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**Department of Energy**  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352  
APR 27 1998

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DNF SAFETY BOARD

98-SCD-046

The Honorable 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 1998

The DNFSB 93-5 Quarterly Report for January through March 1998 is attached. This quarterly report addresses issues and milestones as presented in the Recommendation 93-5 IP, Revision 1.

The U.S. Department of Energy, Richland Operations Office has completed several significant technical achievements this quarter. Rotary Mode Core Sampling operation has continued in the SX Tank Farm. By introducing the use of push mode with the rotary drill bit, overall sample recovery has improved. The special grab sampler (finger sampler) has been successfully used on two additional tanks, AX-102 and SX-115. This type of sampler has much better sample recovery than the conventional auger sampler on dry waste.

The following three DNFSB Milestones were completed and submitted during this quarter:

- 5.4.3.5.d "Letter Reporting Qualification of Rotary Mode Sampling System for use in Flammable Gas Tanks," January 7, 1998;
- 5.5.6.1.a "Letter Reporting Completion of Tank Waste Characterization Basis (Brown et al. 1995, 1996) High Priority Tanks (HPTs) Sampling and Analysis for the Disposal Program," March 27, 1998; and
- 5.6.3.1.g "Letter Reporting Completion of Tank Waste Characterization Basis (Brown et al. 1995, 1996) High Priority Tanks (HPTs) Sampling and Analysis," March 27, 1998.

The Tier I review on the Revised Organic Solvent Topical Report was completed during the last quarter, and the review by the Chemical Reaction Sub-Tank Advisory Panel was completed during this quarter. When approved, this topical report will provide the basis for proposing closure of the Organic Solvent Safety Issue.

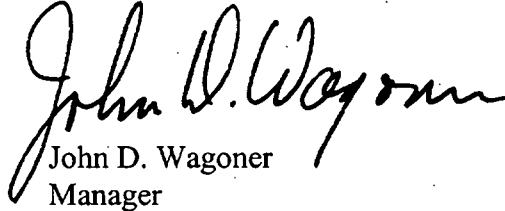
The Honorable John T. Conway  
98-SCD-046

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APR 27 1998

If you have any questions, please contact me, or your staff may contact Jackson Kinzer, Assistant Manager for the Office of Tank Waste Remediation System, on (509) 376-7591.

Sincerely,



John D. Wagoner  
Manager

SCD:WSL

Attachment

cc w/attach:

J. M. Owendoff, EM-1  
C. A. Peabody, EM-4  
R. E. Lightner, EM-38  
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M. B. Whitaker, S-3.1

**DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1998****EXECUTIVE SUMMARY**

The highlights for this quarter were operation of Rotary Mode Core System (RMCS) in the SX Tank Farm, continuing progress toward issuing the Organic Solvent Topical Report, additional samples using the special grab sampler, and the reporting of three milestones to Defense Nuclear Facilities Safety Board (DNFSB) as complete. The milestones reported complete were based on accomplishing the objectives stated in the Implementation Plan (IP) for sampling the High Priority Tanks (HPTs) and qualification of rotary mode sampling. These objectives were completed by a combination of sampling HPTs and other tanks. The current issues discussed are the status of the two milestones related to the High Heat Safety Issue, and closure of polychlorinated biphenyl (PCB) concerns at the 222-S Laboratory.

DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1998

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**DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1998**

**1 PURPOSE**

This quarterly report covers High Level Waste Tank Characterization activities at the Hanford Site related to the DNFSB Recommendation 93-5 during the period January 1 to March 31, 1998. The Recommendation dealt with insufficient technical information to ensure safe storage, operation, retrieval, and disposal of the Hanford high-level tank wastes in both single and double-shell tanks. 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, 1998**

**2 QUARTERLY HIGHLIGHTS**

**1.1 Milestones Submitted**

- 1.1.1 5.4.3.5d, Letter reporting qualification of Rotary Mode Core Sampling (RMCS) System for use in Flammable Gas Tanks, January 7, 1998.
- 1.1.2 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, March 27, 1998.
- 1.1.3 5.6.3.1g, Letter reporting completion of *Tank Waste Characterization Basis* (Brown et al. 1995) High Priority Tanks sampling and analysis, March 27, 1998.

