

Office of River Protection

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*Manager* ~~Quarterly~~ Tri-Party Agreement  
Milestone Review Meeting  
April 28, 2009

**Office of River Protection**

U.S. Department of Energy  
U.S. Environmental Protection Agency  
Washington State Department of Ecology

March 2009

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## Agenda

Office of River Protection  
 Tri-Party Agreement  
 Manager Milestone Review Meeting  
 2440 Stevens Center, Conference Room 1600  
 April 28, 2009  
 9:00 a.m. – 11:30 a.m.

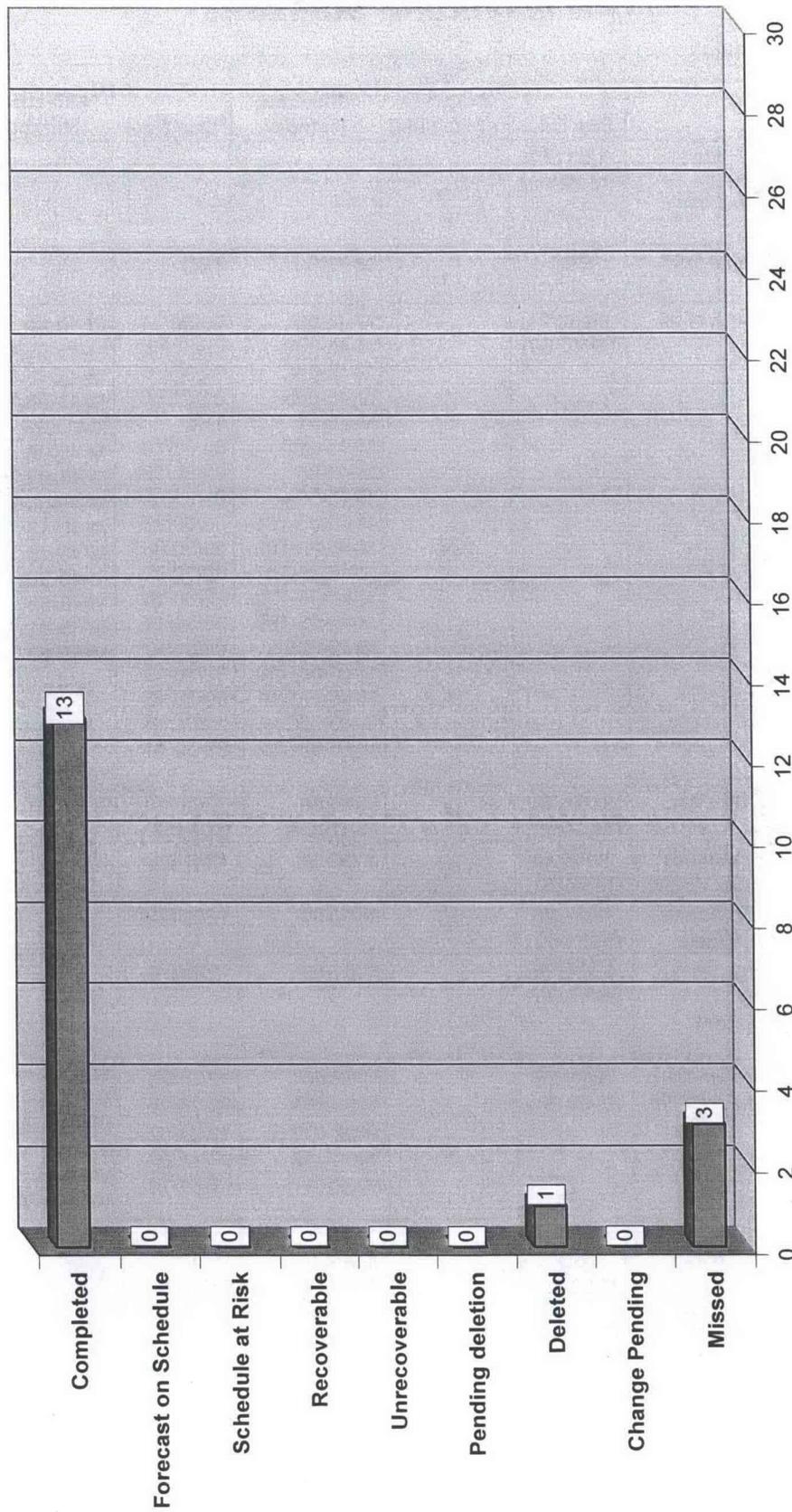
Page	Topic	Leads	Time
36	M-45, -50, -60 Single-Shell Tank Corrective Action	Bob Lober /Joe Caggiano	9:00
38	M-45-00, Complete Closure of All Single-Shell Tank Farms	Chris Kemp /Jeff Lyon	9:10
48	Interim Stabilization Consent Decree	John Long /Nancy Uziemblo	9:25
49	In Tank Characterization and Summary	John Long /Michael Barnes	9:35
50	M-47-00, Tank Waste Treatment, Storage and Disposal Facilities	Ben Harp /Les Fort	9:40
52	M-90-00, Complete Acquisition of Facilities for Interim Storage of IHLW and Storage/Disposal of ILAW and M-20, Part B Permits	Ben Harp /Bud Derrick	9:45
53	M-62-08, M-62-11 Bulk Vitrification/ Supplemental Technologies	Ben Harp /Ed Fredenburg	9:50
	<b>BREAK</b>		
3	TPA Milestone Statistics	Woody Russell Ed Fredenburg /Jeff Lyon	9:55
21	FY 2009 ORP TPA Cost & Schedule Performance (CHG)	Janet Diediker Ed Fredenburg /Jeff Lyon	10:00
55	BNI Cost & Schedule Performance and M-62-00, Complete Pretreatment Processing and Vitrification of Tank Wastes	Pete Furlong /Wahed Abdul Gary Olsen/ Jeff Trent /Ed Fredenburg	10:05

## TPA Milestone Statistics

(Including target milestones)

Milestone	Due Date	Total Active as of 02/21/08	Milestone Number	Due Date	Milestone Number	Due Date
<b>M-20-00</b> , Submit Part B Permit Application on Closure/Post Closure Plans for all RCRA TSD Units	12/31/08 (M-20-00)	0				
<b>M-42-00</b> , Provide Additional DST Capacity	TBD	1	M-42-00	TBD		
<b>M-45-00</b> , Complete Closure of all SST Farms	09/30/24 (M-45-00)	35	M-45-00 M-45-00B M-45-00C M-45-00D M-45-02 M-45-02O M-45-05 M-45-05A M-45-05-T05 M-45-05-T06 M-45-05-T07 M-45-05-T08 M-45-05-T09 M-45-02P M-45-05-T10 M-45-05-T11 M-45-02Q M-45-05-T12	09/30/24 09/30/06 09/30/06 01/31/08 TBD 03/01/10 09/30/18 03/31/07 09/30/07 09/30/08 09/30/09 09/30/10 09/30/11 03/01/12 09/30/12 09/30/13 03/01/14 09/30/14	M-45-05-T13 M-45-02R M-45-05-T14 M-45-05-T15 M45-02S M-45-06 M-45-06-T03 M-45-06-T04 M-45-13 M-45-15 M-45-56 M-45-59 M-45-61 M-45-62	09/30/15 03/01/16 09/30/16 09/30/17 03/01/18 09/30/24 03/31/12 03/31/14 06/30/11 06/30/11 TBD TBD 12/31/10 07/31/12
<b>M-47-00</b> , Complete All Work for Phase 1 Operations	02/28/18 (M-47-00)	3	M-47-00 M-47-03A	02/28/18 03/31/09	M-47-06	06/30/10
<b>M-50-00</b> , Complete Pretreatment Processing of Hanford Tank Waste	12/31/28 (M-50-00)	1	M-50-00	12/31/28		
<b>M-51-00</b> , Complete Vitrification of Hanford High Level Tank Waste	12/31/28 (M-51-00)	1	M-51-00	12/31/28		
<b>M-61-00*</b> (alternate path), Complete Pretreatment & Immobilization of Hanford Low Activity Tank Waste	12/31/28 (M-61-00)	1	M-61-00	12/31/28		
<b>M-62-00</b> , Complete Pretreatment Processing and Vitrification of Tank Wastes	12/31/28 (M-62-00)	13	M-62-00 M-62-00A M-62-07B M-62-01S M-62-01T	12/31/28 02/28/18 12/31/07 07/31/09 01/31/10	M-62-08 M-62-09 M-62-01U M-62-01V M-62-10 M-62-01W M-62-11	06/30/06 02/28/09 07/31/10 01/31/11 01/31/11 07/31/11 06/30/07
<b>M-90-00</b> , Interim Storage and Disposal of LAW and Interim Storage of HLW	TBD (M-90-00)	2	M-90-00 M-90-11	TBD 08/31/10		
<b>Interim Stabilization Consent Decree</b>	09/30/04 (D-001-00)	1	D-001-00			
<b>Total Active Milestones:</b>		<b>59</b>				

### FY 2006 MILESTONE PERFORMANCE



### Fiscal Year 2006 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Unrecoverable	Missed	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk						
D-001-00-R26	DOE shall, on a quarterly basis, submit to Ecology a written report documenting tank stabilization activities that occurred during the period covered by the report. This written report shall provide the status of progress made during the reporting period.	10/31/05	10/31/05								
M-048-07A-A	Complete construction of the AZ-301 condensate return system and remove the AZ-151 catch tank system from service by October 31, 2005. This scheduled deliverable is a subset of M-48-07A, and thus labeled as M-48-07A-A.	10/31/05	10/24/05								
M-046-21	Complete Implementation Of Double Shell Tank Space Optimization Study Recommendations (Tank Space Options Report Document No. RPP-7702, April 12, 2001).	12/31/05	12/15/05								
M-062-01L	Submit Semi-Annual Project Compliance Report.	01/31/06	01/31/06								
M-045-02M	Submit biennial update to SST retrieval sequence document (agreement Appendix I, Section 2.1.2), double-shell tank space evaluation document and Ecology concurrence of additional tank acquisition.	3/1/06	3/13/06								

