



U.S. Department of Energy  
**Office of River Protection**

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01-TOD-T029

OCT 23 2001

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Department of Ecology  
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**EDMC**

Dear Mr. Wilson:

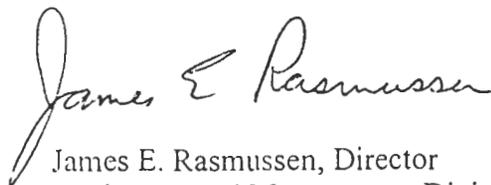
TRANSMITTAL OF A TECHNICAL SAMPLING BASIS AND WASTE INFORMATION REQUIREMENTS DOCUMENT (TSB-WIRD) QUARTERLY REPORT FOR THE PERIOD JULY 1, 2001, TO SEPTEMBER 30, 2001, IN FULFILLMENT OF HANFORD FEDERAL FACILITY AGREEMENT AND CONSENT ORDER MILESTONE M-44-15E

The submission of this report fulfills the agreement made between the U.S. Department of Energy, Office of River Protection and the State of Washington Department of Ecology by submitting the quarterly reports due at the end of the month after each Fiscal Year (FY) quarter. This report provides discussions of fourth quarter FY 2001 activities and FY 2001 yearend summaries of deliverables completed throughout the FY. The characterization project activities planned for the next 90 days are also included in this report.

During this quarter core samples from Tanks 241-AW-104, 241-AW-105, 241-S-105, and 241-S-112 were completed. Liquid grab samples were taken from Tanks 241-AN-106, 241-AP-108, 241-C-103, 241-S-112, and 241-SY-102. Type IV vapor samples were taken from Tank 241-AP-101. Four tank characterization reports were issued during the fourth quarter. All FY 2001 TSB-WIRD deliverables were completed by September 30, 2001, and are reflected in the attached quarterly report.

If you have any questions, please contact me, or your staff may contact Wen-Shou Liou, Technical Operations Division, (509) 373-9879.

Sincerely,

  
James E. Rasmussen, Director  
Environmental Management Division

TOD:WSL

Attachment

cc: See page 2

Mr. Michael A. Wilson  
01-TOD-T029

-2-

OCT 23 2001

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Administrative Record

Attachment

CONTRACT NUMBER DE-AC27-99RL14047:  
TECHNICAL SAMPLING BASIS-WASTE INFORMATION  
REQUIREMENTS DOCUMENT (TSB-WIRD)  
QUARTERLY REPORT FOR THE PERIOD  
JULY 1, 2001, TO SEPTEMBER 30, 2001

Consisting of 21 pages  
including cover page

## TSB-WIRD Quarterly Report, July 1, 2001, through September 30, 2001

### EXECUTIVE SUMMARY

Highlights for this fourth quarter reporting period are:

- Obtained core samples from Tanks AW-104, AW-105, S-105, and S-112. The core samples from Tanks AW-104 and AW-105 constitute early completion of two Fiscal Year (FY) 2002 Technical Sampling Basis – Waste Information Requirements Documents (TSB-WIRD) deliverables/commitments in FY 2001.
- Obtained grab samples from Tanks AN-106, AP-108, C-103, S-112, and SY-102.
- Obtained Type IV vapor samples from Tank AP-101.
- Issued four Auto (Electronic) Tank Characterization Report (TCR), one each for Tanks AP-107, AZ-101, S-107, and SY-103, completing the FY 2001 commitment for TCR.
- Issued the final *Fiscal Year 2002 Tank Characterization Technical Sampling Basis and Waste Information Requirements Document* in fulfillment of *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement [TPA]) Milestone M-44-14E.
- Completed input of characterization data into the Tank Waste Information Network System (TWINS) electronic database within seven days of release of each laboratory analysis report in fulfillment of TPA Milestone M-44-16E.
- Completed all FY 2001 TSB-WIRD field activity deliverables/commitments to the State of Washington Department of Ecology (Ecology) in fulfillment of TPA Milestone M-44-15E. This fourth quarter report provides documentation of the deliverables in support of the FY 2001 commitments.

Issues identified in the third quarter FY 2001 report were resolved.

Reporting on a tank-by-tank basis of sampling and other deliverables provided during the fourth quarter and for the entire FY 2001 is provided in this report.

A look-ahead at the Characterization Program activities planned for the next 90-day period is provided.

## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	i
1.0 CHARACTERIZATION ACCOMPLISHMENTS AND ISSUES.....	1
1.1 Accomplishments .....	1
1.2 Issues.....	2
2.0 CHARACTERIZATION PROGRAM PERFORMANCE.....	3
2.1 Core Sampling .....	3
2.2 Grab Sampling.....	3
2.3 Vapor Sampling.....	3
2.4 Auger Sampling.....	4
2.5 Schedule Performance .....	4
2.6 Tank Characterization Reports (TCR).....	4
3.0 STATUS TABLES .....	5
4.0 LOOK AHEAD .....	10
5.0 PROGRAMS AND ISSUE STATUS.....	10
5.1 Interim Stabilization (Compatibility) .....	10
5.2 Operations.....	11
5.3 Evaporator Operations.....	11
5.4 Waste Feed Delivery Phase 1 .....	11
5.5 Interface Control Document (ICD)-23 .....	11
5.6 Dangerous Wastes (Regulatory Compliance).....	12
5.7 Waste Processing and Disposal .....	12
5.8 Air Emissions (Regulatory Compliance).....	12
5.9 Single-Shell Tank Retrieval and Tank Closure .....	12
5.10 Safety Screening .....	13
5.11 Waste Certification (ICD-19 and ICD-20) .....	13
5.12 Miscellaneous Operations.....	13
5.13 Polychlorinated Biphenyls (PCB).....	13
6.0 CHARACTERIZATION INFORMATION DELIVERABLES FOR FY 2001 .....	14
6.1 Planning and Status Reports .....	14
6.2 Tank Characterization Reports (TCR).....	14
7.0 PARTNERING TEAM MEETINGS IN FY 2001 .....	14
7.1 December 15, 2000 Meeting.....	14
7.2 May 21, 2001 Meeting.....	15
7.3 Summary.....	17

**LIST OF TABLES**

Table 1. Summary of Sampling by Issue.....6

Table 2. TCRs Issued During FY 2001 .....9

## 1.0 CHARACTERIZATION ACCOMPLISHMENTS AND ISSUES

### 1.1 Accomplishments

A summary of sampling events and reports completed by the Characterization Program during Fiscal Year (FY) 2001 (October 1, 2000, through September 30, 2001) is shown in Tables 1 and 2. Table 1 is patterned after Table 7-1 in the FY 2001 Technical Sampling Basis - Waste Information Requirements Document (TSB-WIRD), RPP-5832, Rev. 0. Table 1 reflects completion of deliverables against planning levels in the FY 2001 TSB-WIRD for the entire FY. Table 2 lists all TCRs issued during FY 2001 and the associated issues addressed by each. Notable accomplishments of the Characterization Program during the fourth quarter of FY 2001 are:

- Obtained core samples from Tanks AW-104, AW-105, S-105, and S-112. The core samples from Tanks AW-104 and AW-105 constitute early completion of two FY 2002 TSB-WIRD deliverables/commitments in FY 2001.
- Obtained grab samples from Tanks AN-106, AP-108, C-103, S-112, and SY-102.
- Obtained Type IV vapor samples from Tank AP-101.
- Issued four Auto (Electronic) TCRs, one each for Tanks AP-107, AZ-101, S-107, and SY-103, completing the FY 2001 commitment for TCRs.
- Issued the final *Fiscal Year 2002 Tank Characterization Technical Sampling Basis and Waste Information Requirements Document* (RPP-8093, Rev. 0) in fulfillment of *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement [TPA]) Milestone M-44-14E.
- Completed input of characterization data into the Tank Waste Information Network System (TWINS) electronic database within seven days of release of each laboratory analysis report in fulfillment of TPA Milestone M-44-16E. The milestone completion letter was issued on September 27, 2001.
- Completed all FY 2001 TSB-WIRD field activity deliverables/commitments to Ecology in fulfillment of TPA Milestone M-44-15E. This fourth quarter report provides documentation of the deliverables in support of the FY 2001 commitments.

## 1.2 Issues

There were no significant issues encountered by the Characterization Program during the fourth quarter of FY 2001.

Five issues affected sampling during the first three quarters of FY 2001:

- During the first quarter of FY 2001, the polychlorinated biphenyl (PCB) issue caused a delay in the acceptance at the 222-S Laboratory of samples from “PCB suspect” Tanks SY-102 and AY-102. The laboratory delayed acceptance of these samples pending the U.S. Department of Energy, Office of River Protection (ORP) approval to send waste generated during extrusion and analysis of these samples back to the double-shell tank (DST) system. To resolve this issue, ORP issued a letter on November 21, 2000, authorizing two shipments of waste from 222-S to the DST system. At the end of FY 2001, one shipment of waste has occurred.
- During the first quarter of FY 2001, corrosion mitigation was identified as a driver for sampling tanks, a driver not originally included in the FY 2001 TSB-WIRD. Corrosion mitigation is the set of corrective actions proposed to address out-of-specification conditions that could lead to increased corrosion rates for DSTs. The corrective actions were proposed as a response to a Defense Nuclear Facilities Safety Board review and a request from ORP to address these out-of-specification issues. Additional sampling to support the corrosion mitigation issue was required during the remainder of FY 2001 and will be continued in future years. The corrosion mitigation program has released a technical basis document (*Technical Basis for Chemistry Control Program*, RPP-7795, Rev. 1) that outlines sampling and monitoring of the tank waste chemistry in DSTs.
- During the third quarter of FY 2001, an Unreviewed Safety Question (USQ) was declared on the use of compressed air/gas systems in contaminated areas. This precluded the employment of the characterization sampling trucks that use compressed nitrogen during core sampling. The USQ was resolved and core sampling resumed in the fourth quarter.
- During the third quarter of FY 2001, grab sampling was precluded by an extensive evaluation of hoist and rigging requirements and procedures for removing cover blocks and shield plugs. With implementation of new procedures, grab sampling resumed in the fourth quarter.
- During the third quarter of FY 2001, several Tank Farm Contractor potential safety concerns resulted in implementation of stricter requirements for release of tank farm fieldwork including characterization sampling. This controlled work release process was designed to enhance the safety of day-to-day operations. After extensive hazard analysis and enhanced work planning, characterization core and grab sampling resumed in the fourth quarter.

