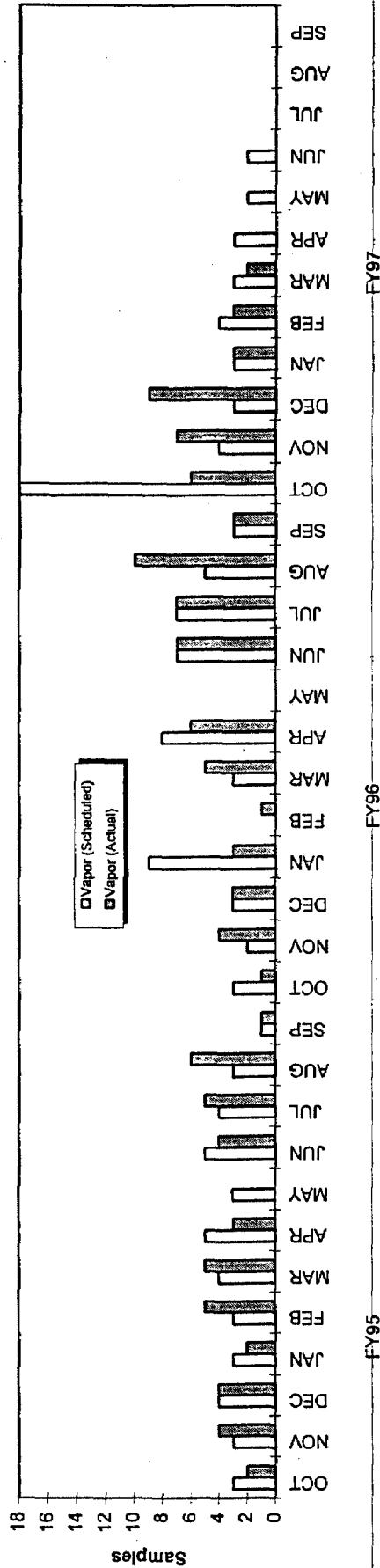
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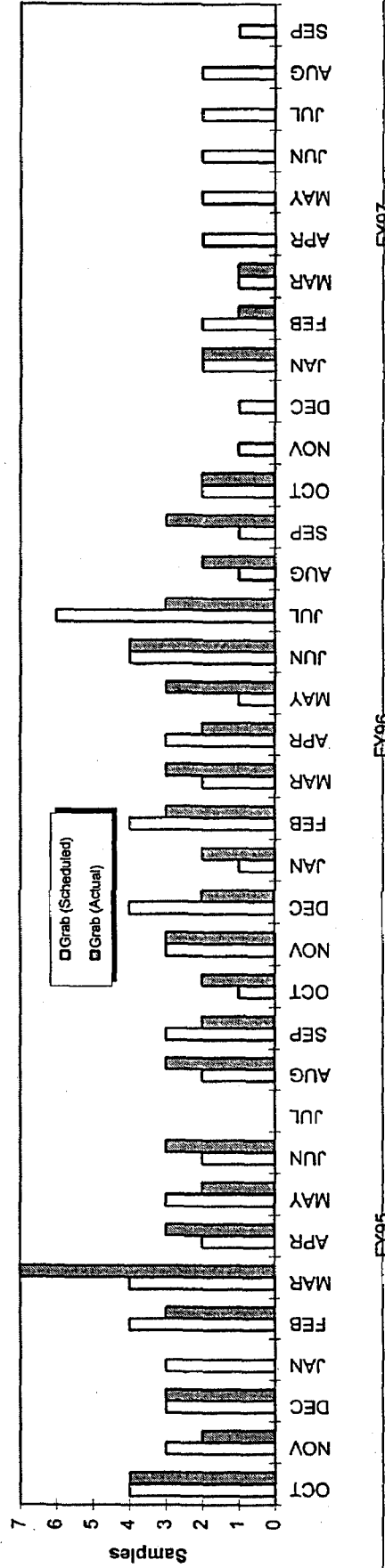
# Characterization