### Fiscal Year 2006 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Unrecoverable	Missed	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk						
M-048-07A-B	Completion of construction for the 241-AP-106A central pump pit upgrade (remove existing equipment, evaluate pit integrity, and replace pit coating, if necessary). This scheduled deliverable is a subset of M-48-07A, and thus labeled as M-48-07A-B.	3/31/06	3/30/06								
M-048-14	Submit Written Integrity Report For The Double-Shell Tank System.	3/31/06	3/31/06								
M-047-05A	Complete startup and turnover activities for waste retrieval and mobilization systems for selected initial low-activity waste feed tank (other than AZ-101 or AZ-102).	4/30/06	12/29/04								
M-45-55-T04	Submit to Ecology for review and comment a draft Field Investigation Report combining the results of field investigations and analysis for WMAs A-AX, C and U. As part of the Phase 2 Vadose Zone project renegotiations being developed, this target milestone scope has been included in M-45-55 Phase 1 rollout documentation due in 1/08.	4/30/06								X	

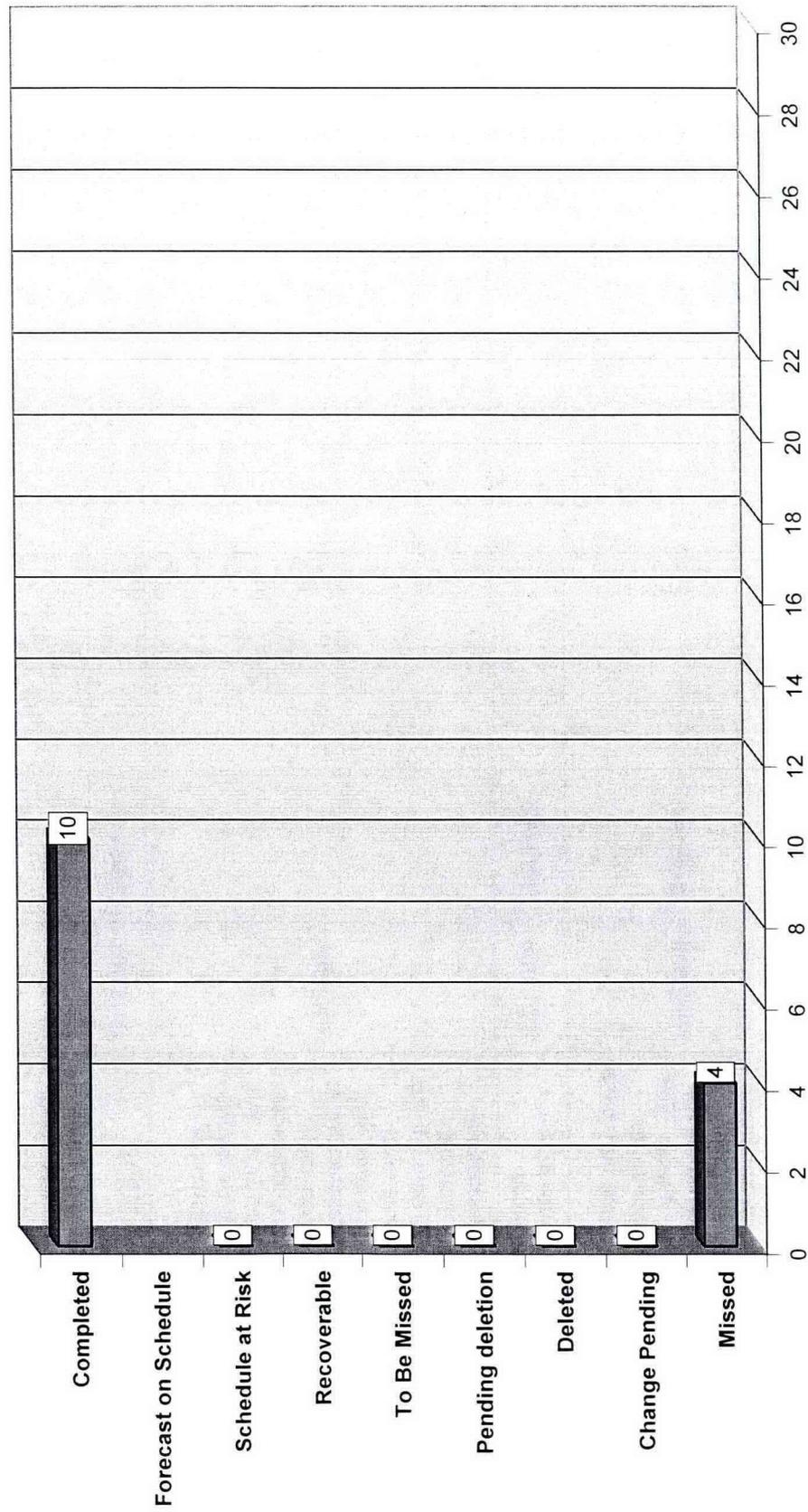
### Fiscal Year 2006 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Unrecoverable	Missed	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk						
M-048-07A	Complete construction of the AZ-301 condensate return system and pit upgrades. This includes: 1) Complete construction of the AZ-301 condensate return system and remove the AZ-151 catch tank system from service [see M 45-07A-A]; 2) Complete construction of AP-106A Central Pump upgrade [M-48-07A-B]; and 3) complete construction of SY-B Valve Pit upgrade [see M 48-07A-C].	06/30/06	06/08/06								
M-048-07A-C	Completion of construction for the 241-SY-B valve pit upgrade (remove existing equipment, evaluate pit integrity, and replace pit coating, if necessary). This scheduled deliverable is a subset of M-48-07A, and thus labeled as M-48-07A-C.	06/30/06	06/08/06								
M-048-07B	The Disposition of all Double-Shell Tank Transfer System Components that will not remain in use beyond June 30, 2005.	06/30/06	6/22/06								
M-062-08	Submittal Of Hanford Tank Waste Supplemental Treatment Technologies Report, Draft Hanford Tank Waste Treatment Baseline, And Draft Negotiations Agreement In Principle (AIP).	06/3/06						X			

### Fiscal Year 2006 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Unrecoverable	Missed	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk						
M-045-56B	Ecology and DOE agree, at a minimum, to meet yearly (by July or as needed to support annual budgeting) for the specific purpose of assessing the adequacy of information, and the need for the establishment of additional agreement interim measures.	07/01/06	07/01/06								
M-062-01M	Submit Semi-Annual Project Compliance Report.	07/31/06	07/31/06								
M-045-00B	Complete specified "near term" SST waste retrieval and interim closure activities, to result in the retrieval of all tank wastes in WMA-C SSTs pursuant to the agreement criteria in milestone M-45-00.	09/30/06						X			
M-045-00C	Initiate negotiation of SST waste retrieval and closure activities and associated schedules (for the period February 07 through August 08).	09/30/06						X			

### FY 2007 MILESTONE PERFORMANCE



### Fiscal Year 2007 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Unrecoverable	Missed	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk						
D-001-00-R30	DOE shall, on a quarterly basis, submit to Ecology a written report documenting tank stabilization activities that occurred during the period covered by the report. This written report shall provide the status of progress made during the reporting period.	10/31/06	10/31/06								
M-062-03	Submit DOE Petition for RCRA Delisting of Vitrified HLW.	12/31/06	12/22/06								
M-045-00C-A	Ecology and DOE negotiations under this milestone shall be completed within 120 days. In the event the parties do not reach agreement within timeframe, the negotiations will be resolved as a resolution of dispute via final determination. Unless otherwise agreed by Ecology and DOE, this final determination will be issued within 150 days of initiation of negotiations.	01/28/07						X			
M-062-01N	Submit Semi-Annual Project Compliance Report.	01/31/07	01/31/07								
D-001-00-R31	DOE shall, on a quarterly basis, submit to Ecology a written report documenting tank stabilization activities that occurred during the period covered by the report. This written report shall provide the status of progress made during the reporting period.	01/31/07	01/26/07								