1.2 HPT Milestones Completion Reported - Two milestones were reported complete: 5.5.6.1a, "Letter reporting completion of *Tank Waste Characterization Basis* (Brown et al. 1995, 1996) 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, 1996) High Priority Tanks sampling and analysis," also due March 1998. Although all HPTs have not all been sampled, analysis of samples from other tanks has provided information equivalent to that expected from analysis of samples taken from all of the HPTs. A letter was transmitted to the DNFSB on March 27, 1998 providing detailed analyses to support the conclusion that the intent of DNFSB Recommendation 93-5 IP, Milestones 5.5.6.1a and 5.6.3.1g have been met. Condensed phase samples from 144 tanks along with data from 82 vapor samples provide sufficient information to address and resolve the nine safety related questions and three disposal process related questions described in Revision 1 of the IP. Information developed from these samples satisfies the original purpose of sampling and analysis of the HPTs. Since the intent of Milestones 5.5.6.1a and 5.6.3.1g has been met, the Department of Energy (DOE) has proposed closure of these two milestones. This alternate approach has been discussed with the DNFSB staff.

1.3 Status of Rotary Core Drilling - RMCS operation has continued in tanks SX-101 and SX-105. Both tanks used a combination of push and rotary to obtain samples. While sample recovery was initially not as consistent as the recovery using full push mode, introducing the use of push mode with the rotary bit in softer waste material, combined with other sampling technique enhancements, has improved the overall core recovery. Additional work is in progress to improve sample recovery by refinement of the drill procedures and drill bit geometry.

Use of the RMCS on tanks outside the SX Farm will require commencing operation of an RMCS Exhauster. Regulatory approval has been obtained for use of an exhauster as a major stack on three additional tanks (BY-105, U-107, and S-110). Modifications to two RMCS Exhausters to meet the major stack requirement are expected to be complete during the next quarter. This will allow RMCS operations to continue as scheduled. Regulatory approval for the remaining tanks that require rotary drilling is expected to be obtained in the next several months with approval by the State of Washington Department of Ecology of a revised Toxic Air Pollutant Notice of Construction for the RMCS Exhauster.

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- 1.4 Organic Solvent Topical Report - As reported last quarter, a revision to the Organic Solvent topical report has been completed by the contractor and is in review by the DOE. Tier I and Chemical Reaction Sub-Tank Advisory Panel (Sub-TAP) reviews have now been completed. Responses to the comments are being prepared. When approved, this topical report will provide the basis for proposing closure of the Organic Solvent Safety Issue.
- 1.5 Additional Samples Using the Special Grab Sampler - The tank C-202 special grab sampler ("finger sampler") has been successfully used on two additional tanks, AX-102 and SX-115. Both tanks had been previously sampled using auger sampling. However, the auger sampler recovery was not sufficient to complete the analyses. Adequate recovery was obtained from both tanks using the special grab sampler to accomplish the required laboratory analysis. Refinement of the sampling process with this new sampler is continuing for very high radiation and very dry tanks. The current sampling procedure is "hands on" intensive. Each time the sampler is retrieved from the tank it must be unscrewed, the contents put into another bottle, the sampler threaded back together, and then reinserted into the tank. With dry and powdery samples, migration of the sample within the glove bag during transfer from the sampler to the sample bottle makes teardown and cleanup a continuing radiological control challenge.
- 1.6 Tanks Sampled - During this quarter three tanks were core sampled, eight tanks were grab sampled, and monthly vapor grab samples at the Standard Hydrogen Monitoring System (SHMS) cabinets were taken. The SHMS cabinets contain equipment with flammable gas measurement instruments capable of continuously measuring flammable gas constituents. These cabinets have been installed on each of the flammable gas watchlist tank.

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**3 CURRENT ISSUES**

- 1.7 High Heat Safety Issue Milestones - Initiating the retrieval of Tank C-106 continues to be on schedule for September 1998. The report "High Heat Program Thermal Hydraulic Computer Model," HNF-2152, was issued during this quarter. This report documents computer model enhancements for predicting waste temperature in Tank C-106 following removal of various levels of heat bearing sludge. This modeling will be used as the technical basis to propose closure of the High Heat Safety Issue following sluicing of sludge from Tank C-106. Resolution of the High Heat Safety Issue is now estimated to be completed in September 1999.
- 1.8 PCB Concerns at 222-S Laboratory - The previous quarterly report discussed a concern that liquid waste from the 222-S laboratory may contain PCBs and that a certification issue existed with the newly installed waste transfer line from the laboratory to the tank farms. Both issues have been resolved and the routine transfer of laboratory waste to the tank farms was started in February.



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**4 STATUS OF REVISION 1 MILESTONES OVERDUE, DUE WITHIN SIX MONTHS, OR COMPLETED DURING THE REPORTING QUARTER**

**1.9 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 Authorization Basis 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: Overdue. A revised completion date will be provided by April 30, 1998.