## **2.0 CHARACTERIZATION PROGRAM PERFORMANCE**

### **2.1 Core Sampling**

The "Look Ahead" section in the FY 2001 TSB-WIRD Third Quarter Report anticipated acquiring two rotary-mode cores from Tank S-112 (Single-Shell Tank [SST] Retrieval and Closure, PCBs, Safety Screening) and one rotary-mode core from Tank S-105 (Waste Feed Delivery Phase 1, SST Retrieval and Closure, PCBs, Safety Screening) during the fourth quarter. These samplings were completed as well as a second rotary-mode core from Tank S-105. In support of the caustic mitigation program, one push-mode core each was obtained from Tanks AW-104 and AW-105. These two sampling events constitute the early completion of two FY 2002 TSB-WIRD sampling commitments.

The FY 2001 TSB-WIRD commitments requiring core sampling have been met.

### **2.2 Grab Sampling**

The "Look Ahead" section in the FY 2001 TSB-WIRD Third Quarter Report anticipated that the following grab sampling events would be completed during the fourth quarter: Tanks AP-108 (Evaporator, Compatibility), C-103 (Interim Stabilization, PCBs), S-112 (Interim Stabilization, PCBs), SY-102 (Cross-site Compatibility), and U-107 (SST Saltcake Dissolution Demonstration, PCBs).

Grab sampling of Tanks AP-108, C-103, S-112, and SY-102 was completed. Because a planned transfer of waste from Tank AP-106 to Tank AP-108 in support of 242-A Evaporator Campaign 02-01 was delayed, Tank AP-108 was sampled for the compatibility and corrosion mitigation issues only. Grab sampling of Tank U-107 was deferred until saltwell pumping of that tank is initiated. In addition to the planned grab sampling events, Tank AN-106 was grab sampled for the corrosion mitigation issue. Neither sampling of Tank AP-108 for evaporator operations nor sampling of Tank U-107 was required to meet FY 2001 TSB-WIRD commitments.

The FY 2001 TSB-WIRD commitments requiring grab sampling have been met.

### **2.3 Vapor Sampling**

The "Look Ahead" section in the FY 2001 TSB-WIRD Third Quarter Report anticipated that Type IV vapor sampling of Tank AP-101 would be completed during the fourth quarter. The vapor sampling of Tank AP-101 was completed as scheduled.

The FY 2001 TSB-WIRD commitments requiring vapor sampling have been met.

## **2.4 Auger Sampling**

No auger sampling was planned or scheduled for FY 2001.

## **2.5 Schedule Performance**

At the end of FY 2001, the Characterization Program was ahead of schedule in comparison to the Sampling Schedule, Draft Revision 5.8:

- During the fourth quarter of FY 2001, truck #1 was operational and used to push-mode core sample Tanks AW-104 and AW-105. Truck #4 was operational and used to rotary-mode core sample Tanks S-105 and S-112. Truck #3 was in a corrective maintenance outage; truck #2 is retired. At the end of FY 2001, a total of 10 core samples had been collected from five different tanks against FY 2001 schedules, and one each additional cores were collected from AW-104 and AW-105 against FY 2002 schedules, for a total of 12 core samples. This is ahead of the 10 core samples originally scheduled for FY 2001.
- During the fourth quarter of FY 2001, grab samplings of Tanks AN-106, AP-108, C-103, S-112, and SY-102 were completed. At the end of FY 2001, a total of 14.2 grab samples had been collected from 13 different tanks, which is on schedule for the 14 grab samples scheduled for FY 2001.
- During the fourth quarter of FY 2001, Type IV vapor sampling of Tank AP-101 was completed. At the end of FY 2001, a total of six Type IV vapor samples were collected from Tanks AN-101, AN-106, AP-101, AP-102, AP-104, and AP-106. Sampling was on schedule with six Type IV vapor samples scheduled for FY 2001. Additionally, a vapor sniff sampling of Catch Tank AX-152 was performed during the first quarter of FY 2001, and a Type IV vapor sampling of Tank SY-102 was completed during the fourth quarter of FY 2000 in support of FY 2001 TSB-WIRID commitments.
- See Table 1 for listing of specific tanks sampled and the programs/issues the samplings supported.

