



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

99-PDD-062

AUG 13 1999

Mr. Mike Wilson, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
P.O. Box 47600
Olympia, Washington 98504



Dear Mr. Wilson:

TRANSMITTAL OF A WASTE INFORMATION REQUIREMENTS DOCUMENT (WIRD)
QUARTERLY REPORT FOR THE PERIOD APRIL 1, 1999, TO JUNE 30, 1999,
FULFILLING THE AGREEMENT MADE BETWEEN THE U.S. DEPARTMENT OF
ENERGY, OFFICE OF RIVER PROTECTION AND THE STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY SUBMITTAL OF QUARTERLY REPORTS IDENTIFYING
PROGRESS UNDER THE DELIVERABLES IDENTIFIED IN THE FISCAL YEAR (FY)
1999 WIRD

The attached WIRD Quarterly Report covers the period from April 1, 1999, to June 30, 1999, and includes discussion of major accomplishments, significant issues, and the Characterization Project's performance during this reporting period. The Characterization Project activities planned for the next 90 day period are also included in this report.

During this quarter, a draft FY 2000 Technical Sampling Basis (TSB) WIRD was issued. Core sampling on Tanks TX-113 and TX-118, and grab sampling on Tanks AP-107 and U-102 were completed. Three grab samples were taken from Tank AY-102 to support sluicing of Tank C-106. Based on the current schedule, the Characterization Project is two cores and two grab samples behind schedule. It is expected that the schedule will be recovered during the fourth quarter of this year.

Sincerely,

A handwritten signature in black ink, appearing to read "G. Sanders".

George H. Sanders, Administrator
Hanford Tri-Party Agreement

PDD:WSL

Attachment

cc: See page 2

Mr. Mike Wilson
99-PDD-062

-2-

AUG 13 1999

cc w/o attach:

Administration Record H6-06

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ATTACHMENT

**WASTE INFORMATION REQUIREMENTS DOCUMENT
QUARTERLY REPORT FOR THE
PERIOD APRIL 1, 1999 TO JUNE 30, 1999**

WIRD Quarterly Report, April 1, 1999 through June 30, 1999

EXECUTIVE SUMMARY

Highlights for this reporting period include completion of core sampling of Tank TX-113, core sampling of Tank TX-118, continuation of waste sluicing operations from TankC-106 to TankAY-102, grab sampling of Tanks AY-102, AP-107, and U-102, issuance of four Tank Characterization Reports (TCRs)/Auto (Electronic) TCRs with associated Tank Interpretive Reports (TIRs), conduct of a Partnering Team meeting, and issuance of the Draft Fiscal Year (FY) 2000 Technical Sampling Basis-Waste Information Requirements Document (TSB-WIRD). Significant issues that occurred during this reporting period are discussed and a look-ahead at the Characterization Project activities planned for the next 90 day period is provided. Reporting on a tank-by-tank basis of sampling performed during the subject period is also provided. During the third quarter, the core sampling schedule remained behind 2 cores and there was a schedule slip of 2 grab samples. It is expected the schedule will be recovered for these samples as well as maintaining the schedule for the remaining samples. The details regarding the schedule are discussed in Section 2.0 of this report.

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1.0 CHARACTERIZATION ACCOMPLISHMENTS AND ISSUES

1.1 Accomplishments

A summary of sampling events and reports completed by the Characterization Project during the third quarter of Fiscal Year (FY)1999, (April 1, 1999 through June 30, 1999) is shown in Tables 1 and 2. These tables are patterned after Tables 5-1a and 5-2 in the FY 1999 WIRD. These tables compare progress against planning levels in the FY 1999 WIRD for the entire fiscal year. Notable accomplishments of the Characterization Project during the third quarter of FY 1999 include:

- Retrieval of 2 cores from Tank TX-118.
- Retrieval of the second of two cores from Tank TX-113.
- Continued support to waste sluicing operations from Tank C-106 to Tank AY-102 with 3 grab samples from Tank AY-102 in April, May, and June as well as 2 Standard Hydrogen Monitoring System (SHMS) grab samples from Tank AY-102.
- Issued 1 TCR and 3 Auto (Electronic) TCRs. Details are in Section 2.5 of this report.
- Obtained liquid grab samples from Tank AP-107 (compatibility in preparation of evaporator operations) and Tank U-102 (interim stabilization).
- SHMS vapor grab samples were taken from tanks AN-103, 107, AZ-101, 102, SX-101, 102, 104, 105, 106, 109, and SY-103.
- Vented, video taped (inspection), and vapor sampled Tank Z-361 at the Plutonium Finishing Plant.
- Issued the Draft FY 2000 Technical Sampling Basis-Waste Information Requirements Document (TSB-WIRD) May 26, 1999. Draft was delivered to Ecology June 10, 1999.
- Issued ECNs to TCRs for 38 tanks to reflect the results of safety screening data recently reevaluated and published in "Evaluation of Tank Data for Safety Screening," HNF-4217, Revision 0, May 26, 1999.
- A Partnering Team meeting was held May 13, 1999, during which the format and content of the Draft FY 2000 TSB-WIRD was discussed in detail.