### Fiscal Year 2007 Tri-Party Agreement Milestone Status

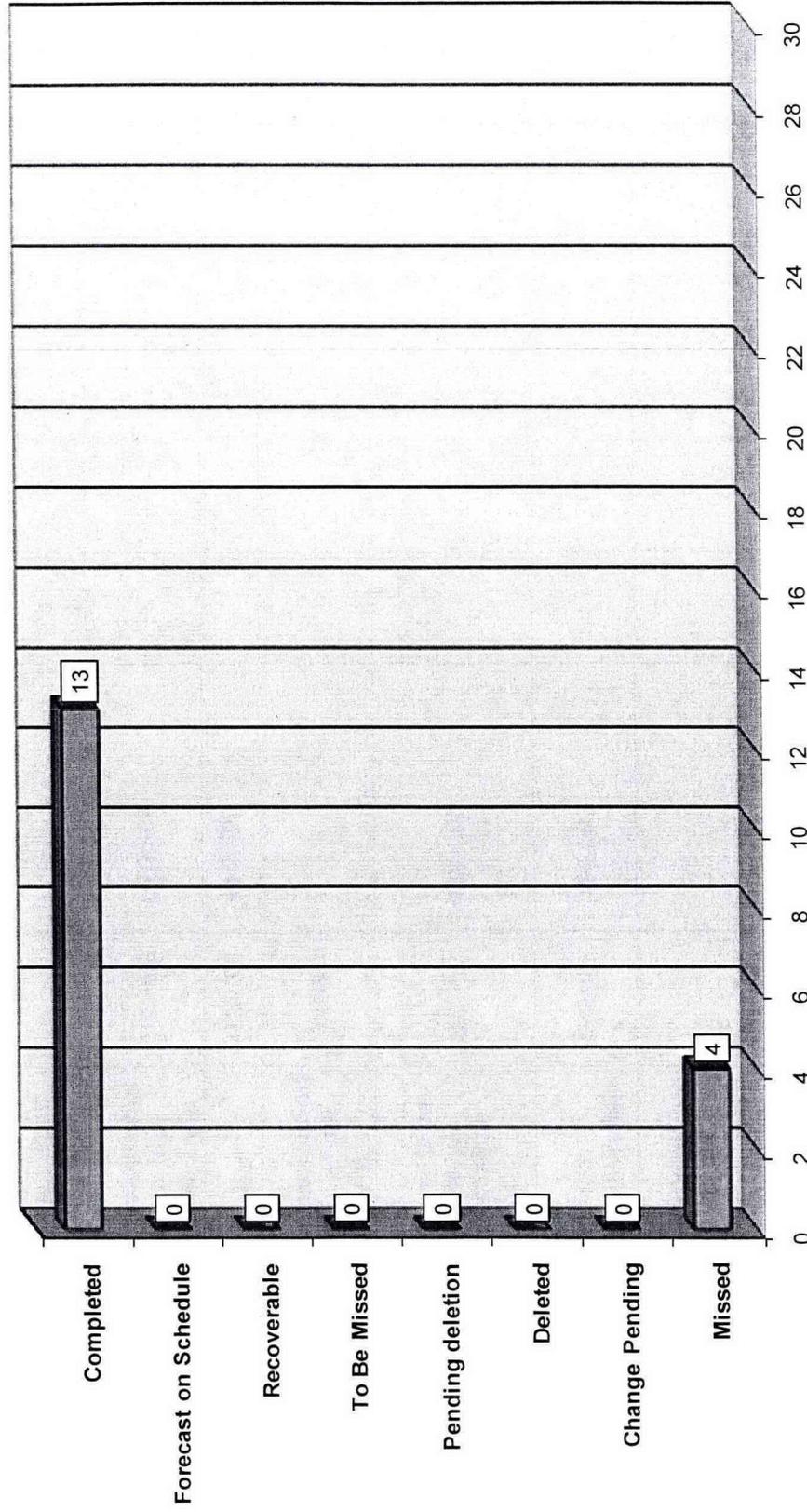
Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Unrecoverable	Missed	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk						
M-045-05A	Complete Waste Retrieval from S-102.	3/31/07						X			
D-001-00-R32	DOE shall, on a quarterly basis, submit to Ecology a written report documenting tank stabilization activities that occurred during the period covered by the report. This written report shall provide the status of progress made during the reporting period.	04/30/07	04/27/07								
M-062-11	Submit a Final Hanford Tank Waste Treatment Baseline. Following completion of negotiations required by M-62-08, DOE will modify its draft baseline as required and submit its revised, agreed-to baseline for treating all Hanford Tank Waste (HLW, LAW, and TRU) by 12/31/2028.	06/30/07						X			
M-045-56C	Ecology and DOE agree, at a minimum, to meet yearly (by July or as needed to support annual budgeting) for the specific purpose of assessing the adequacy of information, and the need for the establishment of additional agreement interim measures.	07/31/07	07/24/07								

### Fiscal Year 2007 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Unrecoverable	Missed	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk						
D-001-00-R33	DOE shall, on a quarterly basis, submit to Ecology a written report documenting tank stabilization activities that occurred during the period covered by the report. This written report shall provide the status of progress made during the reporting period.	07/31/07	07/30/07								
M-062-010	Submit Semi-Annual Project Compliance Report.	07/31/07	07/31/07								
M-048-15	Submit a report to Ecology for the re-examination of six (6) DSTs by ultrasonic testing in all areas previously examined to provide comparative data from which to calculate corrosion rates in each of the six DSTs examined.	09/30/07	09/26/07								
M-045-05-T05	Initiate tank retrieval from five additional single-shell tanks.	09/30/07						X			
M-048-00	Complete Tank Integrity Assessment activities for Hanford's Double Shell Tank (DST) system.	09/30/07	09/26/07								

\* Milestone has been completed by ORP; Ecology has not yet concurred.

### FY 2008 MILESTONE PERFORMANCE



### Fiscal Year 2008 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Will Be Missed	Missed	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk						
D-001-00-R34	DOE shall, on a quarterly basis, submit to Ecology a written report documenting tank stabilization activities that occurred during the period covered by the report. This written report shall provide the status of progress made during the reporting period.	10/31/07	10/31/07								
M-045-13-A	Submit to Ecology a Retrieval Data Report for S-112 pursuant to Agreement Appendix I.	12/31/07	12/21/07								
M-045-13-B	Remaining waste has been adequately characterized, and a risk assessment completed for S-112 residuals that remain in the tank.	12/31/07	12/21/07								
M-062-07B	Complete Assembly of LAW Vitrification Facility melter #1 and complete move of #1 melter into the HLW Vitrification Facility	12/31/07						X			
M-062-01P	Submit Semi-Annual Project Compliance Report.	01/31/08	01/31/08								
M-045-55	Submit to Ecology a Phase 1 RFI report integrating results of data gathering activities and evaluations for all SST VMAs.	01/31/08	01/30/08								
D-001-00-R35	DOE shall, on a quarterly basis, submit to Ecology a written report documenting tank stabilization activities that occurred during the period covered by the report. This written report shall provide the status of progress made during the reporting period.	01/31/08	01/31/08								

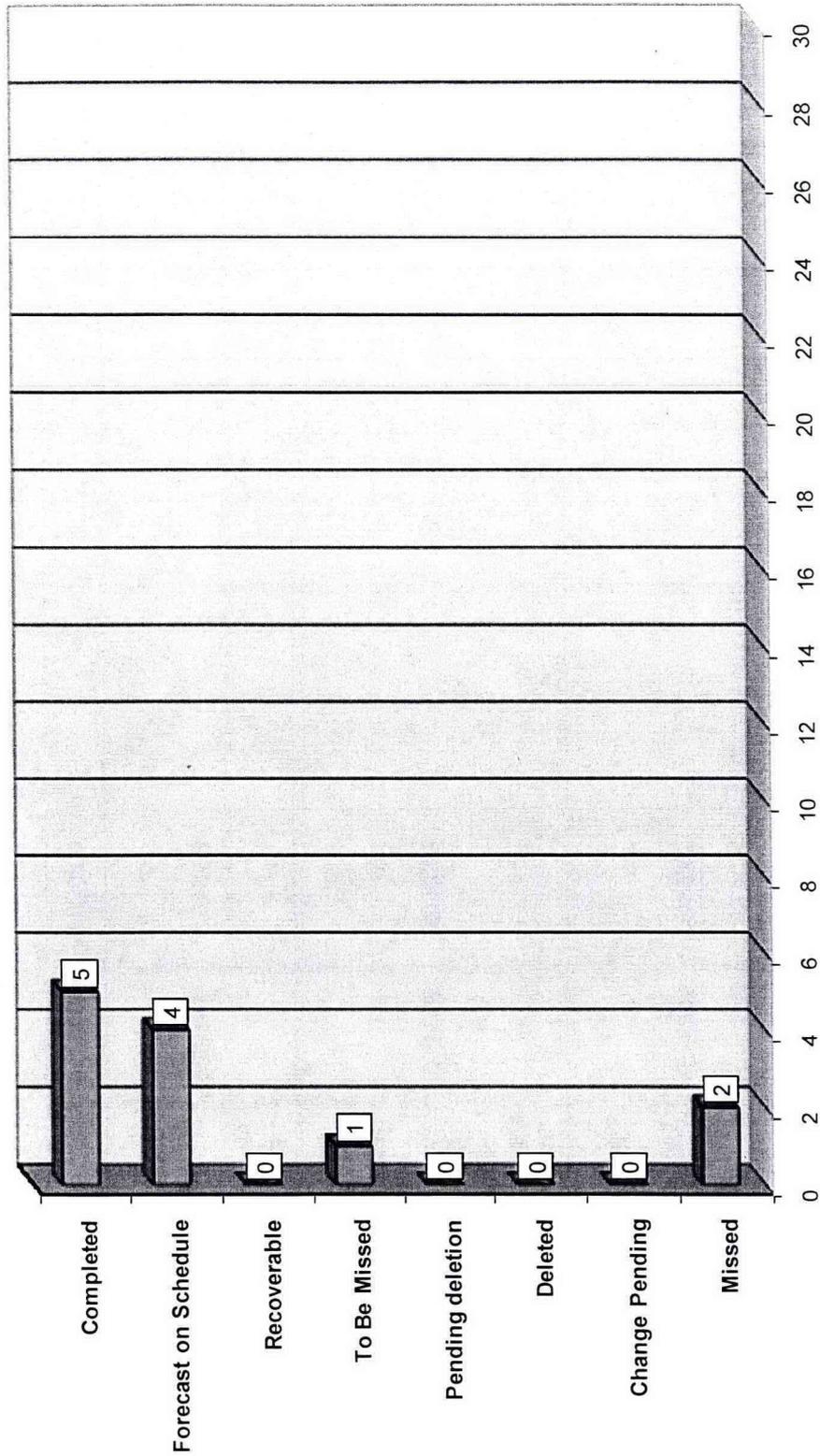
### Fiscal Year 2008 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Will Be Missed	Missed	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk						
M-045-00D	Initiate negotiations of SST waste retrieval and closure for 2008-2013.	01/31/08						X			
M-045-02N	Submit Biennial Update.	03/01/08	02/29/08								
M-045-02N-A	Three Parties shall meet to establish new milestones within 60 days, if required, for acquisition of additional tanks.	06/02/08	01/22/09								
D-001-00-R36	DOE shall, on a quarterly basis, submit to ecology a written report documenting tank stabilization activities that occurred during the period covered by the report. This written report shall provide the status of progress made during the reporting period.	04/30/08	04/30/08								
M-045-00D-A	Negotiations shall be complete within 150 days.	06/29/08						X			
M-045-56D	Ecology and DOE agree, at a minimum, to meet yearly (by July or as needed to support annual budgeting) for the specific purpose of assessing the adequacy of information, and the need for the establishment of additional agreement interim measures.	07/31/08	07/22/08								
D-001-00-R37	DOE shall, on a quarterly basis, submit to ecology a written report documenting tank stabilization activities that occurred during the period covered by the report. This written report shall provide the status of progress made during the reporting period.	07/31/08	07/31/08								