## **2.6 Tank Characterization Reports (TCR)**

During the fourth quarter of FY 2001, four TCRs, one each for Tanks AP-107, AZ-101, S-107, and SY-103, were issued for a total of 12 TCRs issued in FY 2001. The FY 2001 TSB-WIRID originally identified completion of TCRs for Tanks BY-106 and U-108. However, sampling of those two tanks was subsequently determined to not be required, hence no new data were available for TCRs for those tanks. During the Partnering Team meeting of December 15, 2000, a TCR for Tank S-101 was substituted for Tank BY-106 (see Section 7.1 of this report). For the

same reason, a TCR for Tank S-107 was later substituted for Tank U-108. The 12 TCRs are identified in Table 2, and are accessible at the following Internet location:

- <http://twins.pnl.gov:8001>

The FY 2001 TSB-WIRD commitment to issue 12 TCRs was met.

### 3.0 STATUS TABLES

Table 1, Summary of Sampling by Issue, is patterned after Table 7-1 in the FY 2001 TSB-WIRD (RPP-5832, Rev. 0). Table 1 columns of particular interest for FY 2001 are:

Tanks Needed for FY 2001 TSB-WIRD Commitments: The number of tanks originally identified in the FY 2001 TSB-WIRD as the minimum needing to be sampled during FY 2001 (condensed or vapor phase) in support of each of the River Protection Project (RPP) program issues. These numbers are sometimes referred to as the FY 2001 deliverables/commitments to Ecology. They are considered the baseline numbers for FY 2001.

Tanks Scheduled FY 2001: The number of tanks supporting each issue scheduled to be sampled in FY 2001. They are based on the most current Characterization Program Sampling Schedule Draft Revision 5.8.

Tanks Sampled Against FY 2001 TSB-WIRD Commitments: Number of tanks that have been sampled through September 30, 2001, in support of issues and commitments in the FY 2001 TSB-WIRD. Tanks that were sampled during FY 2000 against FY 2001 TSB-WIRD commitments are included in this total.

Table 2 lists the TCRs published during FY 2001 and the associated programs/issues addressed by each.

Table 1. Summary of Sampling by Issue

Sampling Needed		Tanks Needed for FY 2001 TSB-WIRD Deliverables	Tanks Scheduled FY 2001 (Rev. 5.8 Draft)	Tanks Previously Sampled	Tanks Sampled This Quarter	Tanks Sampled Against FY 2001 TSB-WIRD Deliverables	Tanks Sampled in FY 2001
Interim Stabilization	cond	5 (3) <sup>1</sup>	3 <sup>1</sup>	1	2	3	U-111 grab, S-112 grab, C-103 grab
Operations	cond	6(4 / 6 ev) <sup>2</sup>	5 / 7 ev	3 / 4 ev	2 / 3 ev <sup>3</sup>	5 / 7 ev <sup>3</sup>	SY-102 grab (3 events), TX-244 grab, AP-107 grab, S-105 core, AP-108 grab
Evaporator Operations	cond	1	2	2	0	2	AP-107 grab, AW-106 grab
Waste Feed Delivery Phase 1	cond	3	3	3	0	3	SY-102 core, AP-104 grab, C-107 core
ICD-23	cond	4	4	6 (AN-104 core <sup>4</sup> ) (AZ-101 core <sup>4</sup> )	0	6	SY-102 core, AP-104 grab, AN-107 grab, AY-102 <sup>5</sup> core
Dangerous Wastes	cond	0	0	0	0	0	---
Waste Processing and Disposal	cond	3	3	3	0	3	SY-102 core, AP-104 grab, C-107 core
Air Emissions	vap	1	6	6 (SY-102 <sup>4</sup> )	1	7	AP-104, AP-102, AN-101, AP-106, AN-106, AP-101
SST Retrieval and Tank Closure	cond	1	3	1	2	3	C-107 core, S-112 core, S-105 core
Safety Screen	cond	OP	2	0	2	2	S-112 core, S-105 core
Waste Certification (ICD-19, ICD-20)	cond	0	0	0	0	0	---
Miscellaneous Operations	cond / vap	OC	OC	6	4	8 <sup>5</sup>	AX-152 vapor, AY-102 grab, core, AN-107 grab, AY-101 grab, AY-102 grab, AN-106 grab, AP-108 grab (AW-105 core <sup>6</sup> , AW-104 core <sup>6</sup> )

**Table 1. Summary of Sampling by Issue**

Sampling Needed		Tanks Needed for FY 2001 TSB-WIRD Deliverables	Tanks Scheduled FY 2001 (Rev. 5.8 Draft)	Tanks Previously Sampled	Tanks Sampled This Quarter	Tanks Sampled Against FY 2001 TSB-WIRD Deliverables	Tanks Sampled in FY 2001
<b>PCB</b>	cond	OP	OP	8	5	13	TX-244 grab, SY-102 core, AY-102 grab, AP-107 grab, AP-104 grab, C-107 core, AY-101 grab, AW-106 grab, <b>S-112 grab, S-112 core, C-103 grab, S-105 core, AN-106 grab</b>

Notes:

Tanks shown in **BOLD** were sampled during the fourth quarter, July 1, 2001, to September 30, 2001.