**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 rotary-mode core sampling for flammable gas environments.

Responsible Manager: Assistant Manager, TWRS

Applicable facilities and programs: TWRS

Milestone deliverables/due dates:

**d. Letter reporting qualification of Rotary Mode Core Sampling System for use in Flammable Gas Tanks.**

Due Date: September 1996

Status: Complete. Letter report submitted to DNFSB on January 7, 1998

**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:

**c. Letter reporting initiation of tank C-106 waste retrieval.**

Due Date: October 1997

Status: Overdue. Equipment modifications were delayed until the safety assessment was approved. ECD is November 1998.

**d. Letter reporting completion of topical report to resolve the High Heat Safety Issue.**

Due Date: May 1998

Status: Behind schedule. ECD is December 1999.

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### 1.10 Disposal Program Data Requirements

#### 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:**

- a. **Letter report completion of *Tank Waste Characterization Basis* (Brown et al. 1995) High Priority Tanks sampling and analysis for the Disposal Program.**

Due Date: March 1998

Status: Complete. Letter report submitted to DNFSB on March 27, 1998 forwarded a detailed analyses showing that the intent of the milestone has been met.

### 1.11 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:**

- g. **Letter report completion of *Tank Waste Characterization Basis* (Brown et al. 1995) High Priority Tanks sampling and analysis.**

Due Date: March 1998

Status: Complete. Letter report submitted to DNFSB on March 27, 1998 forwarded a detailed analyses showing that the intent of the milestone has been met.

- h. **Letter reporting completion of tank-by-tank safety status evaluation.**

Due Date: July 1998

Status: On Schedule.

## 3 REFERENCES

None.

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4 APPENDICES

4.1 High Priority Tank Core Sampling and Analysis Status

Tank	Rank	Planned Samples	Samples Obtained	Sampling Completed	Lab Analysis Completed	Tank Characterization Report (TCR)
U-103	100	3P	3 cores, 1 RGS core	4/9/97	7/31/97	HNF-SD-WM-ER-712 <sup>B</sup>
BY-105	100	2R	1 partial rotary and push core.	10/26/95	7/19/96	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	1/19/96	6/29/96	WHC-SD-WM-ER-609
BY-103	86	2R				HNF-SD-WM-ER-663 <sup>B</sup>
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.	3/28/96	5/12/97	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				HNF-SD-WM-ER-662 <sup>B</sup>
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	5/5/97	HNF-SD-WM-ER-673
TX-118	61	3R				HNF-SD-WM-ER-718 <sup>B</sup>
SX-104	61	3R				HNF-SD-WM-ER-643 <sup>B</sup>
BY-110	52	3R	9 cores	10/20/95	4/25/96	WHC-SD-WM-ER-591
TX-111	51	2R				HNF-SD-WM-ER-659 <sup>B</sup>
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	HNF-SD-WM-ER-679
S-107	50	3P	3 cores	9/30/95	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
SX-101	49	2R	2 rotary cores	2/10/98		HNF-SD-WM-ER-660 <sup>B</sup>
S-110	47	2R	1 partial push core. Need rotary.			HNF-SD-WM-ER-642 <sup>B</sup>
AW-101	47	2P	2 RGS cores	5/24/96	12/6/96	WHC-SD-WM-ER-470
AN-104	46	2P	2 RGS cores	9/12/96	6/5/97	HNF-SD-WM-ER-690
AX-101	43	3R	2 push cores (1 RGS)	2/13/98		HNF-SD-WM-ER-649 <sup>B</sup>
AN-105	37	2P	2 RGS cores	6/28/96	1/24/97	HNF-SD-WM-ER-678
AN-103	36	2P	2 RGS cores	9/23/96	5/19/97	HNF-SD-WM-ER-702
B-104	15	2P	2 cores	6/14/95	10/1/95	WHC-SD-WM-ER-552

Notes:

P = push mode core sample

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R = rotary mode core sample

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

B Best Basis Inventory only - no current sample data included.