### Fiscal Year 2008 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Will Be Missed	Missed	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk						
M-062-01Q	Submit Semi-Annual Project Compliance Report.	07/31/08	07/30/08								
M-090-10	Ready to accept placement of ILAW in ILAW Disposal Facility.	08/31/08	02/13/07								
M-45-05-T06	Initiate tank retrieval from five additional SSTs.	09/30/08						X			

### FY 2009 MILESTONE PERFORMANCE



### Fiscal Year 2009 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Will Be Missed	Missed	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk						
D-001-00-R38	DOE shall, on a quarterly basis, submit to Ecology a written report documenting tank stabilization activities that occurred during the period covered by the report. This written report shall provide the status of progress made during the reporting period.	10/31/08	10/28/08								
M-045-58	Submit to Ecology for Review and Approval as an Agreement Primary Document Phase 2 Master Work Plan that describes the proposed approach for the completion of Corrective Action to meet final closure requirements in the Waste Management Areas as described in Appendix I, Section 2.3	12/31/08	12/18/08								
M-045-60	Submit to Ecology for review and approval as an agreement primary document, DOE's Phase 2 RFI/CMS Work Plan and Sampling and Analysis Plan (SAP) for WMA C.	12/31/08	12/18/08								
M-062-01R	Submit Semi-Annual Project Compliance Report	01/31/09	01/30/09								

### Fiscal Year 2009 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Will Be Missed	Missed	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk						
D-001-00-R39	DOE shall, on a quarterly basis, submit to Ecology a written report documenting tank stabilization activities that occurred during the period covered by the report. This written report shall provide the status of progress made during the reporting period.	01/31/09	01/30/09								
M-062-09	Start Cold Commissioning – Waste Treatment Plant	02/28/09						X			
M-47-03A	Complete startup/turnover for waste retrieval mobilization systems for selected initial tank high-level waste feed tank	03/31/09						X			
D-001-00-R40	DOE shall, on a quarterly basis, submit to ecology a written report documenting tank stabilization activities that occurred during the period covered by the report. This written report shall provide the status of progress made during the reporting period.	04/30/09									
M-045-56E	Ecology and DOE agree, at a minimum, to meet yearly (by July or as needed to support annual budgeting) for the specific purpose of assessing the adequacy of information, and the need for the establishment of additional agreement interim measures.	07/31/09						X			

### Fiscal Year 2009 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Will Be Missed	Missed	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk						
D-001-00-R41	DOE shall, on a quarterly basis, submit to ecology a written report documenting tank stabilization activities that occurred during the period covered by the report. This written report shall provide the status of progress made during the reporting period.	07/31/09		X							
M-062-01S	Submit Semi-Annual Project Compliance Report	07/31/09		X							
M-045-05-T07	Initiate tank retrieval from 7 additional SSTs	09/30/09					X				

# Tank Farm Project Executive Summary

## February Reporting

### General

The earned value analysis is a comparison of cost and schedule performance to a one-year Interim Performance Measurement Baseline (IPMB). The one-year IPMB was developed as part of contract transition and is based on expected funding levels for fiscal year (FY) 2009. The earned value analysis is not intended to be a measurement of performance against existing Tri-Party Agreement Milestones.

The earned value performance reporting reflects the format, Work Breakdown Structure (WBS) reporting levels, and variance thresholds as agreed to with the Tank Farms Operations Contractor (TOC) for monthly performance reporting. Generally, performance is reported at WBS level 3 with the exception of WBS 5.01.01, Base Operations, and WBS 5.01.05, Project Support, wherein reporting is at level 4 to provide additional visibility and analysis.

The schedule and cost variance analysis thresholds at the reporting levels are as follows:

Current Month (CM) = +/- 10% and \$150K

Cumulative to Date (CTD) = +/- 10% and \$500K

### PROJECT BASELINE PERFORMANCE STATUS

WRPS Project Performance - February (\$K)										
	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
CM	17,506.8	20,599.8	16,789.7	3,093.0	3,810.1	1.18	1.23			
CTD	82,178.7	84,067.4	76,630.6	1,888.7	7,436.8	1.02	1.10	228,932.4	223,752.6	5,179.8

The positive CTD SV of \$1,888.7K is reportable:

**Description/Cause:** The positive CTD schedule variance was attributed to 1) acceleration of C-110 Retrieval and completion of construction activities ahead of schedule, 2) AY-102 Corrosion Probe activities ahead of schedule due to subcontract availability and early fabrication.

The CTD SV was partially offset by priority given to restarting C-110 Retrieval Operations, 2) C-104 Retrieval due to delay in removing water from the 04B-Pit, and delayed awards of procurement and construction contracts, and 3) issues related to valves.

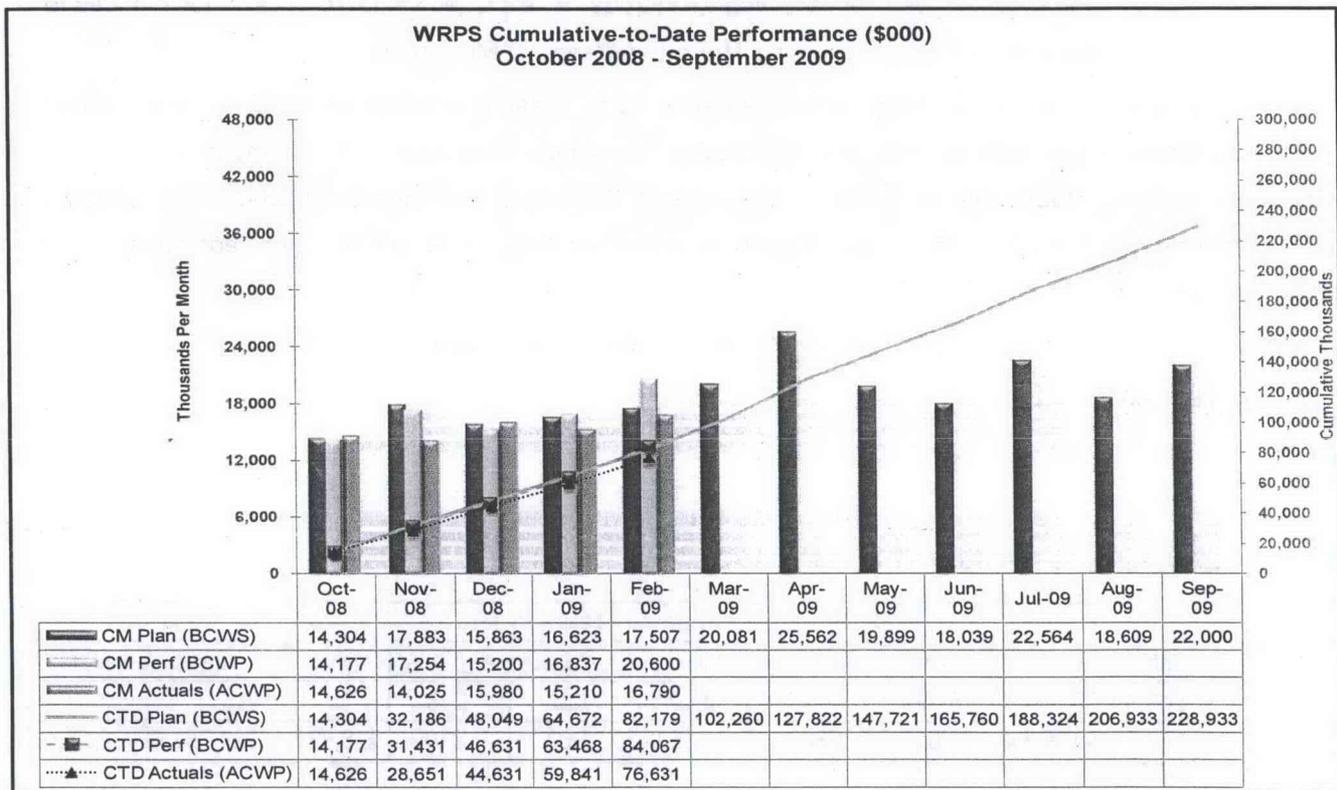
The positive CTD CV of \$7,437K is reportable:

**Description/Cause:** The positive CTD cost variance was attributed to 1) Lock and Tag training attendance through February being lower planned levels resulting in lower subcontracted tuition charges. 2) less than

planned staff for Financial Support and company travel to date, 3) elimination of the Business & Occupancy Tax, 3) material and subcontractor fees being below planned levels for Information Resource Management, 4) C-110 Retrieval efficiencies, 5) 222-S Lab procurement of analytical equipment (TDU Unit and ICP/MS) Upgrade and annual renewal of analytical equipment services being performed later in the fiscal year than represented in the current baseline.