<sup>1</sup> Agreements reached in the Partnering Team Meeting of December 15, 2000, revised this deliverable/commitment from 5 tanks to 3 tanks. See Section 7.1 of this report.

<sup>2</sup> Agreements reached in the Partnering Team Meetings of December 15, 2000, and May 21, 2001, revised this deliverable/commitment from six tanks to four different tanks with a total of six sampling events. See Sections 7.1 and 7.2 of this report.

<sup>3</sup> Tank SY-102 was grab sampled three times during FY 2001, once during the fourth quarter. However, the tank itself is counted only once in the total number of tanks sampled for this issue during FY 2001.

<sup>4</sup> These tanks sampled in FY 2000 against FY 2001 TSB-WIRD deliverables/commitments.

<sup>5</sup> Tank AY-102 sampled to replace ICD-23 material used for the corrosion mitigation program.

<sup>6</sup> Tanks AW-104 and AW-105 sampled in FY 2001 against FY 2002 TSB-WIRD deliverables/commitments and are not counted in total for FY 2001 TSB-WIRD deliverables/commitments.

**Table 1. Summary of Sampling by Issue**

Sampling Needed	Tanks Needed for FY 2001 TSB-WIRD Deliverables	Tanks Scheduled FY 2001 (Rev. 5.8 Draft)	Tanks Previously Sampled	Tanks Sampled This Quarter	Tanks Sampled Against FY 2001 TSB-WIRD Deliverables	Tanks Sampled in FY 2001
<p>cond = condensed-phase sample (solid or liquid)      PCB = polychlorinated biphenyl                      ev = sampling events      Rev. = revision                      ICD = interface control document      SST = single-shell tank                      OC = operationally contingent      Vap = vapor-phase sample                      OP = opportunistic sample</p>						

**Table 2. TCRs Issued During FY 2001**

<b>TCRs</b>	<b>Issues Addressed</b>
AW-103*	Waste Processing and Disposal, Waste Feed Delivery Phase 1, Retrieval Equipment, Safety Screening, Air Emissions
AY-102*	Waste Processing and Disposal, Waste Feed Delivery Phase 1, Retrieval Equipment, Safety Screening, Flammable Gas, ICD-23
AY-101*	Waste Processing and Disposal, Waste Feed Delivery Phase 1, Compatibility, Retrieval Equipment, Safety Screening, Evaporator, Air Emissions
AP-101*	Waste Processing and Disposal, Waste Feed Delivery Phase 1, ICD-23
AP-106*	Compatibility, Air Emissions
AP-108*	Evaporator, Compatibility, Air Emissions
AW-104*	Evaporator, Compatibility, Air Emissions
S-101*	Compatibility
<b>AZ-101*</b>	Mixer Pump Test, Air Emissions, Waste Processing and Disposal, Waste Feed Delivery Phase 1, ICD-23, Retrieval Equipment
<b>S-107*</b>	Compatibility
<b>AP-107</b>	Evaporator, Compatibility, Air Emissions
<b>SY-103*</b>	Waste Processing and Disposal, Waste Feed Delivery Phase 1, Air Emissions

NOTES:

\* The sampling for these TCRs was conducted prior to FY 2001.

The TCRs shown in **BOLD** were issued during the Fourth Quarter, July 1, 2001, to September 30, 2001.

## 4.0 LOOK AHEAD

Characterization Program activities planned for the first quarter of FY 2002 (October 1 through December 31, 2001) include:

- Obtaining one push-mode core from each of Tanks AN-105 and AP-105 for corrosion mitigation.
- Grab sampling Tanks AZ-102, AP-102, and AN-102 for corrosion mitigation, Tank C-103 for the presence of organics and PCBs, Tank U-107 for the saltcake dissolution demonstration and PCBs, and Tank SY-102 for cross-site transfer operations.
- Issuing two TCRs, one each for tank, U-111 and SY-102 using new sample data.

## 5.0 PROGRAMS AND ISSUE STATUS

This section addresses sampling conducted during the fourth quarter of FY 2001 for each of the issues and programs that were identified in the FY 2001 TSB-WIRD as requiring characterization sampling. Specific identification and a detailed discussion of the individual drivers for these issues and programs may be found in the FY 2001 TSB-WIRD (RPP-5832, Rev. 0). Sections 5.1 and 5.2 also note changes made to the FY 2001 TSB-WIRD deliverables/commitments during the December 15, 2000, Partnering Team meeting with ORP, Ecology, and the contractor, CH2M HILL Hanford Group, Inc.