1.2 Issues

Notable issues encountered by the Characterization Project during the third quarter of FY 1999 include:

- Retrieval of the second core from Tank TX-113 was impacted by complications encountered during sampling. The drill string became stuck in the tank and could not be withdrawn without special actions; the sampler containing Segment 6A was still in the drill string. Eventually, the drill string was successfully removed by use of a jack arrangement. Preparations for and execution of the drill string removal consumed much of the core sampling crew resources for several weeks during the quarter.
- Core sampling of Tank AZ-101 and Tank AZ-102 were impacted by a combination of several things. Completion of core sampling of Tank SY-101 did not occur until late in the second quarter; this consumed core sampling crews. The rotary trucks required for sampling of Tank AZ-101 and Tank AZ-102 were in outages during the third quarter. Also, truck #4, which was scheduled to core sample Tank AZ-102, was occupied in the TX Farm for removal of the drill string from Tank TX-113. Tanks AZ-101 and AZ-102 are expected to be sampled during the fourth quarter.
- Venting, video taping (inspection), and vapor sampling of Tank Z-361 occurred during the third quarter. The video taped inspection revealed an unexpected 3-7/8 inch diameter pipe in three of four of the candidate core sampling risers. The pipe extended to the bottom of the tank. These finds have caused the strategy for core sampling to be reevaluated (e.g., riser preparations, access) and have subsequently impacted the core sampling of Tank Z-361. Currently, core sampling of Tank Z-361 (2 cores) is planned for August, 1999.
- Grab sampling resources were consumed during the third quarter by Tank AY-102 (Tank C-106 sluicing operations support). Tank Z-361 inspections also used grab sampling personnel. This caused a delay in sampling Tank U-105, which was expected to occur in the third quarter. Grab sampling of Tank U-105 is currently scheduled for July 1999.

2.0 CHARACTERIZATION PROJECT PERFORMANCE

2.1 Core Sampling

The second quarter report "Look Ahead" section anticipated Tank AZ-102 (2 cores) to be sampled with Tank AZ-101 started, but not complete. The Tank SY-101 efforts, truck outages, and Tank TX-113 sampling complications as described above caused the schedule to remain behind by 2 cores. It is expected the schedule will be recovered and these 2 cores as well as the remaining 3 other cores will be completed during the fourth quarter of FY 1999.

2.2 Grab Sampling

During the third quarter of FY 1999, 5 tanks (Tanks AY-102, U-102, U-105, SY-102, and AP-107) were planned for grab sampling and 3 were completed. Tank AY-102 was grab sampled three times in support of Tank C-106 sluicing operations and process testing, Tank AP-107 was sampled for compatibility in support of eventual evaporator operations and Tank U-102 was sampled in support of Interim Stabilization. The resource impacts from Tank AY-102 and Tank Z-361 described earlier caused a schedule slip of 2 grab samples. It is expected the schedule will be recovered and these 2 grabs as well as the remaining 6 other grabs will be completed during the fourth quarter of FY 1999.

2.3 Vapor Sampling

During the third quarter of FY 1999, vapor sampling proceeded as planned with 11 tanks having SHMS grab samples performed. Those tanks sampled include Tanks AN-103, 107, AZ-101, 102, SX-101, 102, 104, 105, 106, 109, and SY-103 (2 times).

Vapor sampling of Tank Z-361 occurred in May 1999.

2.4 Auger Sampling

No auger sampling occurred during the third quarter of FY 1999, and no auger sampling is currently planned or scheduled for FY 1999.

2.5 Tank Characterization Report

All TCRs and Auto (Electronic) TCRs planned for FY1999 are completed or in progress and are expected to meet the FY 1999 WIRD commitment. As was discussed in the second quarter report, of the 17 TCRs scheduled to be issued during FY 1999, 10 are being developed and issued using the Auto (Electronic) TCR tool. During the third quarter, the process of issuing Auto (Electronic) TCRs and the associated Tank Interpretive Reports (TIRs) began.