This CTD Cost variance is partially offset by 242-A Evaporator Operation maintenance costs associated with the condenser room decontamination and inspection/repair/replacement of air compressors.

The CM and CTD earned value performance data is shown on the graph below.



**CURRENT MONTH PERFORMANCE MEASUREMENT - 02/2009  
BY WORK BREAKDOWN STRUCTURE  
Dollars in Thousands**

WBS	TITLE	Current Month						
		Budgeted Cost			Variance			
		Work Scheduled	Work Performed	Actual Cost Work Performed	Schedule	SV %	Cost	CV %
<b>5.1</b>	<b>BASE OPERATIONS</b>							
5.1.1	Base Operations	5,150.7	5,103.8	4,983.8	(47.0)	-0.9%	120.0	2.4%
5.1.2	DST Space Management	307.2	294.5	569.6	(12.7)	-4.1%	(275.0)	-93.4%
5.1.3	TOC Facility Operations	1,561.2	1,470.7	1,412.5	(90.5)	-5.8%	58.2	4.0%
5.1.4	Tank Farm Upgrades	286.6	186.6	196.8	(100.0)	-34.9%	(10.2)	-5.5%
5.1.5	Project Support	<u>5,842.6</u>	<u>6,301.8</u>	<u>5,388.4</u>	<u>459.2</u>	<u>7.9%</u>	<u>913.4</u>	<u>14.5%</u>
	<b>TOTAL</b>	<u>13,148.3</u>	<u>13,357.4</u>	<u>12,551.1</u>	<u>209.0</u>	<u>1.6%</u>	<u>806.4</u>	<u>6.0%</u>
<b>5.2</b>	<b>RETRIEVE AND CLOSE SSTs</b>							
5.2.1	Retrieval/Closure Program	1,283.9	1,651.0	1,528.9	367.1	28.6%	122.1	7.4%
5.2.2	SST Retrieval East Area	2,225.2	4,765.0	1,902.7	2539.8	114.1%	2862.2	60.1%
5.2.3	SST Retrieval West Area	11.0	9.3	11.1	(1.7)	-15.5%	(1.8)	-19.4%
5.2.4	Closure Program	101.7	131.2	82.8	29.4	28.9%	48.4	36.9%
5.2.5	SST Closure	<u>73.3</u>	<u>67.6</u>	<u>44.2</u>	<u>(5.7)</u>	<u>-7.8%</u>	<u>23.4</u>	<u>34.6%</u>
	<b>TOTAL</b>	<u>3,695.1</u>	<u>6,624.1</u>	<u>3,569.7</u>	<u>2928.9</u>	<u>79.3%</u>	<u>3054.3</u>	<u>46.1%</u>
<b>5.3</b>	<b>WFD/TREATMENT PLNG/DST RETRIEVAL/CLOSURE</b>							
5.3.1	WTP Feed Delivery Program	535.2	490.3	508.8	(45.0)	-8.4%	(18.6)	-3.8%
5.3.2	Construct DST Retrieval Systems	78.1	78.1	99.4	0.0	0.0%	(21.3)	-27.3%
5.3.6	Immobilization Program	<u>50.0</u>	<u>50.0</u>	<u>60.7</u>	<u>0.0</u>	<u>0.0%</u>	<u>(10.7)</u>	<u>-21.4%</u>
	<b>TOTAL</b>	<u>663.3</u>	<u>618.4</u>	<u>668.9</u>	<u>(45.0)</u>	<u>-6.8%</u>	<u>(50.6)</u>	<u>-8.2%</u>
<b>TOC TOTAL</b>		<u>17,506.8</u>	<u>20,599.8</u>	<u>16,789.7</u>	<u>3093.0</u>	<u>17.7%</u>	<u>3,810.1</u>	<u>18.5%</u>

## CONTRACT-TO-DATE PERFORMANCE MEASUREMENT - 10/2008 - 02/2009

## BY WORK BREAKDOWN STRUCTURE

Dollars in Thousands

Cumulative Contract-To-Date

WBS	TITLE	Budgeted Cost			Variance			Budget at Completion (BAC)	
		Work Scheduled	Work Performed	Actual Cost Work Performed	Schedule	SV%	Cost		CV%
<b>5.1</b>	<b>BASE OPERATIONS</b>								
5.1.1	Base Operations	24,399.7	25,228.5	25,223.7	828.8	3.4%	4.8	0.0%	65,684.5
5.1.2	DST Space Management	1,991.2	1,790.4	2,383.7	(200.8)	-10.1%	-593.3	-33.1%	4,970.1
5.1.3	TOC Facility Operations	7,589.3	7,399.4	6,560.3	(189.9)	-2.5%	839.1	11.3%	19,567.9
5.1.4	Tank Farm Upgrades	944.4	692.0	540.2	(252.4)	-26.7%	151.8	21.9%	3,280.9
5.1.5	Project Support	29,806.5	30,244.5	25,728.7	438.0	1.5%	4,515.8	14.9%	76,140.7
	<b>TOTAL</b>	<u>64,731.1</u>	<u>65,354.8</u>	<u>60,436.6</u>	<u>623.7</u>	<u>1.0%</u>	<u>4,918.2</u>	<u>7.5%</u>	<u>169,644.1</u>
<b>5.2</b>	<b>RETRIEVE AND CLOSE SSTs</b>								
5.2.1	Retrieval/Closure Program	6,737.5	6,605.1	6,530.5	(132.4)	-2.0%	74.6	1.1%	24,916.0
5.2.2	SST Retrieval East Area	6,554.9	8,164.5	6,693.2	1,609.6	24.6%	1,471.3	18.0%	22,298.1
5.2.3	SST Retrieval West Area	61.7	61.7	71.2	0.0	0.0%	-9.5	-15.4%	137.3
5.2.4	Closure Program	573.4	558.9	260.7	(14.5)	-2.5%	298.2	53.4%	1,403.5
5.2.5	SST Closure	360.2	222.9	109.8	(137.3)	-38.1%	113.1	50.7%	1,619.7
	<b>TOTAL</b>	<u>14,287.7</u>	<u>15,613.1</u>	<u>13,665.4</u>	<u>1,325.4</u>	<u>9.3%</u>	<u>1,947.7</u>	<u>12.5%</u>	<u>50,374.6</u>
<b>5.3</b>	<b>WFD/TREATMENT PLNG/DST RETRIEVAL/CLOSURE</b>								
5.3.1	WTP Feed Delivery Program	2,506.0	2,445.5	1,960.3	(60.5)	-2.4%	485.2	19.8%	7,159.6
5.3.2	Construct DST Retrieval Systems	398.5	398.6	303.3	0.1	0.0%	95.3	23.9%	1,091.0
5.3.6	Immobilization Program	255.4	255.4	265.1	0.0	0.0%	-9.7	-3.8%	663.4
	<b>TOTAL</b>	<u>3,159.9</u>	<u>3,099.5</u>	<u>2,528.7</u>	<u>(60.4)</u>	<u>-1.9%</u>	<u>570.8</u>	<u>18.4%</u>	<u>8,914.0</u>
<b>TOC TOTAL</b>		<b>82,178.7</b>	<b>84,067.4</b>	<b>76,630.6</b>	<b>1,888.7</b>	<b>2.3%</b>	<b>7,436.8</b>	<b>8.8%</b>	<b>228,932.7</b>

## 5.01.01-BASE OPERATIONS

### WBS 5.01.01.02 –TSR/Surveillance & Maintenance

This WBS element includes (1) Waste Feed Operations Safe Storage Surveillance and Monitoring activities for DST operations monitoring and response activities necessary to satisfy TSRs; (2) DST TSR/Basic Maintenance activities necessary to maintain DST Farms and the 242-A Evaporator; (3) DST Control Spare Parts, Materials and Tools; (4) Waste Feed Operations DST radiological surveys.

#### February 2009 (K\$)

	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC
CM	3,152.7	3,091.2	3,039.1	-61.5	52.1	0.98	1.02	
CTD	16,163.2	16,033.5	16,891.3	-129.7	-857.8	0.99	0.95	41,882.3

#### Schedule and Cost Variance Analysis

The CM schedule and cost variances and the CTD schedule variance are within the reporting thresholds.

The CTD cost variance of (-\$857.8) is due to:

**Description/Cause:** Expending more labor than planned to perform the DST and SST TSR/Basic Maintenance activities.

**Impact:** The DST & SST TSR/Basic Maintenance accounts are projected to overrun at fiscal year-end but will be offset by efficiencies in other Base Operation areas.