### 5.1 Interim Stabilization (Compatibility)

Interim Stabilization (Compatibility) covers sampling of SSTs to assess the compatibility of the SST liquid with the DST system prior to pumping of the SST liquid to the DST system. Tanks C-103 and S-112 were grab sampled during the fourth quarter for this issue. Tank U-111 was grab sampled during the second quarter. A total of three tanks were sampled for this issue during FY 2001. The FY 2001 TSB-WIRD originally identified five tanks, BY-106, SX-102, U-107, U-108, and U-111, as deliverables for the Interim Stabilization (Compatibility) issue. As a result of the Partnering Team meeting of December 15, 2000, the number of tanks to be sampled for this issue was revised from the five tanks originally identified to three tanks. See Section 7.1 of this report for additional information.

The FY-2001 TSB-WIRD sampling deliverables/commitments for this issue, as amended by the Partnering Team meeting, were met during FY 2001.

## **5.2 Operations**

Operations cover compatibility sampling for tank-to-tank transfers, cross-site transfers, and other miscellaneous requirements. Tanks AP-108 and SY-102 were grab sampled and S-105 was core sampled for this issue during the fourth quarter of FY 2001. Tanks AP-107, SY-102, and TX-244 were grab sampled during the first quarter of FY-2001 for this issue. Tank SY-102 was sampled twice during the first quarter in support of cross-site transfers. A total of five tanks and seven separate sampling events (three events from Tank SY-102) supporting this issue occurred during FY 2001. As a result of the Partnering Team meetings of December 15, 2000, and May 21, 2001, the number of tanks to be sampled for this issue was revised from the six originally identified in the FY 2001 TSB-WIRD to four tanks with a total of six sampling events. See Sections 7.1 and 7.2 of this report for additional information.

The FY-2001 TSB-WIRD sampling deliverables/commitments for this issue, as amended by the Partnering Team meetings, were met during FY 2001.

## **5.3 Evaporator Operations**

Evaporator Operations includes sampling waste staged as feed for the 242-A Evaporator. No tanks were sampled for this issue during the fourth quarter of FY 2001. The FY 2001 TSB-WIRD identified the grab sampling of Tank AP-107 as the only deliverable for the Evaporator Issue. Tanks AP-107 and AW-106 were grab sampled during the first and second quarters in support of Evaporator Campaigns 02-01 and 01-01, respectively.

The FY-2001 TSB-WIRD sampling deliverable/commitment for this issue was met during FY 2001.

## **5.4 Waste Feed Delivery Phase 1**

Waste Feed Delivery Phase 1 sampling supports preparations for supplying waste from Phase 1 tanks to the Waste Treatment Plant. No tanks were sampled for this issue during the fourth quarter of FY 2001. The FY 2001 TSB-WIRD identifies three tanks, AP-104, C-107, and SY-102, as deliverables for the Waste Feed Delivery issue. All three tanks were sampled during the first and second quarters of FY 2001.

The FY-2001 TSB-WIRD sampling deliverables/commitments for this issue were met during FY 2001.

## **5.5 Interface Control Document (ICD)-23**

Sampling for the ICD-23 issue supports design and testing for the Waste Treatment Plant. No tanks were sampled for this issue during the fourth quarter of FY 2001. The FY 2001

TSB-WIRD identifies four tanks, AN-104, AN-107, AZ-101, and SY-102, as deliverables for the ICD-23 issue. Of these tanks, AN-104 and AZ-101 were core sampled during the fourth quarter of FY 2000 in early completion of FY 2001 deliverables. During the first and second quarters of FY 2001, one core sample from Tank SY-102, one core sample from Tank AY-102 (ICD-23 replacement), and grab samples from Tanks AN-107 and AP-104 were obtained for the ICD-23 issue.

The FY-2001 TSB-WIRD sampling deliverables/commitments for this issue were met.

### **5.6 Dangerous Wastes (Regulatory Compliance)**

No tank sampling was identified or scheduled for FY 2001 in support of this issue.

### **5.7 Waste Processing and Disposal**

Waste Processing and Disposal sampling supports preparations for supplying waste from Phase 1 tanks to the Waste Treatment Plant. No tanks were sampled for this issue during the fourth quarter of FY 2001. The FY 2001 TSB-WIRD identifies three tanks, AP-104, C-107, and SY-102, as deliverables for the Waste Processing and Disposal issue. During the first and second quarters of FY 2001, two core samples from Tank SY-102, two core samples from Tank C-107, and grab samples from Tank AP-104 were obtained for Waste Processing and Disposal.

The FY-2001 TSB-WIRD sampling deliverables/commitments for this issue were met during FY 2001.

### **5.8 Air Emissions (Regulatory Compliance)**

Vapor sampling for this issue supports regulatory air permitting. The FY 2001 TSB-WIRD identifies one sampling deliverable, Tank SY-102, for the Air Emissions issue. Tank AP-101 was Type IV vapor sampled during the fourth quarter in support of this issue. During the second and third quarters of FY 2001, Tanks AN-101, AN-106, AP-102, AP-104, and AP-106 were also Type IV vapor sampled for this issue. Tank SY-102 was sampled late in FY 2000 in an early completion of the FY 2001 deliverable.

The FY-2001 TSB-WIRD sampling deliverable/commitment for this issue was met.