One paper copy TCR was released during the third quarter: "Tank Characterization Report for Single-Shell Tank 241-S-102," HNF-SD-WM-ER-611, Revision 1 dated May, 1999

Three Auto (Electronic) TCRs and the associated TIRs were released: Tank SX-105, S-111 and Tank U-109 and are accessible at

<http://pctwins.pnl.gov:9397/autotcr/TankInterpretiveReport.html>

<http://pctwins.pnl.gov:9397/autotcr/autotcrstartup.html>

One paper copy TCR and 7 Auto (Electronic) TCRs with their associated TIRs will be issued in the fourth quarter to meet the WIRD commitment.

3.0 STATUS TABLES

Table 1, Summary of Sampling/Reporting by Issue, is patterned after Table 5-1a in the FY 1999 WIRD. Rows of particular interest in Table 1 for FY 1999 Quarterly Reports are:

Tanks FY 1999. Numbers are the number of tanks originally identified in the FY 1999 WIRD as the minimum needing to be sampled during FY 1999 (condensed or vapor phase) in support of each of the RPP program issues. These numbers are sometimes referred to as the FY 1999 deliverables commitment to Ecology. They are considered the baseline numbers for FY 1999 and are not subject to change.

Total Tanks Scheduled FY 1999. Numbers are the number of tanks supporting each issue currently scheduled to be sampled in FY 1999. They are based on the most current "Characterization Project Sampling Schedule," Revision 5.6 issued February 25, 1999.

Total Tanks Sampled FY 1999. Numbers are the number of tanks supporting each issue that have been sampled in FY 1999 through June 30, 1999.

Similar rows describe planned, scheduled, and issued TCRs through June 30, 1999.

There were significant changes made during the second quarter, FY1999 in the row, Total Tanks Scheduled FY 1999. The number of tanks scheduled for each issue changed in several cases from that seen in the FY 1999 WIRD and the Quarterly Report of October 1, 1998 through December 31, 1998. Changes reflect the Baseline Sampling Schedule, Change 99-01, Sampling Schedule Revision 5.6, issued February 25, 1999. The changes were discussed among the Partnering Team in a meeting held February 25, 1999 and are discussed in detail in the second quarterly report, Section 4.0. See DOE-ORP letter 99-PDD-030 dated April 29, 1999.

Table 2, Tank List With Associated Sampling Priority Values, is patterned after Table 5-2 in the FY 1999 WIRD and reflects relative tank priorities plus specific tanks sampled and type of sample taken during the first three quarters of FY 1999.

Table 1. Summary of Sampling/Reporting by Issue

	Flammable Gas		Organic Fuel	Waste Feed Delivery [Phase I]	Privatization - DOE Mgmt of Contract [Phase I]	W-320 Sluicing of tank 241-C-106 / High heat	Dangerous Waste and Air Emissions		SST Waste Retrieval and Tank Closure	Privatization - Provide Samples to Contractor [Phase I] ¹	Retrieval, Pretreatment, and Immobilization [Phase II] ²	Historical Model Evaluation	Compatibility (Interim Stab.) ³	Evaporator ⁴	Casualty Mitigation ⁵	Safety Screening [including criticality]
	Cond. ¹	Vapor ^{2,3}	Cond.	Cond.	Cond.	Cond.	Cond.	Vapor ³	Cond.	Cond.	Cond.	Cond.	Cond.	Cond.	Cond.	Cond.
Total Tank Samplings Needed for Issue ⁴	0	45	0	10	4	1	19	11	2	7	18	Opport.	5	Oper.	Oper.	Opport.
Milestone Due Date (FY)	1998	N/A	1998	2003	2002	1998	N/A ⁵	N/A ⁵	2002	2003	2004	N/A	1999	N/A	N/A	N/A
Tanks FY1999	0	45	0	3	2	1	5	3	1	2	3	Opport.	5	Oper.	Oper.	Opport.
Total Tanks Scheduled FY1999 ⁷	1	32	0	4	4	1	0	0	0	2	2	3	9	4	0	3
Total Tanks Sampled FY1999	1 [*]	31 ^{**}		1 [*]	2 ^{***}	1 [†]				1 ^{**}	2 ⁺⁺⁺	2 ⁺⁺⁺	7 ^{***}	1 ⁺⁺		3 ^{*,+++}
Tanks FY2000	-	45	-	3	1.0	-	5	3	1	2	4	Opport.	-	Oper.	Oper.	Opport.
Tanks FY2001	-	45	-	2	1.0	-	5	3	-	2	4	Opport.	-	Oper.	Oper.	Opport.
Tanks FY2002	-	45	-	2	-	-	4	2	-	1	4	Opport.	-	Oper.	Oper.	Opport.
Tanks FY2003	-	45	-	-	-	-	-	-	-	-	3	Opport.	-	Oper.	Oper.	Opport.
TCRs Planned FY1999 From FY1999 Sampling ⁶	0	-	0	0	0	0	0	-	0	-	-	1	-	-	-	1
TCRs Planned FY1999 From FY1998 Sampling	3	-	2	0	0	0	0	-	1	-	-	1	-	-	-	8
TCRs Planned FY1999 From Archive	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-
Total TCRs Planned FY1999	3	-	2	3	0	0	0	-	1	-	-	2	-	-	-	9
Total TCRs Scheduled ⁷	3	-	2	3	0	0	0	-	1	-	-	2	-	-	-	9
Total TCRs Issued		1 [†]	5 [†]									1 [†]	1 [†]	1 [†]		5 [†]

