



Department of Energy
Office of River Protection
P.O. Box 550
Richland, Washington 99352

99-PDD-029

APR 29 1999

RECEIVED
99 MAY -5 PM 1:04
DNF SAFETY BOARD

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 1999.

- References:
- (1) "Organic Solvent Topical Report," HNF-4240, Revision 0, dated March 30, 1999.
 - (2) ORP letter from J. C. Hall to R. D. Hanson, FDH, "Approval of the Tank Waste Remediation System (TWRS) Final Safety Analysis Report (FSAR)," 99-ORP-002, dated March 31, 1999.
 - (3) ORP letter from R. T. French to J. T. Conway, DNFSB, "Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 93-5 Implementation Plan (IP), Revision 1, Milestone 5.4.3.1.d, Approved Final Safety Analysis Report (FSAR)," dated April 6, 1999.

The Quarterly Report for January through March 1999 is attached. This Quarterly Report addresses issues and milestones as presented in Recommendation 93-5, Revision 1.

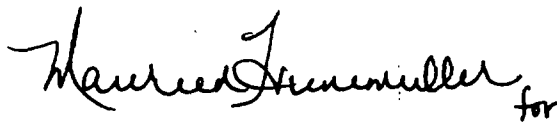
The U.S. Department of Energy (DOE), Office of River Protection (ORP) staff completed several significant technical achievements during this reporting period. Sufficient information was presented in Reference (1) to conclude that all radiological accident consequences are within risk evaluation guidelines. Based on this conclusion, ORP proposed closure of three DNFSB Recommendations 93-5 IP, Revision 1, milestones on April 15, 1999. The three DNFSB Milestones are 5.4.3.4.d, "Letter Reporting Completion of Vapor Sampling of All Single-Shell Tanks," 5.4.3.4.e, "Letter Reporting Adequate Vent Path in All Single-Shell Tanks Suspected of Containing Organic Solvents," and 5.4.3.4.f, "Letter Reporting Completion of Vapor Sampling of All Double-Shell Tanks."

APR 29 1999

Tier III Review on the FSAR was completed during this quarter and subsequently approved in Reference (2) and transmitted in Reference (3). Approval of the FSAR is the result of several years of effort to bring the TWRS Authorization Basis to the nuclear industrial standard. Implementation of the FSAR will be accomplished during the remainder of Fiscal Year 1999.

If you have any questions, please contact me or your staff may contact Jackson Kinzer, Assistant Manager for Tank Waste Storage and Retrieval, on (509) 376-7591.

Sincerely,

A handwritten signature in black ink, appearing to read "Richard T. French", followed by the word "for" in a smaller, cursive script.

Richard T. French, Manager
Office of River Protection

PDD: WSL

Attachment

cc w/attach:

J. M. Owendoff, EM-1
C. A. Peabody, EM-4
R. E. Lightner, EM-38
K. T. Lang, EM-38
A. F. Shattuck, FDNW
M. A. Payne, LMHC (w/o attach)
W. E. Ross, LMHC (w/o attach)
M. B. Whitaker, S-3.1

ATTACHMENT

DNFSB 93-5 Quarterly Report
January 1 to March 31, 1999

DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1999

EXECUTIVE SUMMARY

The highlights for this quarter were issuing of the Organic Solvent Topical Report, continuing waste sample shipments to BNFL, Inc., and approval of the Final Safety Analysis Report (FSAR). Approval of the FSAR is the result of several years of effort to bring the Tank Waste Remediation System (TWRS) Authorization Basis into compliance with DOE 5480.23. Implementation of the FSAR will be accomplished during the remainder of Fiscal Year (FY) 1999. The current issues discussed are the status of the tank C-106 sluicing and the remaining milestone related to the High Heat Safety Issue, and the remediation program for Tank SY-101 surface level rise.

DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1999

TABLE OF CONTENTS

1. PURPOSE..... 1

2. QUARTERLY HIGHLIGHTS..... 2

 2.1. Milestone(s) Submitted..... 2

 2.2. Organic Solvent Topical Report 2

 2.3. Final Safety Analysis Report (FSAR) Approved..... 2

 2.4. Waste Sample Shipments to BNFL 2

 2.5. Tank Samples..... 2

3. CURRENT ISSUES..... 3

 3.1. High Heat Safety Issue Milestone..... 3

 3.2. Tank SY-101 Surface Level Rise 3

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

 4.1. Safe Storage of Tank Wastes and Safe Operation of Tank Farms..... 4

5. APPENDICES..... 5

 5.1. Tanks Sampled during Second Quarter FY 1999 (January through March 1999) 5

 5.2. Sampling Schedule for Third Quarter FY 1999 (April through June 1999)..... 5

 5.3. Tank Sampling and Analysis Plans Issued During the Quarter 6

 5.4. Tank Characterization Reports Issued During the Quarter..... 6

 5.5. Laboratory Analysis Reports Issued During the Quarter..... 6

 5.6. Table of DNFSB 93-5 Implementation Plan Revision 1 Commitments Status..... 7

DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1999**1. PURPOSE**

This quarterly report covers High Level Waste Tank Characterization activities at the Hanford site related to the Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 93-5 during the period January 1 to March 31, 1999. 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 Implementation Plan (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, 1999**2. QUARTERLY HIGHLIGHTS****2.1. Milestone(s) Submitted**

None

2.2. Organic Solvent Topical Report

A final draft of the Organic Solvent Topical Report was submitted to U.S. Department of Energy Office (DOE) Office of River Protection (ORP) (formerly DOE/RL) by the Project Hanford Management Contract (PHMC) on February 2, 1999. ORP review found that this report confirms that the risk posed by an organic solvent fire is within risk evaluation guidelines. The report was subsequently issued on March 30, 1999 as HNF-4240, "Organic Solvent Topical Report." DOE/ORP will submit the report to the Oregon Department of Energy, the State of Washington Department of Ecology (Ecology), and DNFSB in early April 1999. This report will provide the basis for proposing closure of Milestones 5.4.3.4d, 5.4.3.4e, and 5.4.3.4f.

2.3. Final Safety Analysis Report (FSAR) Approved

The Tier III review was completed during this quarter and the FSAR approved by DOE/ORP on March 31, 1999. Reference 3 reporting the completion of milestone 5.4.3.1d, Approved FSAR, was submitted to DNFSB on April 6, 1999. Phase I Implementation of the FSAR will be accomplished during the remainder of FY 1999.

2.4. Waste Sample Shipments to BNFL

The planned waste sample shipments to BNFL for FY 1999 were completed this quarter. The fourth and final shipment of Tank AN-102 sample was made in January, one shipment of Tank AZ-102 material was shipped in February, and material from Tank C-104 was shipped in March. The next planned shipment will be in January 2000 from Tank AN-104.

2.5. Tank Samples

Samples accomplished this quarter were three core samples, three grab samples, four vapor samples, and the monthly vapor grab samples at the Standard Hydrogen Monitoring System cabinets.

DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1999

3. CURRENT ISSUES

3.1. High Heat Safety Issue Milestone

Waste sluicing operations from Tank C-106 to Tank AY-102, initiated in November 1998, were suspended shortly after commencing when the ventilation system exceeded the 50-parts-per-million volatile organic compounds level specified in the Ecology permit. Following repair of a pipe jumper leak, a successful process test was conducted on March 7, 1999, to gather vapor emissions information. This information allowed establishing sluicing procedural limits that brought the vapor emissions within the requirement of the vapor emissions permit. Another sluicing run was conducted on March 28, 1999. Greater than one and a half feet of waste has now been sluiced. Two more sluicing periods are planned in the near future, one in April and one in May. If these sluicing runs are successful in transferring a total of three feet of waste from the tank, the tank heat generation rate is expected to be reduced to a level that can be safely dissipated without regular water additions. Achieving this by the end of May will allow completion of milestone 5.4.3.6d, "Letter reporting completion of topical report to resolve the High Heat Safety Issue," by the previously estimated date of December 1999.