## Vapor and Grab Sampling

Vapor Sampling



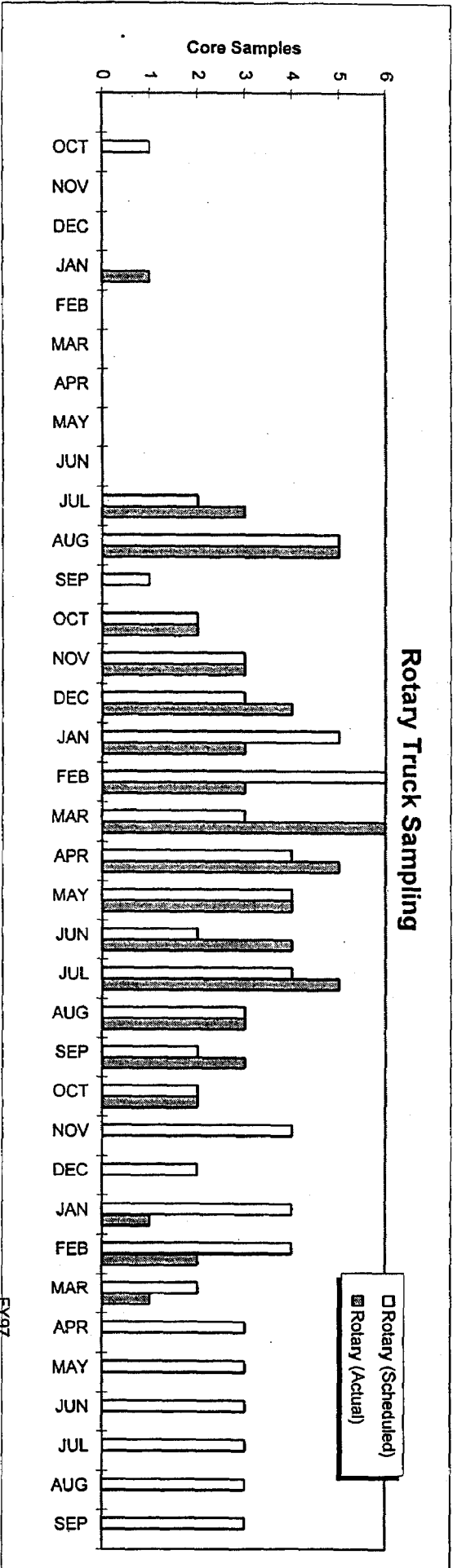
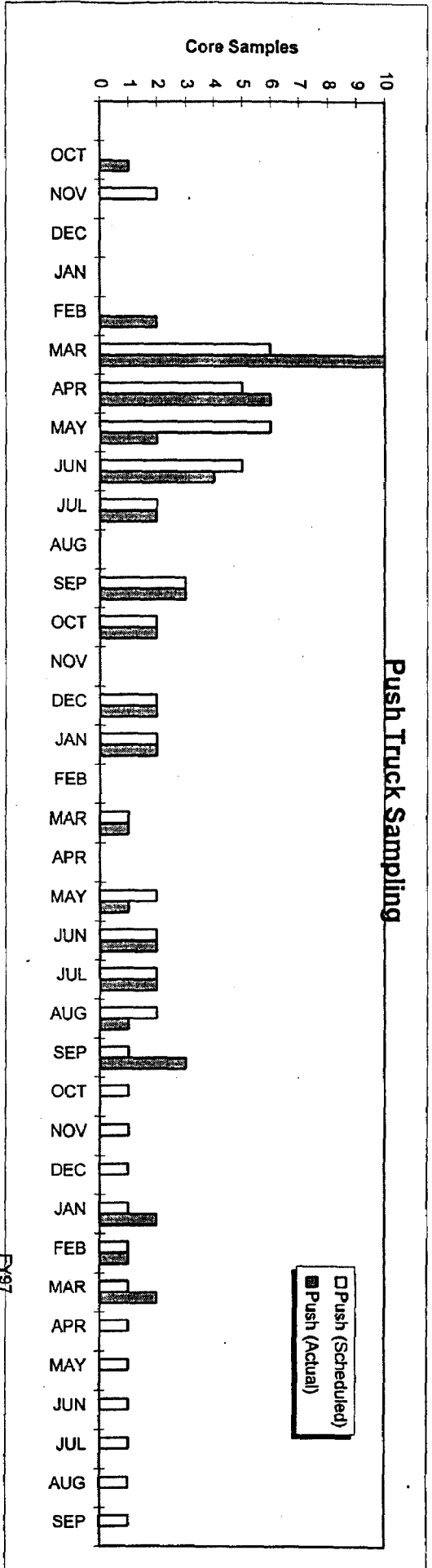
Grab Sampling