Notes: Archive = Have data or will get data from archive sample, Cond. = Condensed, N/A = Not Applicable, Oper. = Operations Driver, Opport. = Opportunistic

¹ Condensed phase pertains to Retained Gas Sampling.

² TCRs are not required for this issue.

³ These tanks are sampled using SHMS cabinets.

⁴ Needs for each program may change over time.

⁵ For projection purposes, the same milestone due date as Waste Feed Delivery is assumed.

⁶ TCRs for FY1999 from FY1999 sampling are calculated by assuming 9 months for TCR production., after tank is sampled.

⁷ These numbers reflect the working sampling schedule dated 2/25/99.

NOTE: Items in **bold** apply to third quarter FY1999 completions. Others were completed in first and second quarter FY 1999.

- * Tank SY-101 core sampling addresses these issues.
- ** 31 tanks have SHMS grabs done (Tanks AN-101, 103, 104, 107; AX-101; AY-102; AZ-101, 102; BY-103, 106, 109; S-101, 102, 106, 107, 111, 112; SY-102, 103; **SX-101, 102, 104, 105, 106, 109**; T-110; U-102, 103, 107, 108, 109)
- *** Tank SY-101 and AZ-102 core sampling addresses this issue.
- # W-320: Tank AY-102 was grab sampled 11/18/98 and 12/20/98 in support of Tank C-106 sluicing operations in accordance with the project control plan and Tank Sampling Analysis Plan. Vapor samples were also obtained 12/16/98 from Tank C-106 and Tank AY-102 during the Tank C-106 process test. **Tank AY-102 was grab sampled 3 times (April, May, June) in support of W-320 sluicing operations.**
- ## Tank AZ-102 core sampling addresses this issue.
- ### Compatibility/Interim Stabilization: Tanks S-102, 106, **U-102**, 103 and U-105 were grab sampled; Tanks S-102 and S-106 grab samples were done for ammonia analysis and were used to augment compatibility analyses performed on core samples previously obtained. The compatibility DQO was also applied during the Tank SY-101 core sampling for transfer purposes, not Interim Stabilization. **Tank AP-107 was grab sampled for compatibility to support eventual evaporator operations.**
- + TCR for Tank AX-102 was issued 12/21/98; 2 issues were satisfied by this TCR. TCRs were issued for Tanks AX-104, TX-104, SX-103, and SX-115. **TCRs/TIRs were issued for Tanks S-102, SX-105, S-111, and U-109.**
- ++ Tank AW-102 was sampled to support Evaporator operations.
- +++ **Tank TX-113 and TX-118 support these issues.**

Table 2. Tank List With Associated Sampling Priority Values. (6 Sheets)

Tanks	Solids Value	Supernatant Value	Vapor Value	Operations Value ¹	FY 99 First Quarter				FY 99 Second Quarter				FY 99 Third Quarter				FY 99 Fourth Quarter			
					Sol	Sup	Vap	Ops	Sol	Sup	Vap	Ops	Sol	Sup	Vap	Ops	Sol	Sup	Vap	Ops
SY-101	100	0	74	0	X*				X											
AZ-102	96	19	100	0	X*		X				X					X				
SY-103	67	0	74	0			X									X#				
C-104	57	0	0	0																
S-102	45	0	74	44				X			X									
U-109	45	0	74	0			X													
AZ-101	45	100	100	0			X				X					X				
S-111	40	0	74	44			X													
AN-107	16	64	100	23			X				X					X				
AW-101	16	64	100	44																
AN-105	16	31	100	77																
AN-103	16	19	100	44			X				X					X				
AN-104	16	19	100	44			X													
AN-102	16	12	0	23																
AX-104	13	0	0	0																
C-106	13	0	74	0			X				X									
SX-101	7	0	74	44												X				
SX-104	7	0	74	44												X				
TX-118	6	0	0	0										X						
SX-103	6	0	74	44																
TX-113	6	0	0	0					X					X+						
TX-116	6	0	0	0																
TX-105	5	0	0	0																
TX-110	5	0	0	0																
TX-115	5	0	0	0																
SX-114	5	0	0	0																
S-110	5	0	0	0																
SX-107	5	0	0	0																
SX-110	5	0	0	0																
SX-111	5	0	0	0																
SX-112	5	0	0	0																
TY-105	4	0	0	0																
BY-105	4	0	74	44																