**Corrective Action:** Monitor labor charging practices and maintain overtime at minimum levels.

**5.01.01 –BASE OPERATIONS – CONTINUED****WBS 5.01.01.05 – Tank Chemistry and Integrity**

This WBS element includes activities necessary to ensure that the waste within the DSTs complies with the chemistry control limits of Administrative Control (AC) 5.16, "Corrosion Mitigation Controls," of the HNF-SD-WM-TSR-006, Tank Farm Technical Safety Requirements. Activities are based on periodic assessments of the hydroxide and nitrite ion waste concentrations as part of the DST Chemistry Control Program, including engineering support; laboratory testing and analysis; DST chemistry and thermodynamic mixing modeling; DST chemistry optimization studies and corrosion expert panel support; development, testing, and deployment of new DST corrosion monitoring systems. Other activities include the DST Integrity Project to maintain and improve the longevity of the DST systems and SST Integrity Project.

**February 2009 (K\$)**

	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC
CM	708.5	779.7	660.9	71.3	118.8	1.10	1.18	
CTD	2,169.7	3,245.5	2,925.2	1,075.9	320.4	1.50	1.11	7,730.7

**Schedule and Cost Variance Analysis**

The CM schedule variance is within the reporting threshold.

The CTD schedule variance of \$1,075.9K is reportable:

**Description/Cause:** The CTD favorable schedule variance is due to: 1) performing AY-102 Corrosion Probe replacement ahead of schedule due to availability of resources, and 2) performing AW-101 UT Examination and Testing ahead of schedule.

**Corrective Action:** None required

The CM cost variance of \$118.8K is reportable:

**Description/Cause:** The CM favorable cost variance is due to: 1) Tank Chemistry Control labor efficiencies during the early performance of the AY-102 Corrosion Probe installation and 2) correction of an overstated contract-to-date estimate provided by the subcontractor supporting the DST Infrastructure Integrity Assessments.

**Corrective Action:** None required.

The CTD cost variance is within the reporting threshold.

**5.01.01 –BASE OPERATIONS – CONTINUED****WBS 5.01.01.06 – Solid Waste Management**

This WBS element includes activities necessary to provide overall guidance and direction to Waste Services function. Scope provides for staff, contract services, and materials to support tank farms projects and compliance activities in the area of waste generation and management. Areas covered under the program include waste management planning activities, project interface, project guidance and direction, waste characterization, waste sampling, waste packaging, waste designation, surveillance of waste management areas, support of regulatory audits and inspections, transportation management, waste transportation, shipping administration and performance, maintenance of regulatory files and documents, maintenance of waste management facilities, waste treatment, and waste disposal. Waste forms include hazardous, radioactive and mixed radioactive wastes. The Program Management function includes integration of Tank Farm Waste Management activities with other Hanford contractors; procurement and management of services of off-site contractors for waste treatment and disposal; and maintenance of trained and qualified staff.

**February 2009 (K\$)**

	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC
CM	428.6	428.6	531.7	0.0	-103.1	1.00	0.81	
CTD	2,188.1	2,188.1	1,952.7	0.0	235.4	1.00	1.12	5,684.5

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**Schedule and Cost Variance Analysis**

The CM and CTD schedule variance is within the reporting threshold.

The CM cost variance of (- \$103.K ) is reportable:

**Description/Cause:** The CM cost variance is due to PermaFix processing the backlog of Low Level Mixed Waste Debris and Volume Reduction they received in FY08.

**Corrective Action:** None required

The CTD cost variance is within the reporting threshold.

### 5.01.02 – DST Space Management

This WBS element includes activities necessary to evaluate the availability of Double-Shell Tank (DST) space for effective management of this resource. Also, the development of the annual Single-Shell Tank (SST) Retrieval Sequence, which is dependent on availability of DST space, is included in this activity. The WBS element also includes 242-A Evaporator Operation, 242-A Maintenance, Management of the facility and the Evaporator Certification training Program.

#### February 2009 (K\$)

	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC
CM	307.2	294.5	569.6	-12.7	-275.0	0.96	0.52	
CTD	1,991.2	1,790.4	2,383.7	-200.8	-593.3	0.90	0.75	4,970.1

#### Schedule and Cost Variance Analysis

The CM and CTD schedule variance is within reporting thresholds.

The CM cost variance of (-\$275K) is reportable:

**Description/Cause:** The CM cost variance is due to unplanned maintenance cost associated with the condenser room decontamination and continued repair work on the replacement of electric compressors.

**Impact:** It is anticipated that the unfavorable cost variance is unrecoverable.

**Corrective Action:** Opportunities to reduce costs are being evaluated.

The CTD cost variance (-\$593.3K) is reportable:

**Description/Cause:** The CTD unfavorable cost variance is due to unplanned maintenance costs associated with the condenser room decontamination efforts to reduce levels and replacement of compressors. The replacement compressors required modifications to resolve NEC inspection issues identified.

**Impact:** The unfavorable cost variance is expected to increase due to issues related to the start up of the Evaporator Campaign.

**Corrective Action:** Opportunities to reduce costs are being evaluated.

### 5.01.03 – TOC FACILITY OPERATIONS

This work scope provides for the 222S Management, Analytical Process Development, Operations, Engineering, Maintenance, ESH&Q, Nuclear Safety, Radiological Controls, Laboratory Support Services, and Waste Handling necessary to operate the 222S Laboratory.

#### February 2009 (K\$)

	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC
CM	1,561.2	1,470.7	1,412.5	-90.5	58.2	0.94	1.04	
CTD	7,589.3	7,399.4	6,560.3	-190.0	839.1	0.97	1.13	19,567.9

#### Schedule and Cost Variance Analysis

The CM schedule and cost variance and CTD schedule variance are within reporting thresholds.

The CTD cost variance of \$839.1K is reportable:

**Description/Cause:** The CTD cost variance is due to the procurement of analytical equipment (Mercury Analyzers, Ion Chromatography, and Multi-potentiostat chassis) and annual renewal of analytical equipment service agreements which will be performed later in the fiscal year than planned.

**Corrective Action:** None

## 5.01.05– PROJECT SUPPORT

### WBS 5.01.05.02 – Environmental, Safety, Health and Quality Assurance (QA)

This function (1) provides management, oversight, and administration to the ESH&Q Assurance Functional Organization. (2) Sets policy, establishes work objectives, and interfaces with TOC senior management; and (3) respond to requests from the Tank Farms line and support organizations to handle emergent work issues pertaining to environmental protection, industrial safety, environmental health, quality assurance (QA), radiation protection, event reporting, security, and emergency operations. Other activities include verification that regulatory compliance and best management practices are achieved. This element also provides Environmental Management (EM) core infrastructure for the TOC and environmental services to operations. General TOC environmental strategies, regulatory analyses, negotiations, permitting, and compliance oversight not specifically included in other WBS elements are part of this work scope.

#### February 2009 (K\$)

	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC
CM	1,116.3	1,083.5	1,177.7	-32.8	-94.2	0.97	0.92	
CTD	5,673.1	5,638.7	5,162.9	-34.4	475.8	0.99	1.09	14,526.1

#### Schedule and Cost Variance Analysis

The CM and CTD schedule are within the reporting threshold.

The CTD cost variance of \$475.8K is reportable:

**Description/Cause:** The favorable CTD cost variance is primarily due to: 1) QA personnel are supporting projects and field activities, delaying Program scope; 2) performing Environmental and Radiation work with less staff than planned and an overall delay in placing contracts.

**Corrective Action:** Increasing staff to planned levels

**5.01.05 – PROJECT SUPPORT – CONTINUED****WBS 5.01.05.05 – Workforce Resources**

This function serves as the central organization to provide Human Resources services in the areas of Staffing, Recruiting, and Workforce Restructuring; Compensation and Benefit Administration; Personnel Records; Diversity; Employee Relations; Employee Concerns; Human Resource Development to include Human Performance Improvement; and Labor Relations.

**February 2009 (K\$)**

	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC
CM	586.1	1,103.3	474.1	517.2	629.2	1.88	2.33	
CTD	2,992.1	3,509.3	2,327.5	517.2	1,181.8	1.17	1.51	8,875.2

**Schedule and Cost Variance Analysis**

The CM and CTD schedule variance of \$517.2K is reportable:

**Description/Cause:** The favorable cost variance is the result of early completion of Lock and Tag training efficiencies in facilitation of training material.

**Corrective Action:** None required

The CM cost variance of \$629K is reportable:

**Description/Cause:** The favorable cost variance is due to Lock and Tag training costs less than planned.

The CTD cost variance of \$1,181.8K is reportable

**Description/Cause:** The favorable cost variance is due to Training class attendance being below planned levels.

**Corrective Action:** None, additional training is expected to increase as the year progresses.

**5.01.05 – PROJECT SUPPORT – CONTINUED****WBS 5.01.05.06 – Business Services**

This element includes the management of (1) Procurement and Contracts to ensure that the TOC contracts and procurement functions are planned, budgeted, and controlled. (2) Chief Financial Officer, the Controller, to provide full range of financial services including accounts payable, accounts receivable, general accounting, general ledger, funds control, and (3) Information Resources Management for computer-related technologies, systems, applications, data and information capabilities support.

**February 2009 (K\$)**

	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC
CM	1,703.0	1,703.0	1,398.2	0.0	304.8	1.00	1.22	
CTD	8,675.9	8,675.9	6,770.6	0.0	1,905.2	1.00	1.28	20,608.5

**Schedule and Cost Variance Analysis**

The CM schedule variance and the CTD schedule variance are within the reporting thresholds.

The CM cost variance of \$304.8K is reportable:

**Description/Cause:** The favorable cost variance is driven by: 1) Elimination of B&O taxes for the month and the receipt of an incorrect credit for liability insurance. 2) Underrun in labor, occupancy and DOE contracts costs not yet received.