**4.2 Tanks Sampled during Second Quarter FY 1998 (January through March 1998)**

<b>SAMPLE</b>	<b>Actual Start</b>	<b>Actual Finish</b>
AX-101 Push Samples 2 Segments 15 High Priority	12/12/97	2/13/98
Vapor SHMS Grab Samples - Jan	1/21/98	1/27/98
AW-102 Grab Sample	1/13/98	1/13/98
AW-106 Grab Sample	1/12/98	1/12/98
S-302 Grab Sample Compatibility	1/30/98	1/30/98
SX-101 Rotary Samples 1 Seg 9 High Priority	1/16/98	2/10/98
AY-102 Grab Sample	1/15/98	1/15/98
AX-102 Grab Sample	2/11/98	2/11/98
AN-102 Grab Samples 2 - Privatization	2/2/98	2/6/98
Vapor SHMS Grab Samples - Feb	2/18/98	2/19/98
TX-104 Rotary Samples 2 Segments 2	2/13/98	2/25/98
Vapor SHMS Grab Samples - Mar	3/18/98	3/26/98
SY-102 Grab Sample - Compatibility	3/4/98	3/10/98
SX-115 Grab Sample	3/13/98	3/24/98

**4.3 Charts of Samples Taken vs. Samples Scheduled**

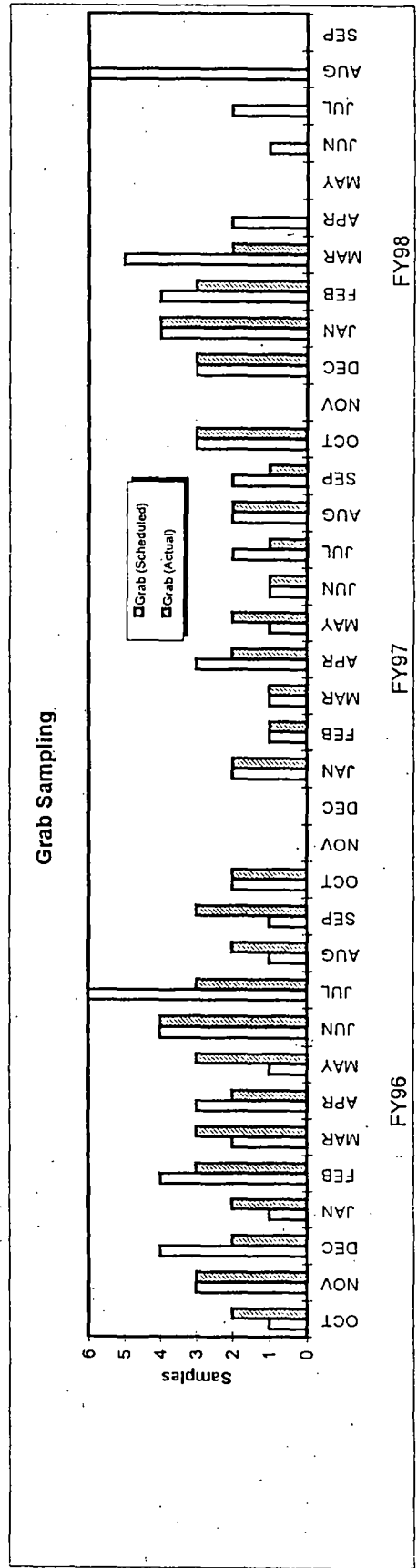
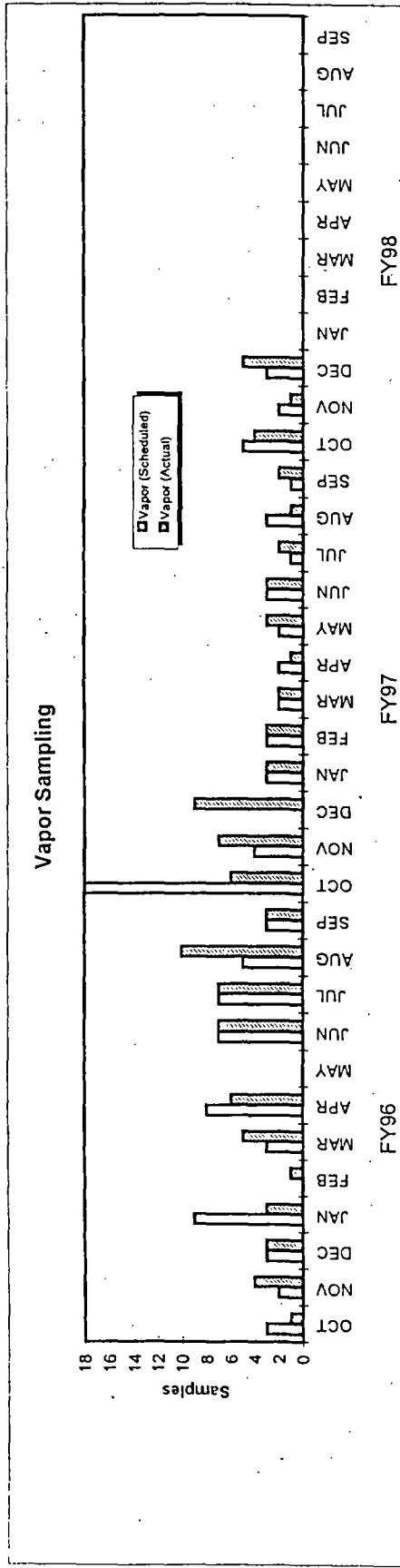
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**Characterization**  
**Vapor and Grab Sampling**