Table 2. Tank List With Associated Sampling Priority Values. (6 Sheets)

Tanks	Solids Value	Supernatant Value	Vapor Value	Operations Value'	FY 99 First Quarter				FY 99 Second Quarter				FY 99 Third Quarter				FY 99 Fourth Quarter				
					Sol	Sup	Vap	Ops	Sol	Sup	Vap	Ops	Sol	Sup	Vap	Ops	Sol	Sup	Vap	Ops	
SX-109	4	0	74	0													X				
TX-106	4	0	0	0																	
C-102	1	0	0	0																	
TX-111	1	0	0	0																	
AY-101	0	0	0	23																	
AY-102	0	43	100	44			X**	X				X				X**	X**				
AP-102	0	19	26	0																	
AP-104	0	19	26	100																	
SY-102	0	19	100	44			X														
244-A	0	0	74	0																	
244-BX	0	0	74	0																	
244-S	0	0	74	0																	
244-TX	0	0	74	0																	
244-U	0	0	0	0				X													
A-101	0	0	74	44																	
A-102	0	0	0	0																	
A-103	0	0	0	0																	
A-104	0	0	0	0																	
A-105	0	0	0	0																	
A-106	0	0	0	0																	
AN-101	0	0	74	44			X														
AN-106	0	0	0	0																	
AP-101	0	0	0	44																	
AP-103	0	0	0	44																	
AP-105	0	0	0	44																	
AP-106	0	0	0	44																	
AP-107	0	0	0	100														X##			
AP-108	0	0	0	44																	
AW-102	0	0	0	77							X										
AW-103	0	0	0	0																	
AW-104	0	0	0	77																	
AW-105	0	0	0	44																	
AW-106	0	0	0	44																	

Table 2. Tank List With Associated Sampling Priority Values. (6 Sheets)

Tanks	Solids Value	Supernatant Value	Vapor Value	Operations Value	FY 99 First Quarter				FY 99 Second Quarter				FY 99 Third Quarter				FY 99 Fourth Quarter			
					Sol	Sup	Vap	Ops	Sol	Sup	Vap	Ops	Sol	Sup	Vap	Ops	Sol	Sup	Vap	Ops
BY-103	0	0	74	0							X									
BY-104	0	0	0	0																
BY-106	0	0	74	44							X									
BY-107	0	0	0	0																
BY-108	0	0	0	0																
BY-109	0	0	74	0			X													
BY-110	0	0	0	0																
BY-111	0	0	0	0																
BY-112	0	0	0	0																
C-101	0	0	0	0																
C-103	0	0	0	44																
C-105	0	0	0	0																
C-107	0	0	0	0																
C-108	0	0	0	0																
C-109	0	0	0	0																
C-110	0	0	0	0																
C-111	0	0	0	0																
C-112	0	0	0	0																
C-201	0	0	0	0																
C-202	0	0	0	0																
C-203	0	0	0	0																
C-204	0	0	0	0																
S-101	0	0	74	44			X													
S-103	0	0	0	44																
S-104	0	0	0	0																
S-105	0	0	0	0																
S-106	0	0	74	44			X	X												
S-107	0	0	74	44			X													
S-108	0	0	0	0																
S-109	0	0	74	44																
S-112	0	0	74	44			X													
SX-102	0	0	74	44														X		
SX-105	0	0	74	44														X		

Table 2. Tank List With Associated Sampling Priority Values. (6 Sheets)

Tanks	Solids Value	Supernatant Value	Vapor Value	Operations Value ¹	FY 99 First Quarter				FY 99 Second Quarter				FY 99 Third Quarter				FY 99 Fourth Quarter				
					Sol	Sup	Vap	Ops	Sol	Sup	Vap	Ops	Sol	Sup	Vap	Ops	Sol	Sup	Vap	Ops	
SX-106	0	0	74	44													X				
SX-108	0	0	0	0																	
SX-113	0	0	0	0																	
SX-115	0	0	0	0																	
T-101	0	0	0	0																	
T-102	0	0	0	0																	
T-103	0	0	0	0																	
T-104	0	0	0	0																	
T-105	0	0	0	0																	
T-106	0	0	0	0																	
T-107	0	0	0	0																	
T-108	0	0	0	0																	
T-109	0	0	0	0																	
T-110	0	0	74	44			X														
T-111	0	0	0	0																	
T-112	0	0	0	0																	
T-201	0	0	0	0																	
T-202	0	0	0	0																	
T-203	0	0	0	0																	
T-204	0	0	0	0																	
TX-101	0	0	0	0																	
TX-102	0	0	0	0																	
TX-103	0	0	0	0																	
TX-104	0	0	0	0																	
TX-107	0	0	0	0																	
TX-108	0	0	0	0																	
TX-109	0	0	0	0																	
TX-112	0	0	0	0																	
TX-114	0	0	0	0																	
TX-117	0	0	0	0																	
TY-101	0	0	0	0																	
TY-102	0	0	0	0																	
TY-103	0	0	0	0																	