### **5.9 Single-Shell Tank Retrieval and Tank Closure**

Sampling for this issue supports retrieval of SST waste into the DST system in preparation for disposal and SST closure activities. During the fourth quarter of FY 2001, Tanks S-105 and S-112 were core sampled in support of this issue. The FY 2001 TSB-WIRD identifies one

sampling deliverable, Tank C-107, for the SST Retrieval and Tank Closure issue. Tank C-107 was core sampled during the second quarter of FY 2001 in support of this issue.

The FY-2001 TSB-WIRD sampling deliverable/commitment for this issue was met during FY 2001.

#### **5.10 Safety Screening**

The FY 2001 TSB-WIRD identifies sampling for Safety Screening as opportunistic. Safety Screening analysis is applied to a tank sample only when a tank not previously sampled for Safety Screening is sampled for some other issue. Samples taken during the fourth quarter of FY 2001 from Tanks S-105 and S-112 will have Safety Screening analyses applied.

No other tanks sampled in FY 2001 needed the Safety Screening analyses.

#### **5.11 Waste Certification (ICD-19 and ICD-20)**

No tank samplings were identified or scheduled for FY 2001 in support of the Waste Certification issue.

#### **5.12 Miscellaneous Operations**

Sampling for miscellaneous operations supports sampling events associated with operational requirements not otherwise identified in the FY 2001 TSB-WIRD. These samples are acquired as operational requirements dictate. Tanks AN-106 and AP-108 were grab sampled in support of the corrosion mitigation issue during the fourth quarter of FY 2001. In addition, Tanks AW-104 and AW-105 were core sampled during the fourth quarter in early completion of FY 2002 TSB-WIRD deliverables for the corrosion mitigation issue. During the first three quarters, Tank AX-152 was vapor sniff sampled, Tank AY-102 was grab and core sampled, and Tanks AN-107 and AY-101 were grab sampled in support of miscellaneous operations. All, except Tank AX-152, supported the corrosion mitigation issue.

#### **5.13 Polychlorinated Biphenyls (PCB)**

The FY 2001 TSB-WIRD does not identify specific sampling requirements for this issue. The PCB characterization plan indicates that sampling during FY 2001 in support of this issue would be opportunistic. During the fourth quarter of FY 2001, Tanks AN-106, C-103, and S-112 were grab sampled and Tanks S-105 and S-112 were core sampled in support of this issue. During the first three quarters, Tanks AP-104, AP-107, AW-106, AY-101, AY-102, and TX-244 were grab sampled and Tanks C-107 and SY-102 were core sampled in support of this issue.

## **6.0 CHARACTERIZATION INFORMATION DELIVERABLES FOR FY 2001**

### **6.1 Planning and Status Reports**

- TPA Milestone M-44-13E was completed with submittal of the Draft FY 2002 TSB-WIRD to Ecology on June 15, 2001.
- TPA Milestone M-44-14E was completed with submittal of the Final FY 2002 TSB-WIRD to Ecology on August 29, 2001.
- TPA Milestone M-44-16E was completed with submittal of evidence to Ecology of data loading onto the electronic TWINS/INTERNET system on September 27, 2001.
- TPA Milestone M-44-15E was completed with submittal to Ecology on September 27, 2001, of a letter stating that all field activities supporting the FY 2001 TSB-WIRD were completed before September 30, 2001.
- This report summarizes the yearly activity for the FY 2001.

### **6.2 Tank Characterization Reports (TCR)**

- The FY 2001 TSB-WIRD commitment was to publish 12 TCRs. Twelve TCRs were published and are listed in Table 2.

## **7.0 PARTNERING TEAM MEETINGS IN FY 2001**

During FY 2001, two Partnering Team meetings with Ecology, ORP, and the contractor, CH2M HILL Hanford Group, Inc., were held December 15, 2000, and May 21, 2001, to discuss modifications to the FY 2001 TSB-WIRD deliverables/commitments.

### **7.1 December 15, 2000 Meeting**

The December 15, 2000, Partnering Team meeting was held to provide the status toward completion of FY 2001 TSB-WIRD deliverables and to review, discuss, and agree on modifications to be made to the FY 2001 TSB-WIRD deliverables to be provided to Ecology. Two sampling issues and one TCR issue were discussed.

The first sampling issue was grab sampling in support of interim stabilization. The FY 2001 TSB-WIRD identified five tanks for compatibility grab sampling in support of interim

stabilization. After publication of the TSB-WIRD, the Interim Stabilization program determined that four of the five tanks had sufficient analytical data available to conduct compatibility analyses to support start dates for interim stabilization operations. Therefore, those four tanks did not need sampling. The fifth Tank, U-111, required sampling. Two Tanks, C-103 and S-112, needed sampling no later than FY 2002 in support of interim stabilization and were moved ahead to FY 2001. All participants agreed to revise the FY 2001 deliverables from sampling of five tanks to three tanks to include Tanks C-103, S-112, and U-111.