**Vapor and Grab Sampling**

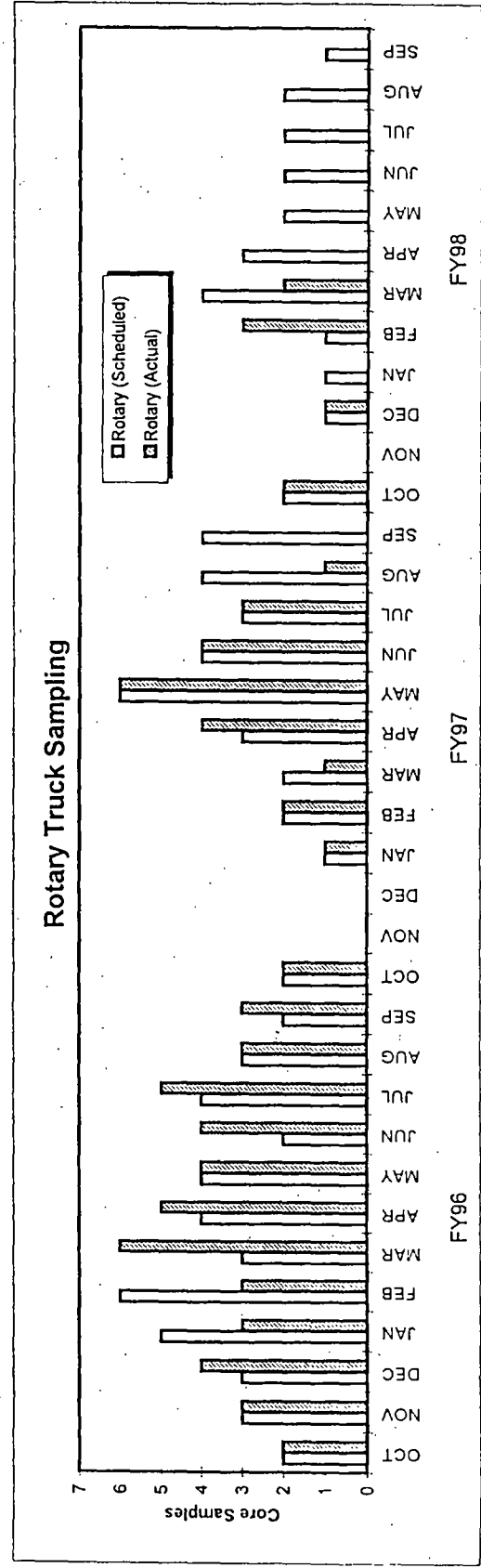
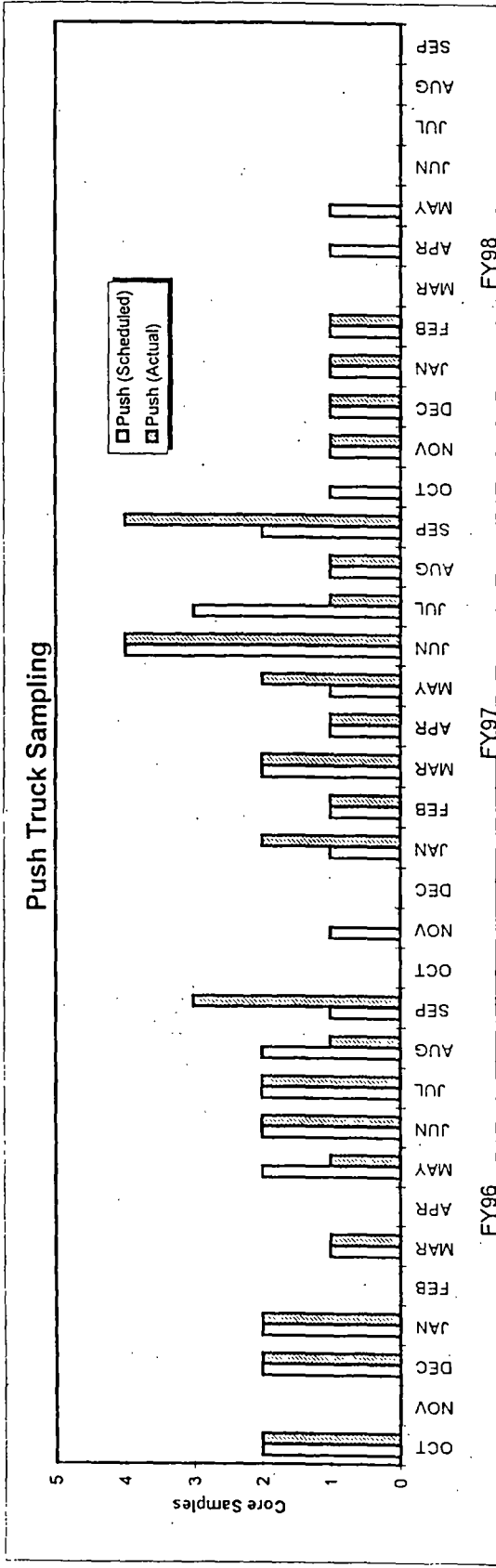