**Corrective Action:** Two positions will be filled in March and two additional positions by summer 2009.

The CTD cost variance of \$1,905.2K is reportable:

**Description/Cause:** The favorable cost variance is due to: 1) Elimination of B&O taxes; 2) performing work with less staff than planned; 3) Hanford Pension Fund (due to retiring medical claims being paid as incurred and less than planned); 4) occupancy costs not received; and 5) LMIT costs not incurred.

**Impact:** Favorable cost variances are expected to continue throughout the fiscal year.

**Corrective Action:** None.

### 5.02.01 – RETRIEVAL/CLOSURE PROGRAM

This work element provides support to the Retrieval and Closure projects that will retrieve waste from the tanks and close tank farm facilities. This work element also develops the common technology platforms and systems used by the retrieval and closure projects that include the new Mobile Retrieval System (MRS) development and Leak Detection Monitoring and Mitigation (LDMM) technology development. Finally, this work element includes the retrieval, deactivation, and/or closure of non-tank SST and DST facilities and inactive waste sites, including: (1) SST retrieval demonstration documentation, procurement and testing of the Mars Retrieval System. (2) National Environmental Policy Act (NEPA), closure, and permitting documentation including the NEPA Environmental Impact Statement (EIS), Resource Conservation and Recovery Act (RCRA) closure plan updates, DOE O 435.1 documentation, and air permit applications. (3) Retrieval and closure technology development; (4) Cold Test Facility (CTF) management and maintenance; (5) Vadose zone investigations and risk assessments; (6) Engineering, design, construction and procurement, startup, testing, and turnover to operations of waste receiver facilities supporting SST retrieval; (7) Inactive waste site surveillance, maintenance, and management; and (8) Isolation of the 244-CR vault and disposition of hose-in-hose transfer line (HIHTL).

#### February 2009 (K\$)

	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC
CM	1,283.9	1,651.0	1,528.9	367.1	122.1	1.29	1.08	
CTD	6,737.5	6,605.1	6,530.5	-132.4	74.6	0.98	1.01	24,915.7

#### Schedule and Cost Variance Analysis

The CM cost variance and CTD schedule and cost variance are within the reporting thresholds.

The CM schedule variance of \$367.1K is reportable:

**Description/Cause:** The primary contributors to the favorable schedule variance are; 1) Re-planning of the Interim Barriers Construction activity work scope to direct push and SGE activities in SX Farm in support of an interim surface barrier spectral gamma logging in T and TY Farms, and additional interim surface barrier testing and evaluation and 2) Hose in Hose Transfer line Disposition work scope costing less as field work performed was on less hazardous activities resulting in reducing required controls.

**Impact:** None, Technology work-scope will to recover the current variance by March month-end, and Surface Geophysical Exploration will recover by the end of June 2009. No other long- term impacts are anticipated.

## 5.02.02 – SST RETRIEVAL EAST AREA

The WBS element includes activities to retrieve waste from the 200 East SSTs. Retrieval activities include design, procurement, construction, startup, readiness, and operation of SST waste retrieval systems.

### February 2009 (K\$)

	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC
CM	2,225.2	4,765.0	1,902.7	2,539.8	2,862.2	2.14	2.50	
CTD	6,554.9	8,164.5	6,693.2	1,609.6	1,471.3	1.25	1.22	22,298.1

### Schedule and Cost Variance Analysis

The CM schedule variance of \$2,539.8K is reportable:

**Description/Cause:** The favorable schedule variance is due to: 1) acceleration of C-110 Retrieval activities, 2) C-104 accelerated construction activities, including installation of protective plates, pumping water from the 04B pit, inspecting and removing cover blocks at 04A and 04C pits, and cleaning 04C pit.

**Corrective Action:**

The CM cost variance of \$2,862.2K is reportable:

**Description/Cause:** The favorable cost variance is due to: 1) inaccurate status of the project was taken as cost was incurred in January however performance was not taken until February.

**Corrective Action:** None required.

The CTD cost variance of \$1,471.3K is reportable:

**Description/Cause:** See above

**Corrective Action:** None

### 5.03.01 – WTP FEED DELIVERY PROGRAM

This WBS element includes capital asset construction activities performed for Waste Feed Delivery (WFD) to the Waste Treatment Plant (WTP), Infrastructure Upgrades, Construction, and Acceptance Testing. Sub elements of this WBS include Program Management, Engineering/Modeling, Characterization, Retrieval and Transfer Management.

February 2009 (K\$)

	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC
CM	535.2	490.3	508.8	-45.0	-18.6	0.92	0.96	
CTD	2,506.0	2,445.5	1,960.3	-60.5	485.2	0.98	1.25	7,159.6

#### Schedule and Cost Variance Analysis

The CM schedule and cost variances and CTD schedule variance are within the reporting thresholds.

The CTD cost variance of \$485.2K is reportable:

**Description/Cause:** Key contributors to CTD CV are due to labor underruns caused by staffing vacancies and contracts that have not been awarded to support strategic initiatives.

**Corrective Action:** Contracts will be awarded to supplement staff and will be awarded in the April-May time frame to support WFD Strategic initiatives.

## Milestone M-45,-50,-60 Single-Shell Tank Corrective Action

### I. Near-Term Deliverables:

- **M-45-56F, Complete Implementation of Agreed to Interim Measures**  
Due: 07/31/09  
Status: On Schedule.
- **M-45-58, Submit to Ecology for review and approval as an Agreement primary document a Phase 2 Master Work Plan that describes the proposed approach for the completion of Corrective Action to meet Final Closure Requirements in the Waste Management Areas as described in Appendix I, Section 2.3**  
Due: 12/31/08  
Status: Complete. Report transmitted by ORP/Richland Operations Office (RL) to Ecology on December 23, 2008. Ecology comments are complete and were transmitted to ORP/RL the week of April 20, 2009.
- **M-45-60, Submit to Ecology for review and approval as an Agreement primary document DOE's Phase 2 RFI/CMS Work Plan and Sampling and Analysis Plan (SAP) for WMA C**  
Due: 12/31/08  
Status: Complete. Report transmitted by ORP/RL to Ecology on December 19, 2008. Ecology comments are complete and were transmitted to ORP/RL the week of April 20, 2009.
- **M-45-61, Submit to Ecology for review and approval as an Agreement primary document a Phase 2 RCRA Facility Investigation/Corrective Measures Study Report for WMA C**  
Due: 12/31/10  
Status: At Risk. See issues below.
- **M-45-62, Submit to Ecology for review and approval as an Agreement primary document a Phase 2 Corrective Measures Implementation Work Plan for WMA C**  
Due: 7/31/12  
Status: At Risk. See issues below.

### II. Significant Accomplishments:

- T-Farm interim barrier monitoring continues.
- Completed analysis of spectral gamma data collection in T Farm to support barrier effectiveness evaluation.

- Continued direct push characterization in C Farm per the Phase 2 RFI/CMS work plan and SAP for WMA C.
- Continuing next phase of surface geophysical exploration in SX Farm.

### **III. Significant Planned Actions in the Next Six Months:**

- Initiate direct push characterization in SX Farm in support of interim barrier.
- Report on results of C-Farm 3-Dimensional SGE Survey.
- Complete SGE data collection in SX-Farm.

### **IV. Issues**

- The transmittal letter for M-45-50 (WMA C work plan and SAP) indicated that the scope of characterization activities identified in the plan could not be completed in time to support the currently scheduled dates for M-45-61 and M-45-62. Discussion of a change proposal will be initiated.
- There is no apparent maintenance plan for the ongoing maintenance of interim measures.

## **Milestone M-45-00, Complete Closure of All Single-Shell Tank Farms SST Retrieval and Closure Program**

### **I. Deliverables**

- **M-45-00, Complete Closure of all Single-Shell Tank Farms**  
Due: 9/30/24  
Status: To Be Missed (based on current DOE Baseline planning).
  
- **M-45-00B, Complete Specified "Near-Term" SST Waste Retrieval and Interim Closure Activities, to Result in the Retrieval of all Tank Wastes in WMA-C SSTs Pursuant to the Agreement Criteria in Milestone M-45-00**  
Due: 9/30/06 (Or as otherwise indicated within the descriptive text of this milestone.)  
Status: Missed.
  - Completion of four limits of technology retrieval demonstrations:
    - Saltcake dissolution (S-112): Completed (M-45-03C).
    - Modified sluicing (C-106): Completed.
    - Vacuum retrieval (C-200s): Completed; C-203 field retrieval operations completed on March 24, 2005; C-202 retrieval completed on August 11, 2005; C-201 retrieval completed on March 23, 2006; C-204 retrieval completed on December 11, 2006.
    - Mobile retrieval (C-101, C-105, or C-111): Not completed. C-101 start of retrieval is currently projected for FY 2011.
  
  - Implementation of full-scale leak detection monitoring and mitigation (LDMM) technologies for the first three 100-series tank retrievals following Tank S-112:
    - Tank S-102: High Resolution Resistivity System (HRR) installed; supporting retrieval operations.
    - Tank C-103: HRR demonstration complete.
    - Tank C-108: HRR installed; supporting retrieval operations.
    - Completed HRR injection tests at S-102.
    - Submitted HRR evaluation report and recommendation for further deployment.
  
  - Submittal of Tank Waste Retrieval Work Plans (TWRWP):
    - Tanks C-201, C-202, C-203, and C-204: Completed on April 8, 2004.
    - Two (2) 100-series tanks by July 31, 2004: Completed on July 29, 2004 (C-103 and C-109).
    - Four (4) 100-series tanks by 10/31/04: Completed on October 8, 2004 (C-102, C-104, C-107, C-108, and C-112).
    - Five (5) 100-series tanks by January 31, 2005: Completed on January 24, 2005 (C-101, C-105, C-110, and C-111).