3.2. Tank SY-101 Surface Level Rise

Results from the sampling activities using the void fraction instrument and retained gas core sampler have shown that the crust has a high gas content. Core samples have been obtained and laboratory tests and analysis are in progress to support future waste transfer and tank dilution activities. A detailed project plan for remediation of the surface level rise was submitted to ORP in February 1999. A revision to the Unreviewed Safety Question on surface level rise has been prepared, along with supplemental Tank SY-101 controls. A presentation to Tank Advisory Panel (TAP) on the status of the Tank SY-101 surface level rise is scheduled for April 12 to 14, 1999, and a presentation to DNFSB is scheduled for May 5, 1999.

DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1999

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

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

Commitment

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, AMSR

Applicable facilities and programs: ORP

Milestone deliverables/due dates:

d. Approved FSAR.

Due Date: June 1997

Status: The FSAR has been approved by ORP. A letter reporting this completion will be sent in April 1999.

5.4.3.6 High Heat

Statement: Retrieve wastes from Tank C-106

Responsible Manager: Assistant Manager, AMSR

Applicable facilities and programs: ORP

Milestone deliverables/due dates:

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

Due Date: May 1998

Status: Overdue. Estimated completion date is December 1999.

DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1999

5. APPENDICES

5.1. Tanks Sampled during Second Quarter FY 1999 (January through March 1999)

Sample	Actual Start	Actual Finish
SY-101 Push Sample 2 Segments 22	10/12/98	3/30/99
TX-113 Rotary Samples 1 Segments 11	10/14/98	2/12/99
Cone Penetrometer Cold Test #2	10/19/98	2/17/99
Vapor SHMS Samples - Jan	1/21/99	1/21/99
AW-102 Grab Sample 1.2 - (99-1 Campaign)	1/27/99	1/28/99
U-102 Vapor Sample (Filter) (SW)	2/2/99	2/2/99
Vapor SHMS Samples - Feb	2/12/99	2/25/99
C-106 Vapor Sample Vapor Resolution	3/7/99	3/7/99
AZ-702 Vapor Sample Vapor Resolution	3/7/99	3/7/99
AY-102 Grab Sample C-106 Retrieval	3/11/99	3/11/99
U-103 Grab Sample Compatibility (SW)	3/12/99	3/12/99
Vapor SHMS Samples - Mar	3/23/99	3/23/99
C-106 Vapor Sample Vapor Resolution	3/28/99	3/28/99

5.2. Sampling Schedule for Third Quarter FY 1999 (April through June 1999)

Sample	Early Start	Early Finish
S-106 Tracer Gas Injections	11/2/98	4/30/99
TX-118 Rotary Sample 2 Segments 8R High Priority	3/31/99	5/3/99
AY-102 Grab Sample C-106 Retrieval	4/1/99	4/1/99
Vapor SHMS Samples - Apr	4/1/99	4/21/99
W-320 SHMS Samples (AY-102)	4/13/99	4/13/99
AY-102 Grab Sample C-106 Retrieval	4/20/99	4/20/99
Z-361 Vapor Sample Bogen	4/22/99	5/26/99
AZ-101 Vapor Sample (ALCs)	4/27/99	4/28/99
SY-102 Grab Sample (00-1 Compatibility)	5/3/99	5/5/99
Vapor SHMS Samples - May	5/3/99	5/21/99
AZ-102 Rotary Sample 2 Segments 17P	5/4/99	6/7/99
AZ-102 Vapor Sample (ALCs)	5/4/99	5/5/99
Deploy Water Lance Option In 101-SY	5/6/99	5/19/99
AP-107 Grab Sample Operation Compatibility	5/10/99	5/12/99
AX-152 Catch Tank Sniff	5/11/99	5/11/99
U-102 Grab Sample Compatibility (SW)	5/17/99	5/19/99
S-304 Catch Tank Sniff	5/19/99	5/19/99
AY-102 Grab Sample C-106 Retrieval	5/26/99	5/26/99
TX-302C Catch Tank Sniff	6/1/99	6/1/99
204-AR Tank #1 Sniff	6/3/99	6/3/99
U-301B Catch Tank Sniff	6/8/99	6/8/99

DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1999

Sample	Early Start	Early Finish
AZ-101 Rotary Sample 2 Segment 18P	6/14/99	7/16/99
Setup and Install 101-SY Transfer Pump	6/15/99	6/28/99
U-105 Grab Sample Compatibility (SW)	6/16/99	6/18/99
TBD Grab Sample 1.7	6/22/99	6/28/99
UX-302A Catch Tank Sniff	6/22/99	6/22/99
AY-102 Grab Sample C-106 Retrieval	6/29/99	6/29/99
AZ-151 Catch Tank Sniff	6/29/99	6/29/99

5.3. Tank Sampling and Analysis Plans Issued During the Quarter

Tank	Number	Rev	Date
AW-101	HNF-2379	0-B	3/1/99
AW-102	HNF-3758	0-A	1/21/99
AX-104	HNF-3559	0	2/2/99
AZ-101	HNF-3964	1	3/2/99
AZ-102	HNF-3964	1	3/2/99
SY-101	HNF-3375	0-A	1/20/99
U-102	HNF-3821	0-A	2/16/99
Waste Retrieval Sluicing System	HNF-4030 (Process Test Phase 2 Vapor Sampling and Analysis Plan)	0	2/25/99
Waste Retrieval Sluicing System	HNF-4212 (Process Test Phase 3 Vapor Sampling and Analysis Plan)	0-A	3/25/99
Various	HNF-3528 (Compatibility Grab Sampling and Analysis Plan for Fiscal Year 1999)	0	2/11/99

5.4. Tank Characterization Reports Issued During the Quarter

Tank	Number	Rev	Date
AX-102	HNF-SD-WM-ER-472	2	2/2/99
AX-104	HNF-SD-WM-ER-675	2	1/26/99
SX-103	HNF-SD-WM-ER-662	1	3/16/99
SX-115	HNF-SD-WM-ER-684	1	3/26/99
TX-104	HNF-SD-WM-ER-672	1	2/4/99

5.5. Laboratory Analysis Reports Issued During the Quarter

Tank	Title	Number	Date
SX-102	Tank 241-SX-102, Cores 243 and 244 Analytical Results for the Final Report	HNF-1655, Rev. 0	1/11/99

DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1999

5. APPENDICES

5.1. Tanks Sampled during Second Quarter FY 1999 (January through March 1999)

Sample	Actual Start	Actual Finish
SY-101 Push Sample 2 Segments 22	10/12/98	3/30/99
TX-113 Rotary Samples 1 Segments 11	10/14/98	2/12/99
Cone Penetrometer Cold Test #2	10/19/98	2/17/99
Vapor SHMS Samples - Jan	1/21/99	1/21/99
AW-102 Grab Sample 1.2 - (99-1 Campaign)	1/27/99	1/28/99
U-102 Vapor Sample (Filter) (SW)	2/2/99	2/2/99
Vapor SHMS Samples - Feb	2/12/99	2/25/99
C-106 Vapor Sample Vapor Resolution	3/7/99	3/7/99
AZ-702 Vapor Sample Vapor Resolution	3/7/99	3/7/99
AY-102 Grab Sample C-106 Retrieval	3/11/99	3/11/99
U-103 Grab Sample Compatibility (SW)	3/12/99	3/12/99
Vapor SHMS Samples - Mar	3/23/99	3/23/99
C-106 Vapor Sample Vapor Resolution	3/28/99	3/28/99