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**Characterization**  
**Push and Rotary Sampling**



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**4.4 Sampling Schedule for Third Quarter FY 1998 (April through June 1998)**

<u>TITLE</u>	<u>Early Start</u>	<u>Early Finish</u>
TX-104 Vapor Tracer Gas Study	1/8/98	4/2/98
Cone Penetrometer Cold Test #1	2/2/98	5/4/98
C-104 Vapor Tracer Gas Study	2/16/98	5/11/98
U-244 Vapor Tracer Gas Study	2/24/98	5/18/98
SX-103 Rotary Samples 2 Seg 13 High Priority	2/27/98	4/1/98
S-111 Push Sample 1 Seg 11	3/19/98	4/1/98
TX-118 Rotary Samples 2 Segment 6 High Priority	3/23/98	4/23/98
AN-101 Grab Sample - Compatibility	4/1/98	4/3/98
Vapor SHMS Samples - April	4/1/98	4/21/98
AN-107 Grab Sample - Privatization	4/10/98	4/14/98
TX-244 Vapor Tracer Gas Study	4/13/98	5/8/98
AW-101 Grab Sample - Privatization	4/17/98	4/21/98
A-244 Vapor Tracer Gas Study	4/20/98	5/15/98
U-109 Push Sample 1 Seg 10	4/23/98	5/6/98
S-244 Vapor Tracer Gas Study	4/27/98	5/22/98
Vapor SHMS Samples - May	5/1/98	5/21/98
BX-244 Vapor Tracer Gas Study	5/4/98	6/1/98
S-110 Rotary Sample 2 Segments 8 High Priority	5/7/98	6/10/98
AZ-102 Rotary Sample 2 Segments 17	5/13/98	6/16/98
Cone Penetrometer Cold Test #2	5/18/98	6/16/98
Vapor SHMS Samples - June	6/1/98	6/19/98
AX-104 Light Duty Utility Arm (HTI)	6/4/98	6/29/98
AN-102 Grab Sample 3 Privatization	6/15/98	6/24/98
U-107 Rotary Samples 2 Segs 9 High Priority	6/16/98	7/21/98
Z-361 Vapor Sample (4)	6/22/98	6/26/98

**4.5 List of Tank Sampling and Analysis Plans Issued during the Quarter**

<u>Tank</u>	<u>Number</u>	<u>Rev</u>	<u>Date</u>
AN-102	HNF-2158 (Privatization Grab)	0	02/02/98
AX-102	HNF-2190 (Grab)	0 0-A	02/05/98 02/18/98
AX-104	HNF-SD-WM-TSAP-149 (Auger) HNF-2071 (Light Duty Utility Arm)	0-A 0	03/03/98 02/02/98
C-202	HNF-1864 (Grab)	0-A	01/08/98
S-102	HNF-1907 (Retained Gas Sampler System)	0 0-A	02/05/98 03/18/98
SX-105	HNF-2107 (Rotary Mode)	0	01/27/98

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<u>Tank</u>	<u>Number</u>	<u>Rev</u>	<u>Date</u>
		0-A 0-B	02/09/98 03/11/98
SX-115	HNF-2250 (Grab)	0	03/11/98
*	HNF-SD-WM-TSAP-150 * Compatibility Grab Sampling and Analysis Plan for Fiscal Year 1998	0-A	01/29/98
*	WHC-SD-WM-TSAP-115 * Compatibility Grab Sampling and Analysis Plan for Fiscal Year 1997	0-L	01/15/98