# Characterization

## Push and Rotary Sampling





**DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1997**

**5.4 Sampling Schedule for Third Quarter FY 1997 (April through June 1997)**

<b>TITLE</b>	<b>Early Start</b>	<b>Early Finish</b>
C-107 Vapor Tracer Gas Study	2/18/97	5/19/97
AX-103 Vapor Tracer Gas Study	2/21/97	5/22/97
U-103 Vapor Tracer Gas Study	2/26/97	5/28/97
U-103 Push Samples 1 Segments 9 High Priority	3/28/97	4/10/97
BY-105 Vapor Tracer Gas Study	4/1/97	7/1/97
BX-104 Temporal Vapor Sample (4) High Priority	4/3/97	4/4/97
SX-104 Grab Sample Compatibility	4/7/97	4/9/97
C-Farm Dry Well Samples	4/10/97	4/11/97
AY-101 Campaign 97-2 Grab Sample	4/14/97	4/16/97
T-203 Rotary Samples 1 Segments 10	4/15/97	4/30/97
TX-110 Vapor Sample (4) (Rotary)	4/17/97	4/18/97
AW-106 Grab Sample	4/21/97	4/23/97
T-202 Rotary Samples 1 Segments 6	5/1/97	5/16/97
TX-104 Vapor Sample (4) (Rotary)	5/1/97	5/2/97
BY-101 Push Samples 2 Segments 8 High Priority	5/2/97	5/30/97
TX-103 Vapor Sample (4) (Rotary)	5/15/97	5/16/97
T-201 Rotary Samples 1 Segments 9	5/19/97	6/4/97
BX-104 Temporal Vapor Sample (4) High Priority	5/30/97	6/2/97
AX-101 Grab Sample Compatibility	6/2/97	6/4/97
BY-109 Push Samples 2 Segments 10	6/2/97	6/27/97
AW-103 Rotary Sample 2 Segments 5-10	6/5/97	7/10/97
SX-103 Grab Sample Compatibility	6/9/97	6/11/97
TX-101 Vapor Sample (4) (Rotary)	6/13/97	6/16/97
TY-102 Rotary Samples 2 Segments 2 High Priority	6/16/97	7/15/97
AY-102 Grab Sample (Caustic Addition)	6/23/97	6/25/97
TX-108 Vapor Sample (4) (Rotary)	6/27/97	6/30/97
T-105 Push Sample 2 Segments 3	6/30/97	7/29/97

**5.5 Tank Characterization Plan (TCP) Completion Schedule**

The TCP for tanks that may be sampled in FY 1997 were submitted to Ecology with the Tank Waste Analysis Plan on October 31, 1996. The additional plans listed in Section 5.7 are those with emergent requirements for sampling or those requiring revision. The next planned submittal of TCPs is for FY 1998 in August 1997.

**5.6 List of TCPs issued during the Quarter**

No TCPs were released during the report quarter.

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**5.7 List of TCRs issued during the Quarter**

<b>Tank</b>	<b>Number</b>	<b>Rev</b>	<b>Date</b>
AP-102	HNF-SD-WM-ER-358	1	01/28/97
AP-103	HNF-SD-WM-ER-359	1	01/21/97
AP-106	HNF-SD-WM-ER-361	1	03/18/97
AP-107	HNF-SD-WM-ER-362	1	03/19/97
B-110	HNF-SD-WM-ER-368	1	03/14/97
B-111	HNF-SD-WM-ER-549	1	03/17/97
B-201	HNF-SD-WM-ER-550	1	02/03/97
BX-107	HNF-SD-WM-ER-539	1	02/12/97
BY-102	HNF-SD-WM-ER-630	0	03/13/97
S-107	HNF-SD-WM-ER-589	0-A	01/10/97
S-109	HNF-SD-WM-ER-627	0	01/22/97
T-104	HNF-SD-WM-ER-372	1	02/04/97
T-105	HNF-SD-WM-ER-369	1	01/21/97
T-111	HNF-SD-WM-ER-540	1	03/14/97
U-102	HNF-SD-WM-ER-618	0	01/24/97
U-108	HNF-SD-WM-ER-639	0	03/20/97
U-110	HNF-SD-WM-ER-551	1	03/20/97