Table 2. Tank List With Associated Sampling Priority Values. (6 Sheets)

Tanks	Solids Value	Supernatant Value	Vapor Value	Operations Value ¹	FY 99 First Quarter				FY 99 Second Quarter				FY 99 Third Quarter				FY 99 Fourth Quarter			
					Sol	Sup	Vap	Ops	Sol	Sup	Vap	Ops	Sol	Sup	Vap	Ops	Sol	Sup	Vap	Ops
TY-104	0	0	0	0																
TY-106	0	0	0	0																
U-101	0	0	0	0																
U-102	0	0	74	44			X					X								
U-103	0	0	74	44			X		X											
U-104	0	0	0	0																
U-105	0	0	74	0		X														
U-106	0	0	0	0																
U-107	0	0	74	44			X													
U-108	0	0	74	44			X													
U-110	0	0	0	0																
U-111	0	0	0	44																
U-112	0	0	0	0																
U-201	0	0	0	0																
U-202	0	0	0	0																
U-203	0	0	0	0																
U-204	0	0	0	0																

Note:

- ¹ Operations activities usually require grab samples for supernatant, however if solid sampling retrieves supernatant, it may be used in place of a grab sample.
- * 1 core done and 2 more planned on Tanks SY-101 and AZ-102. SY-101 completed.
- ** Tank AY-102 was vapor sampled during Tank C-106 process test on 12/16/98 and a SHMS grab was also done first quarter. Tank AY-102 grab sampled 3 times and SHMS sampled 2 times.
- # Sampled 2 times.
- ## Tank AP-107 was sampled for compatibility to support eventual evaporator operations.
- + Tank TX-113 was completed.

Items applying to current quarter are in bold.

4.0 LOOK AHEAD

Characterization Project activities planned for the fourth quarter of FY 1999 (July 1 through September 30, 1999) include:

- Obtain core samples from Tanks AW-103 (1), AZ-101 (2), and AZ-102 (2) in support of Waste Feed Delivery Phase 1 and Privatization Phase 1 (DOE Management of Contract).
- Continue support of Tank C-106 sluicing operations through grab sampling Tank AY-102.
- Obtain grab sample of Tanks S-109, S-111, and U-105 in support of interim stabilization.
- Obtain grab samples of Tanks AP-103, AP-108, and AW-104 in support of compatibility and minimum safe operations.
- Grab sample Tank AP-107 to support evaporator operations.
- Grab sample Tank SY-102 for compatibility and cross-site transfer for evaporator operations.
- Core sample Tank Z-361.
- Issue Final FY 2000 TSB-WIRD in August.
- Issue 1 hard copy TCR and 7 Auto (Electronic) TCRs.

5.0 PROGRAMS AND ISSUE STATUS

This section addresses only the milestones that were completed, impacted, or active during the subject fiscal year quarter. For past progress, refer to past quarterly reports.

5.1 Partnering Team Meeting

An Office of River Protection (ORP), Ecology, Contractor Partnering Team Meeting was held May 13, 1999, during which the format and content of the Draft FY 2000 TSB-WIRD was reviewed and discussed. The format and content met with approval. Comment on specific data/information was withheld pending issue of the Draft FY 2000 TSB-WIRD to Ecology for detail review in June 1999.

5.2 Flammable Gas

Drivers Tri-Party Agreement (TPA) Milestone M-40-00, which requires mitigation/resolution of tank safety issues for high priority Watch List tanks by September 30, 2001;

Flammable gas vapor sampling is used to verify real time SHMS cabinet readings by obtaining vapor samples for confirmatory laboratory mass spectrometry analysis.

Although the Flammable Gas Unreviewed Safety Question was closed (for SSTs and DSTs, not IMUSTs) in September 1998; the Flammable Gas Safety Issue remains open and is still a driver for additional characterization. During the third quarter of FY 1999, 11 tanks had SHMS grab samples performed. Those tanks sampled are: Tanks AN-103, 107, AZ-101, 102, SX-101, 102, 104, 105, 106, 109, and SY-103 (2 times).