4.6 List of Tank Characterization Reports Issued during the Quarter

<u>Tank</u>	<u>Number</u>	<u>Rev</u>	<u>Date</u>
AN-103	HNF-SD-WM-ER-702	0-A 0-B	02/12/98 02/25/98
AP-105	HNF-SD-WM-ER-360	2	03/03/98
T-110	HNF-SD-WM-ER-686	1	02/26/98
T-201 T-202 T-203 T-204	HNF-1501	0	02/19/98

4.7 List of Laboratory Analytical Reports Issued

<u>Tank</u>	<u>Title</u>	<u>Number</u>	<u>Date</u>
A-102 Auger	Final Report for Tank 241-A-102, Auger Sample 96-AUG-003	WHC-SD-WM-DP-177, Rev. 1A	3/12/98
AN-102 Grab	Final Report for Tank 241-AN-102, Grab Samples 2AN-96-1 through 2AN-96-6 and 102-AN-1 through 102-AN-4	WHC-SD-WM-DP-165, Rev. 1A	3/12/98
AN-107 Grab	Revised Final Report for Tank 241-AN-107, Grab Samples 7AN-95-1 through 7AN-95-10 and 7AN- 95-FB	WHC-SD-WM-DP-176, Rev. 1B	3/13/98
AW-101 PRV	Tank Waste Remediation System (TWRS) Privatization Contractor Samples Low Activity Waste Envelope "A" Tank 241-AW-101	HNF-SD-WM-DP-204, Rev. 1A	3/12/98
AW-101	Tank 241-AW-101, Cores 132 and 139 Analytical Results for the Final Report	WHC-SD-WM-DP-192, Rev. 0B	3/26/98
AW-101	Tank 241-AW-101, Cores 132 and 139 Analytical Results for the Final Report	WHC-SD-WM-DP-192, Rev. 0A	3/12/98
AW-102 Grab	60-Day Waste Compatibility Safety Issue and Final Results for Tank 241-AW-102, Grab Samples 2AW-95-1, 2AW-95-2 and 2AW-95-3	WHC-SD-WM-DP-149, Rev. 0A	3/11/98
AW-106 Grab	60-Day Waste Compatibility Safety Issue and Final Results for Tank 241-AW-106, Grab	WHC-SD-WM-DP-147, Rev. 0A	3/12/98



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<u>Tank</u>	<u>Title</u>	<u>Number</u>	<u>Date</u>
	Samples 6AW-95-1, 6AW-95-2 and 6AW-95-3		
AX-103	Tank 241-AX-103, cores 212 and 214 Analytical Results for the Final Report	HNF-SD-WM-DP-266, Rev. 0	2/5/98
AY-101 Grab	Final Report for Tank 241-AY-101, Grab Samples 1AY-96-1 through 1AY-96-10 and 1AY-96-FB	WHC-SD-WM-DP-178, Rev. 1C	3/12/98
B-103 Auger	45-Day Safety Screen Results and Final Report for Tank 241-B-103, Auger Samples 95-AUG-031 and 95-AUG-032	WHC-SD-WM-DP-134, Rev. 0A	3/12/98
B-106 Push	Final Report for Tank 241-B-106, Push Mode Cores 93 and 94	WHC-SD-WM-DP-140, Rev. 1B	3/11/98
B-107	Tank 241-B-107, Cores 217 and 218 Analytical Results for the Final Report	HNF-SD-WM-DP-269, Rev. 0A	1/19/98
B-203 Core	Final Report for Tank 241-B-203, Push Mode Cores 115, 120 and 122	WHC-SD-WM-DP-169, Rev. 1A	3/12/98
BX-109 Core	Final Report for Tank 241-BX-109, Push Mode Cores 84 and 85	WHC-SD-WM-DP-154, Rev. 0B	3/12/98
BX-110 Auger	45-Day Safety Screening Results and Final Report for Tank 241-BX-110, Auger Samples 95-AUG-045 and 95-AUG-046	WHC-SD-WM-DP-155, Rev. 0A	3/12/98
BY-104	Final Report for Tank 241-BY-104, Rotary Mode Cores 116 and 117	WHC-SD-WM-DP-164, Rev. 1A	3/13/98
BY-105 Core	Final Report for Tank 241-BY-105 Rotary and Push Mode Core 108	WHC-SD-WM-DP-162, Rev. 1A	3/13/98
BY-106 Core	Final Report for Tank 241-BY-106, Cores 64, 65 and 121	WHC-SD-WM-DP-103, Rev. 1A	3/12/98
BY-108 Core	Final Report for Tank 241-BY-108, Rotary Samples Core 98 and Core 104	WHC-SD-WM-DP-145, Rev. 1C	3/11/98
BY-110 Core	Final Report for Tank 241-BY-110, Rotary Mode Cores 92, 95, 96, 101, 103, 106, 107, 109 and 113	WHC-SD-WM-DP-153, Rev. 1A	3/12/98
C-105 Push	90-Day Safety Screen Results and Final Report for Tank 241-C-105, Push Mode, Cores 72 and 76	WHC-SD-WM-DP-108, Rev. 1A	3/12/98
C-106 Grab	222-S Laboratory Analytical Report for Tank 241-C-106, Grab Samples 6C-96-1 through 6C-96-16 and 6C-96-17-FB	WHC-SD-WM-DP-183, Rev. 0B	3/12/98
C-204 Auger	Final Report for Tank 241-C-204, Auger Samples 95-AUG-022 and 95-AUG-023	WHC-SD-WM-DP-115, Rev. 1A	3/12/98
S-101 Push	Final Results for Tank 241-S-101, Push Mode Cores 137, 138 and 142	WHC-SD-WM-DP-185, Rev. 0B	3/12/98
S-102 Core	Final Report for Tank 241-S-102, Push Mode Cores 125 and 131	WHC-SD-WM-DP-179, Rev. 1B	3/13/98
S-107 Core	Tank 241-S-107 Final Report, Push Mode, Cores 105, 110 and 111	WHC-SD-WM-DP-156, Rev. 1C	3/13/98
S-302	Tank 241-S-302, Grab Samples, 302S-97-1, 302C-97-2 and 302S-97-3 Analytical Results for the Final Report	HNF-SD-WM-DP-294, Rev. 0	3/20/98
SX-104 Grab	Ammonia Analyses Results for the Final Report for Tank 241-SX-104	Letter Report, WMH-9852843, dated 3/31/98	3/31/98