**5.8 List of Laboratory Analytical Reports Issued**

<b>Tank</b>	<b>Title</b>	<b>Number</b>	<b>Date</b>
BX-102	Tank 241-BX-102 Headspace Gas and Vapor Characterization Results from Samples Collected on July 31, 1996	PNNL-11437, Rev. 0	01/08/97
BX-106	Tank 241-BX-106 Headspace Gas and Vapor Characterization Results from Samples Collected on August 15, 1996	PNNL-11458, Rev. 0	01/20/97
S-302-C	60-Day Waste Compatibility Safety Issues and Final Results for S-302-C Grab Samples	HNF-SD-WM-DP-220, Rev. 0	01/28/97
AY-102	60-Day Waste Compatibility Safety Issues and Final Results for AY-102 Grab Samples	HNF-SD-WM-DP-222, Rev. 0	01/31/97
C-106	Tank Waste Remediation System (TWRS) Privatization Contractor Samples Waste Envelope D Material 241-C-106	HNF-SD-WM-DP-225, Rev. 0	01/31/97
TX-244	60-Day Waste Compatibility Safety Issues and Final Results for TX-244 Grab Samples	HNF-SD-WM-DP-224 Rev. 0	02/05/97
BX-103	Tank 241-BX-103 Headspace Gas and Vapor Characterization Results from Samples Collected on August 1, 1996	PNNL-11469, Rev. 0	02/11/97

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<b>Tank</b>	<b>Title</b>	<b>Number</b>	<b>Date</b>
BY-101	Tank 241-BY-101 Headspace Gas and Vapor Characterization Results from Samples Collected on August 29, 1996	PNNL-11475, Rev. 0	02/12/97
BX-111	Tank 241-BX-111 Headspace Gas and Vapor Characterization Results from Samples Collected on August 27, 1996	PNNL-11481, Rev. 0	02/24/97
BX-104	Tank 241-BX-104 Headspace Gas and Vapor Characterization Results from Samples Collected on August 22, 1996	PNNL-11482, Rev. 0	02/24/97
B-108	Tank 241-B-108, Cores 172 and 173 Analytical Results for the Final Report	HNF-SD-WM-DP-219, Rev. 0	03/04/97
B-108	Tank 241-B-108, Cores 172 and 173 Analytical Results for the Final Report	HNF-SD-WM-DP-219, Rev. 0A	03/13/97
C-107	Tank 241-C-107 Temporal Study Headspace Gas and Vapor Characterization Results from Samples Collected on September 5, 1996	PNNL-11501, Rev. 0	03/13/97
BY-108	Tank 241-BY-108 Temporal Study Headspace Gas and Vapor Characterization Results from Samples Collected on September 10, 1996	PNNL-11503, Rev. 0	03/13/97
S-102	Tank 241-S-102 Temporal Study Headspace Gas and Vapor Characterization Results from Samples Collected on September 19, 1996	PNNL-11502, Rev. 0	03/18/97