5.3 Organic Fuel

Drivers:

- TPA Milestone M-40-00, which requires mitigation/resolution of tank safety issues for high priority Watch List tanks by September 30, 2001;
- Authorization Basis

The Organic Complexant Safety Issue for DSTs, SSTs, Double Contained Receiver Tanks, and catch tanks has been closed and the Organic Solvent issue is about to be closed. No further sampling is required, however, the issue remains for tracking purposes for TCRs/Auto (Electronic) TCRs yet to be published which address the Organic Fuel issue.

5.4 Waste Feed Delivery (Phase 1)

Drivers:

- TPA Milestone M-50-00, which requires completion of pretreatment processing of Hanford tank waste by December 31, 2028;
- TPA Milestone M-50-04 which requires starting hot operations of high-level waste (HLW) pretreatment facility by June 30, 2008;
- TPA Milestone M-51-00, which requires completion of vitrification of Hanford HLW by December 31, 2028;
- TPA Milestone M-51-02, which required completion of melter tests and selection of reference melter by September 30, 1998;
- TPA Milestone M-51-03, which requires initiation of hot operations of the HLW vitrification facility by December 31, 2009;
- TPA Milestone M-60-00, which requires completion of pretreatment and immobilization of Hanford Low-Activity waste (LAW) by December 31, 2024;

- TPA Milestone M-60-10, which requires selection of 2 Contractor Owned/Contractor Operated (COCO) contractors and issuance of authorization to proceed with Part B work for LAW pretreatment and immobilization by July 31, 1998;
- TPA Milestone M-60-11, which requires the start of construction of two Phase 1 LAW pretreatment and immobilization facilities by August 31, 1998;
- TPA Milestone M-60-12, which requires start of hot operations of two COCO Phase 1 LAW pretreatment and immobilization facilities by December 31, 2002,

NOTE: The former M-60 milestones pertain to pretreatment and immobilization of Hanford LAW. These milestones, along with other disposal milestones, are currently being revised or deleted because of the award of contract for privatized immobilization to British Nuclear Fuel Limited, Inc., (BNFL) in August 1998.

- TPA Milestone M-61-00, which requires completion of pretreatment and immobilization of Hanford LAW by December 31, 2028;
- TPA Milestone M-61-01, which requires start of construction of Phase 1 LAW pretreatment and immobilization facility by a date yet to be determined;
- TPA Milestone M-61-02, which requires initiation of hot operations of Phase 1 LAW pretreatment and immobilization facility by December 31, 2003;
- TPA Milestone M-90-00, which requires completion of acquisition of new facilities, modification of existing facilities, and/or modification of planned facilities as necessary for storage of Hanford site Immobilized HLW (IHLW) and Immobilized LAW (ILAW), and disposal of ILAW by a date yet to be determined;
- TPA Milestone M-90-05-T01, which requires submission of ILAW disposal facility performance assessment to Ecology for review by December 31, 2001;
- Privatization Contract with BNFL.

No sampling occurred during the third quarter in support of this issue.

5.5 Privatization - DOE Management of Contract (Phase 1)

Drivers: • Privatization Contract with BNFL.

No sampling occurred during the third quarter in support of this issue.

5.6 W-320 Sluicing of Tank C-106/High Heat

- Drivers:
- TPA Milestone M-40-00, which requires mitigation/resolution of tank safety issues for high priority Watch List tanks by September 30, 2001;
 - TPA Milestone M-45-00 which requires closure of all SST farms by September 30, 2024;
 - DNFSB 5.4.3.6.D which requires completion of the topical report to resolve the High Heat safety issue by May 31, 1998 (Overdue)

Tank C-106 sluicing continued with 3 events in March, May, and June. Three grab samples, one following each sluicing event were collected from Tank AY-102 during April, May, and June of the third quarter of FY 1999 as well as 2 SHMS grabs from Tank AY-102.

5.7 Air Emissions and Dangerous Waste

- Drivers:
- Regulatory

Data Quality Objectives (DQO) to support regulatory sampling and analysis are currently being generated. The Waste Integration Team's DQO was issued in December 1998. The Air Emission and Dangerous Waste DQOs are being revised and are expected in July 1999.

No sampling activities associated with this issue or driver(s) are expected to occur in FY 1999. (See Section 4.7, second quarterly report, ORP letter 99-PDD-030 dated April 29, 1999).