5.2. Sampling Schedule for Third Quarter FY 1999 (April through June 1999)

Sample	Early Start	Early Finish
S-106 Tracer Gas Injections	11/2/98	4/30/99
TX-118 Rotary Sample 2 Segments 8R High Priority	3/31/99	5/3/99
AY-102 Grab Sample C-106 Retrieval	4/1/99	4/1/99
Vapor SHMS Samples - Apr	4/1/99	4/21/99
W-320 SHMS Samples (AY-102)	4/13/99	4/13/99
AY-102 Grab Sample C-106 Retrieval	4/20/99	4/20/99
Z-361 Vapor Sample Bogen	4/22/99	5/26/99
AZ-101 Vapor Sample (ALCs)	4/27/99	4/28/99
SY-102 Grab Sample (00-1 Compatibility)	5/3/99	5/5/99
Vapor SHMS Samples - May	5/3/99	5/21/99
AZ-102 Rotary Sample 2 Segments 17P	5/4/99	6/7/99
AZ-102 Vapor Sample (ALCs)	5/4/99	5/5/99
Deploy Water Lance Option In 101-SY	5/6/99	5/19/99
AP-107 Grab Sample Operation Compatibility	5/10/99	5/12/99
AX-152 Catch Tank Sniff	5/11/99	5/11/99
U-102 Grab Sample Compatibility (SW)	5/17/99	5/19/99
S-304 Catch Tank Sniff	5/19/99	5/19/99
AY-102 Grab Sample C-106 Retrieval	5/26/99	5/26/99
TX-302C Catch Tank Sniff	6/1/99	6/1/99
204-AR Tank #1 Sniff	6/3/99	6/3/99
U-301B Catch Tank Sniff	6/8/99	6/8/99

DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1999

Sample	Early Start	Early Finish
AZ-101 Rotary Sample 2 Segment 18P	6/14/99	7/16/99
Setup and Install 101-SY Transfer Pump	6/15/99	6/28/99
U-105 Grab Sample Compatibility (SW)	6/16/99	6/18/99
TBD Grab Sample 1.7	6/22/99	6/28/99
UX-302A Catch Tank Sniff	6/22/99	6/22/99
AY-102 Grab Sample C-106 Retrieval	6/29/99	6/29/99
AZ-151 Catch Tank Sniff	6/29/99	6/29/99

5.3. Tank Sampling and Analysis Plans Issued During the Quarter

Tank	Number	Rev	Date
AW-101	HNF-2379	0-B	3/1/99
AW-102	HNF-3758	0-A	1/21/99
AX-104	HNF-3559	0	2/2/99
AZ-101	HNF-3964	1	3/2/99
AZ-102	HNF-3964	1	3/2/99
SY-101	HNF-3375	0-A	1/20/99
U-102	HNF-3821	0-A	2/16/99
Waste Retrieval Sluicing System	HNF-4030 (Process Test Phase 2 Vapor Sampling and Analysis Plan)	0	2/25/99
Waste Retrieval Sluicing System	HNF-4212 (Process Test Phase 3 Vapor Sampling and Analysis Plan)	0-A	3/25/99
Various	HNF-3528 (Compatibility Grab Sampling and Analysis Plan for Fiscal Year 1999)	0	2/11/99

5.4. Tank Characterization Reports Issued During the Quarter

Tank	Number	Rev	Date
AX-102	HNF-SD-WM-ER-472	2	2/2/99
AX-104	HNF-SD-WM-ER-675	2	1/26/99
SX-103	HNF-SD-WM-ER-662	1	3/16/99
SX-115	HNF-SD-WM-ER-684	1	3/26/99
TX-104	HNF-SD-WM-ER-672	1	2/4/99

5.5. Laboratory Analysis Reports Issued During the Quarter

Tank	Title	Number	Date
SX-102	Tank 241-SX-102, Cores 243 and 244 Analytical Results for the Final Report	HNF-1655, Rev. 0	1/11/99

DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1999

Tank	Title	Number	Date
AN-107	Tank 241-AN-107 Low Activity Waste Envelope C Analytical Results for the Final Report	HNF-1653, Rev. 0	1/25/99
U-107	Tank 241-U-107, Cores 242, 242R and 245 Analytical Results for the Final Report	HNF-1661, Rev. 0	2/1/99
AW-101	Tank 241-AW-101 Low Activity Waste Envelope A Analytical Results for the Final Report	HNF-1652 Rev. 0	2/8/99
S-111	Tank 241-S-111, Core 237 Analytical Results for the Final Report	HNF-1647 Rev. 0A	3/10/99

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

Number	Description	Due Date	Reported to DNFSB
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	11/25/98
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 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
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

DNFSB 93-5 QUARTERLY REPORT, JANUARY 1 TO MARCH 31, 1999

Number	Description	Due Date	Reported to DNFSB
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	11/25/98
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	7/22/98
5.6.3.1i	Update Tank Content Models	12/31/98	12/28/98
5.6.3.1j	Completion of Core Sampling of All Tanks	12/31/02	