**5.9 Table of DNFSB 93-5 Implementation Plan Revision 1 Commitments Status**

<b>Number</b>	<b>Description</b>	<b>Due Date</b>	<b>Submitted to DNFSB</b>
5.4.3.1a	Comprehensive Source Terms Report	6/30/96	6/30/96
5.4.3.1b	Report on Lightning Evaluation	8/31/96	8/30/96
5.4.3.1c	Approved BIO	12/31/96	12/30/96
5.4.3.1d	Approved FSAR.	6/30/97	
5.4.3.2a	Topical Report on Resolution of Ferrocyanide Safety Issue.	1/31/97	9/23/96
5.4.3.3a	Supporting Technical Document on Organic Complexant Safety Issue	12/31/96	
5.4.3.3b	Confirm Safe Storage Criteria, and Organic Solubility and Aging Effects on Fuel Content	11/30/98	
5.4.3.4a	Safety Assessment Covering Pool and Entrained Organic Solvent Fires	10/31/96	10/21/96
5.4.3.4b	Organic Speciation of Core Samples for BY-108 and BY-110, and Auger Samples for C-102.	10/31/96	10/21/96
5.4.3.4c	Supporting Technical Document for Organic Solvent Safety Issue.	12/31/96	12/23/96
5.4.3.4d	Vapor Sampling of all SSTs.	12/31/99	
5.4.3.4e	Adequate Vent Path in All SSTs Suspected of Containing Organic Solvents	4/30/00	
5.4.3.4f	Letter Reporting Completion of Vapor Sampling of All DSTs.	12/31/00	
5.4.3.5a	Analyses to Determine If Additional Tanks Have Potential to Exceed 25% of the LFL.	6/30/96	6/28/96
5.4.3.5b	Gas Monitoring Instrumentation Upgrade Needs for Additional Tanks with the Potential to Exceed 25% of the LFL.	8/31/96	8/19/96
5.4.3.5c	Safety Assessment for Rotary Mode Core Sampling in Flammable Gas Tanks	9/30/96	9/27/96

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<b>Number</b>	<b>Description</b>	<b>Due Date</b>	<b>Submitted to DNFSB</b>
5.4.3.5d	Qualification of Rotary Mode Core Sampling System for Use in Flammable Gas Tanks.	9/30/96	
5.4.3.5e	Safety Assessment for Saltwell Pumping in Flammable Gas Tanks	10/31/96	10/31/96
5.4.3.5f	Letter Reporting Completion of AN Tank Farm Ventilation Upgrade.	11/30/96	1/30/97
5.4.3.5g	Flammable Gas Safety Screening of Remaining Passively Ventilated SSTs	11/30/96	11/12/96
5.4.3.5h	Supporting Technical Document on Flammable Gas Safety Issue.	12/31/96	1/30/97
5.4.3.5i	External Equipment Spark Sources in Flammable Gas Tanks	12/31/96	12/24/96
5.4.3.5j	Voidmeter and Viscometer Readings in Tanks AN-103, AN-104, and AN-105.	12/31/96	12/18/96
5.4.3.5k	Retained Gas Sampling in Tanks AW-101, AN-103, AN-104, AN-105, and A-101.	3/31/97	3/28/97
5.4.3.5l	Refinement of Flammable Gas Generation/Retention Models	5/31/97	
5.4.3.6a	C-106 Supernatant Sampling and Analysis.	10/31/96	10/30/96
5.4.3.6b	C-106 Retrieval Safety Assessment.	7/31/97	
5.4.3.6c	Initiation of Tank C-106 Waste Retrieval.	10/31/97	
5.4.3.6d	Topical Report to Resolve the High Heat Safety Issue.	5/31/98	
5.4.3.7a	Topical Report to Resolve the Criticality Safety Issue.	12/31/96	12/18/96
5.5.6.1a	Completion of High Priority Tanks Sampling and Analysis for the Disposal Program	3/31/98	
5.6.3.1a	Comparison Between Truck and Cart Vapor Sampling Systems.	9/30/96	9/27/96
5.6.3.1b	Implementation of FTIR Moisture Analysis Capability in 222-S Laboratory.	11/30/96	11/19/96
5.6.3.1c	Proposed Content and Format of Tank-by-Tank Safety Status Evaluation	1/31/97	1/30/97
5.6.3.1d	Updated HTCEs	6/30/97	
5.6.3.1e	Verification of Headspace Homogeneity	10/31/97	
5.6.3.1f	Standard Inventory Estimates for All Tanks.	11/30/97	
5.6.3.1g	Completion of High Priority Tanks Sampling and Analysis.	3/31/98	
5.6.3.1h	Tank-by-Tank Safety Status Evaluation.	7/31/98	
5.6.3.1i	Update Tank Content Models	12/31/98	
5.6.3.1j	Completion of Core Sampling of All Tanks	12/31/02	