5.8 Single-Shell Tank Waste Retrieval and Tank Closure

Due to indefinite termination of the Light Duty Utility Arm (LDUA) activity in February 1999, the LDUA will not be deployed in FY 1999 and no samples and analyses will be conducted.

5.9 Privatization - Provide Samples to Private Contractor (Phase 1)

- Drivers:
- See Section 5.4 of this report for TPA Milestones M-51, M-60, and M-61.
 - Privatization Contract with BNFL,. See Section 4.5 of this report.

No sampling was performed in support of this issue during the third quarter.

5.10 Retrieval, Pretreatment, and Immobilization (Phase 2)

- Drivers:
- TPA Milestone M-45-00 which requires closure of all SST farms by September 30, 1999,
 - TPA Milestone M-45-02C, M-45-02D, M-45-02E, M-45-02F, and M-45-02G which requires submittal of the annual update of SST retrieval sequence to Ecology for approval by September 30 of 1998, 1999, and 2000, HNF-SD-WM-ER-611, Revisions 100, 01, and 02;
 - See Section 4.4 of this report for M-50, M-51, M-60, and M-61.
 - See Section 4.5 of this report.

When the FY 1999 WIRD was generated, sampling and analysis in support of Phase II was to support enhanced sludge washing studies, determination of tank retrieval sequences, and salt cake dissolution studies to be conducted within RPP and privatization programs.

Tank TX-113 and Tank TX-118 were core sampled during the third quarter with sample material designated for organizations conducting the above activities.

5.11 Historical Model Evaluation

- Drivers:
- DNFSB 5.6.3.1.I which requires update of tank content models or definition of limitation of the models by December 31, 1998 (Complete);

A letter reporting completion of 5.6.3.1.I was submitted to DNFSB on December 28, 1998. The driver associated with this issue is complete. However, for continued enhancement of the database, the Historical Model DQO will continue to be applied opportunistically to selected tank samples.

Tanks TX-113 and TX-118 were core sampled during the third quarter; the Historical Model DQO will be applied to the analyses of these samples.

5.12 Compatibility

- Drivers:
- TPA Milestones M-41-00, M-41-22, M-41-23, M-41-24, M-41-25, M-41-26, M-41-27, M-41-27-T03, M-41-27-T04, M-41-27-T05 which support interim stabilization of tanks through September 30, 2000.
 - Authorization Basis

During the third quarter of FY 1999, Tank U-102 was grab sampled in preparation for interim stabilization. Tank AP-107 was sampled for compatibility to support eventual Evaporator operations.

5.13 Evaporator

Drivers: • Authorization Basis

Tank AP-107 was sampled for compatibility to support eventual Evaporator operations. The tank will be sampled again in the fourth quarter. At that time, the Evaporator DQO will be applied.

5.14 Caustic Mitigation

Drivers: • Authorization Basis

No characterization activities associated with this issue or driver(s) occurred during the subject fiscal year quarter.

5.15 Safety Screening

Drivers: • DNFSB 5.6.3.1.J which requires core sampling of all tanks by December 31, 2002.

- TPA Milestone M-40-00, which requires mitigation/resolution of tank safety issues for high priority Watch List tanks by September 30, 2001;
- TPA Milestone M-40-12, which requires resolution of the nuclear criticality safety issue by September 30, 1999;
- Authorization Basis

A second core sample from Tank TX-113 was obtained and Tank TX-118 was core-sampled in the third quarter. The safety screening DQO will be applied to the analyses for these two tanks.

5.16 Characterization Information Deliverables

Drivers: • TPA Milestone M-44-00A which requires completion of delivery of information requirements as identified in the annually submitted WIRD by September 30, 2002;

- TPA Milestone M-44-13C, which requires submittal of the draft WIRD by June 30, 1999 (Complete)
- TPA Milestone M-44-14C, which requires submittal of the final WIRD by August 31, 1999
- TPA Milestone M-44-15C, which requires issuance of characterization deliverables consistent with the current WIRD by September 30, 1999
- TPA Milestone M-44-16C, which requires completion of input of characterization information for HLW tanks for which sampling and analysis were completed during the current WIRD by September 30, 1999

The Draft FY 2000 TSB-WIRD was issued on May 26, 1999, to ORP and to Ecology on June 10, 1999 for early completion of M-44-13C. All other products associated with these milestones are on schedule.

Mr. Mike Wilson
99-PDD-062

AUG 13 1999

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J. F. Thompson, PDD

Record Note: A draft FY 2000 TSB-WIRD was issued and submitted to Ecology to fulfill TPA Milestone M-44-13C during this quarter.

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Record Note: A draft FY 2000 TSB-WIRD was issued and submitted to Ecology to fulfill TPA Milestone M-44-13C during this quarter.

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