The second sampling issue was waste transfer operations, compatibility sampling. The FY 2001 TSB-WIRD identified six tanks to be sampled in FY 2001 for this issue. Four of the identified tanks were subsequently determined to have sufficient data already available and, therefore, did not need sampling in FY 2001. Of the two original tanks remaining, SY-102 had already been sampled twice in FY 2001 to support cross-site transfers with another sampling needed later in FY 2001. Alternative tanks requiring sampling for this issue were identified and all participants agreed to revise the deliverables from sampling of six tanks to sampling of five tanks with seven total sampling events. This agreement was revised again at the May 21, 2001, Partnering Team meeting.

The TCR issue was the substitution of a TCR for Tank S-101 in place of a TCR for Tank BY-106. The FY 2001 TSB-WIRD identified twelve TCRs to be issued. The TCR for Tank BY-106 was contingent on receiving new interim stabilization compatibility data. Tank BY-106 was one of the Interim Stabilization tanks for which sampling was not required. Therefore, no new data would become available upon which to generate a TCR for BY-106. Instead, a TCR for Tank S-101 was substituted; Tank S-101 was sampled in FY 2000 and data became available to support a TCR. All participants agreed to this one-for-one substitution of a TCR for S-101 instead of a TCR for BY-106.

## **7.2 May 21, 2001 Meeting**

In the May 21, 2001, Partnering Team meeting, two major subjects were discussed: the number of tank samples required in FY 2001 for tank transfer operations and the *Hanford Federal Facility Agreement and Consent Order* (Tri-Party Agreement) requirement to complete analysis of SST waste samples in 216 days. The 216-day analysis requirement subject had no impact on FY 2001 TSB-WIRD deliverables, but was an important item for Partnering Team discussion. After discussions, more details of the two subjects were transmitted to Ecology for their final review and concurrence.

Number of Tank Samples Required in FY 2001 for Waste Transfer Operations: The original FY 2001 TSB-WIRD deliverables commitment was to sample six tanks. At the Partnering Team meeting on December 15, 2000, this commitment was revised to five tanks with seven sampling events.

As of May 21, 2001, the programmatic requirements for waste transfers had again changed. Three tanks had already been sampled to support transfers (TX-244, SY-102 (twice), and AP-107), but sampling of Tanks AN-106 and AP-106 were no longer required in FY 2001 to support transfers. The new requirement was that Tank AP-108 would receive a cross-site transfer later in FY 2001 and would then require sampling for compatibility. As a result, the number of different tanks needing sampling to support transfers in FY 2001 was reduced to a total of four tanks (TX-244, SY-102, AP-107, and AP-108). A total of six sampling events were still planned, but three of those samples were to be from the same tank. Tank SY-102 was to be sampled three separate times, each time with a different waste, to support three separate cross-site transfers.

The Partnering Team participants noted that because each filling and emptying of Tank SY-102 results in different waste to be sampled, a total of six sampling events in four different tanks would meet the intent of the FY 2001 TSB-WIRD commitment to sample tanks in support of transfers. In future years, multiple samplings of different waste from a given tank will be reflected as separate events (multiple commitments) in planning documentation.

Tri-Party Agreement Requirement to Complete Analysis of SST Waste in 216 Days: The Tri-Party Agreement in Appendix 2, *Action Plan*, Section 9.0, *Documentation and Records*, Subsection 9.6, requires that laboratory analysis of SST samples be completed within 216 days of collecting the samples. Subsection 9.6 also states: "For unique circumstances, a schedule other than that specified in this section can be agreed to by DOE and the lead regulatory agency." At the May 21, 2001, Partnering Team meeting, an alternate schedule based on analytical priorities was proposed for samples to be collected from three SSTs during FY 2001.

The three SSTs were Tank C-107 (core sampled February 2001), Tank S-112 (ultimately core sampled in July 2001), and Tank S-105 (ultimately core sampled in August 2001). The proposal was that the core samples from Tanks C-107 and S-112 be archived until January 1, 2002, at which time the 216-day limit would commence, making the completion of analyses due on August 5, 2002. Also proposed was that the core samples from Tank S-105 be archived indefinitely until a retrieval method was identified so that the appropriate analyses could be determined, at which time the 216-day limit would commence. All reasonable efforts would be made to complete the analyses in less than 216 days, should the proposal for the alternate schedule be accepted.

The justification for deferring these analyses was that no near-term urgency existed for the analytical results from Tanks C-107, S-105, or S-112. Deferring the start of the 216-day laboratory analysis clock would permit the laboratory to concentrate on other more urgent analytical work supporting corrosion mitigation for the recently established Double-Shell Tank Integrity Program and compatibility analyses to support interim stabilization and transfers between DSTs. Ecology agreed to extend the allowed analysis time for the Tank C-107 samples to 255 days. The analysis time for the Tank S-105 and S-112 samples will remain 216 days.

### 7.3 Summary

Partnering Team meetings continue to be an invaluable vehicle for timely, effective communications among Ecology, ORP, and CH2M HILL Hanford Group, Inc., on Characterization Program issues.