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<u>Tank</u>	<u>Title</u>	<u>Number</u>	<u>Date</u>
SX-108 Auger	Final Report for Tank 241-SX-108. Auger Samples 95-AUG-042, 95-AUG-043 and 95-AUG-044	WHC-SD-WM-DP-151, Rev. 1A	3/12/98
SY-102	Tank 241-SY-102, Cores 211 and 213 Analytical Results for the Final Report	HNF-SD-WM-DP-267, Rev. 0	2/2/98
TX-302C	Tank 241-TX-302C Grab Samples, 302C-TX-97-1A through 302C-TX-97-3B Analytical Results for the Final Report	HNF-SD-WM-DP-292, Rev. 0	3/12/98
U-102 Core	Final Report for Tank 241-U-102, Cores 143 and 144	WHC-SD-WM-DP-189, Rev. 1A	3/13/98
U-105 Push	Final Results for Tank 241-U-105, Push Mode Cores 131, 133 and 136	WHC-SD-WM-DP-182, Rev. 1A	3/12/98
U-107 Push	Final Report for Tank 241-U-107. Push Mode Cores 129, 134 and 135	WHC-SD-WM-DP-184, Rev. 1B	3/12/98
U-108	Tank 241-U-108, Cores 141, 145 and 146 Analytical Results for the Final Report	WHC-SD-WM-DP-198, Rev. 0A	3/13/98
U-109 Core	Final Report for tank 241-U-109, Rotary and Push Mode Cores 123, 124 and 128	WHC-SD-WM-DP-181, Rev. 1A	3/12/98
U-301-B Grab	Waste Compatibility Safety Issues and Final Report for Tank U-301-B Grab Samples	HNF-SD-WM-DP-291, Rev 0	3/6/98

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

<u>Number</u>	<u>Description</u>	<u>Due Date</u>	<u>Submitted to DNFSB</u>
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	6/27/97
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	10/31/96
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	8/31/96	8/19/96

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<u>Number</u>	<u>Description</u>	<u>Due Date</u>	<u>Submitted to DNFSB</u>
	with the Potential to Exceed 25% of the LFL.		
5.4.3.5c	Safety Assessment for Rotary Mode Core Sampling in Flammable Gas Tanks	9/30/96	9/27/96
5.4.3.5d	Qualification of Rotary Mode Core Sampling System for Use in Flammable Gas Tanks.	9/30/96	1/7/98
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	5/27/97
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	10/3/97
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	3/27/98
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	6/6/97
5.6.3.1e	Verification of Headspace Homogeneity	10/31/97	10/22/97
5.6.3.1f	Standard Inventory Estimates for All Tanks.	11/30/97	10/31/97
5.6.3.1g	Completion of High Priority Tanks Sampling and Analysis.	3/31/98	3/27/98
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	