- **M-45-00C, Initiate Negotiation of SST Waste Retrieval and Closure Activities and Associated Schedules (for the period February 2007 through August 2008)**  
Due: 9/30/06  
Status: Missed.
- **M-45-00D, Initiate Negotiation of the SST Waste Retrieval and Closure Activities (for the period September 2008 to September 2013)**  
Due: 1/31/08  
Status: Missed.
- **M-45-00D-A, Ecology and DOE Negotiations Shall Be Completed within 150 days.**  
Due: 06/28/08  
Status: Missed
- **M-45-00E, Initiate Negotiation of SST Waste Retrieval and Closure Activities for the Remainder of the SST Program**  
Due: 10/31/12  
Status: To Be Missed (based on current DOE Baseline planning).
- **M-45-00E-A, Ecology and DOE Negotiations Shall Be Completed within 120 Days.**  
Due: 02/27/13
- **M-45-05, Retrieve Waste from all Remaining Single-Shell Tanks**  
Due: 9/30/18  
Status: To Be Missed (based on current DOE Baseline planning).
- **M-45-05-T05, Initiate Tank Retrieval from Five Additional Single-Shell Tanks**  
Due: 9/30/07  
Status: Missed.
- **M-45-05-T06, Initiate Tank Retrieval from Five Additional Single-Shell Tanks**  
Due: 9/30/08  
Status: Missed.
- **M-45-05-T07, Initiate Tank Retrieval from Seven Additional Single-Shell Tanks**  
Due: 9/30/09  
Status: To Be Missed (based on current DOE Baseline planning).

- **M-45-05-T08, Initiate Tank Retrieval from Eight Additional Single-Shell Tanks**  
Due: 9/30/10  
Status: To Be Missed (based on current DOE Baseline planning).
- **M-45-05-T09, Initiate Tank Retrieval from Ten Additional Single-Shell Tanks**  
Due: 9/30/11  
Status: To Be Missed (based on current DOE Baseline planning).
- **M-45-05-T10, Initiate Tank Retrieval from 12 Additional Single-Shell Tanks**  
Due: 9/30/12  
Status: To Be Missed (based on current DOE Baseline planning).
- **M-45-05-T11, Initiate Tank Retrieval from 14 Additional Single-Shell Tanks**  
Due: 9/30/13  
Status: To Be Missed (based on current DOE Baseline planning).
- **M-45-05-T12, Initiate Tank Retrieval from 17 Additional Single-Shell Tanks**  
Due: 9/30/14  
Status: To Be Missed (based on current DOE Baseline planning).
- **M-45-05-T13, Initiate Tank Retrieval from 20 Additional Single-Shell Tanks**  
Due: 9/30/15  
Status: To Be Missed (based on current DOE Baseline planning).
- **M-45-05-T14, Initiate Tank Retrieval from 20 Additional Single-Shell Tanks**  
Due: 9/30/16  
Status: To Be Missed (based on current DOE Baseline planning).
- **M-45-05-T15, Initiate Tank Retrieval from 20 Additional Single-Shell Tanks**  
Due: 9/30/17  
Status: To Be Missed (based on current DOE Baseline planning).
- **M-45-06, Complete Closure of all Single-Shell Tank Farms in Accordance with Approved Closure/Post Closure Plan(s)**  
Due: 9/30/24  
Status: To Be Missed (based on current DOE Baseline planning).
- **M-45-06-T03, Initiate Closure Actions on a WMA Basis**  
Due: 3/31/12  
Status: To Be Missed (based on current DOE Baseline planning).
- **M-45-06-T04, Complete Closure Actions on one WMA**  
Due: 3/31/14  
Status: To Be Missed (based on current DOE Baseline planning).

**II. Significant Accomplishments**

- Continued C-111 retrieval system design.

**III. Significant Planned Activities in the Next Six Months**

- Complete retrieval of Tank C-110.
- Continue design of retrieval system for Tank C-111.
- Complete construction activities at Tank C-104 and begin retrieval.

**IV. Issues**

- Milestones M-45-00B (retrieve all C Farm tanks), M-45-00C (initiate negotiations on SST retrievals for 2007-2008), and M-45-00D (initiate negotiations on SST retrievals for 2008-2013) were missed. TPA negotiations to address these and other milestones were halted when the State of Washington filed a lawsuit over the missed milestones.
- Ecology formally requested re-start dates for C-108, C-109, C-110, and S-102 in a letter dated October 13, 2008. Restart dates for these retrievals are in the process of being identified.

**C-FARM RETRIEVAL SUMMARY SCHEDULE FORECASTS <sup>a</sup>**

Tank	Final Design Drawings complete	Construction Complete	Process Control Plan Complete	Start Retrieval	Complete Retrieval	TSAP Complete	Retrieval Data Report or Appendix H to Ecology/EPA
C-101	TBD	TBD	TBD	TBD	TBD	TBD	TBD
C-102	1/14/11	10/13/11	12/9/12	1/9/12	11/20/12	10/20/12	11/18/13
C-103	Complete	Complete	Complete	Complete	Complete	Complete	Complete
C-104 <sup>c</sup>	4/16/09	6/8/09	4/16/09	8/5/09	1/26/10	12/28/09	12/21/10
C-105	5/2/12	6/5/13	7/30/13	8/30/13	3/6/14	2/6/14	12/4/14
C-106	Complete	Complete	Complete	Complete	Complete	Complete	Complete
C-107	3/21/14	12/19/14	2/26/15	3/26/15	12/18/15	11/18/15	4/26/17
C-108 <sup>d</sup>	Complete	Complete	Complete	Complete	TBD	TBD	TBD
C-109 <sup>de</sup>	Complete	Complete	Complete	Complete	TBD	TBD	TBD
C-110 <sup>bc</sup>	Complete	Complete	Complete	Complete	9/30/09	8/30/09	7/6/10
C-111	TBD	TBD	TBD	TBD	TBD	TBD	TBD
C-112	10/18/13	7/23/14	9/9/14	10/9/14	3/25/15	2/25/15	3/1/17
C-201	Complete	Complete	Complete	Complete	Complete	Complete	Complete
C-202	Complete	Complete	Complete	Complete	Complete	Complete	Complete
C-203	Complete	Complete	Complete	Complete	Complete	Complete	Complete
C-204	Complete	Complete	Complete	Complete	Complete	Complete	Complete

- a. Completion dates are based on the stated March month-end Integrated Mission Execution Schedule (IMES) as of 3/25/09 and are subject to change as efforts continue to identify and implement schedule efficiencies.
- b. Projected dates for C-110 are based on utilizing modified sluicing technology and availability of acceleration funding.
- c. Schedules are being updated for inclusion of S-102 corrective actions and compensatory measures.
- d. Sluicing was performed to the limits of the sluicing system technology.
- e. Hard Heel Retrieval using MRT complete to limits of technology, not achieving less than 360 cu ft residual, awaiting future retrieval path forward.
- f. NOTE: For all tanks with a "TBD" in a column, dates will be identified for those "TBDs" following development of the PMB. The PMB will be based on the system plan, which will be approved by Ecology.

## SST RETRIEVAL SEQUENCE DOCUMENT

### I. Deliverables

- **M-45-02N, Submit Biennial Update of SST Retrieval Sequence Document (Agreement Appendix I, Section 2.1.2), and Double-Shell Tank Space Evaluation Document and Ecology Concurrence of Additional Tank Acquisition Within 60-days (see text of M-45-02N for further details)**  
Due: 3/1/08 (Parties to meet annually to agree on SSTs to be retrieved during the coming year from the tank pool.)  
Status: Complete.
- **M-45-02N-A, Embedded Milestone; Within 60 days of receiving the DST Space Evaluation Document, the Three Parties Shall meet to Establish New Milestones, If Required, for Acquisition of Additional Tanks**  
Due: 06/02/08  
Status: Complete. On May 15, 2008, Ecology transmitted comments on the M45-02N deliverable. On July 23, 2008, ORP transmitted letter 08-TF-049 to Ecology with a plan for responding to Ecology comments on and updating the Retrieval Sequence Document (RPP-21216). The revised document was submitted to Ecology on September 12, 2008, by letter 08-TF-062. Ecology approved the document on January 22, 2009, by letter 0900343.
- **M-45-02O, Submit Biennial Update of SST Retrieval Sequence Document (Agreement Appendix I, Section 2.1.2), and Double-Shell Tank Space Evaluation Document and Ecology Concurrence of Additional Tank Acquisition Within 60-days (see text of M-45-02M for further details)**  
Due: 3/1/10 (Parties to meet annually to agree on SSTs to be retrieved during the coming year from the tank pool.)  
Status: On schedule. Ecology has requested the Parties meet to discuss the methodology and contents of the next biennial update.
- **M-45-02O-A, 3 Parties Shall Meet To Establish New Milestones Within 60 Days**  
Due: 04/30/10  
Status: On Schedule.
- **M-45-02P, Submit Biennial Update of SST Retrieval Sequence Document (Agreement Appendix I, Section 2.1.2), and Double-Shell Tank Space Evaluation Document and Ecology Concurrence of Additional Tank Acquisition Within 60-days (see text of M-45-02M for further details)**  
Due: 3/1/12 (Biennially thereafter. Parties to meet annually to agree on SSTs to be retrieved during the coming year from the tank pool.)  
Status: On schedule.

- **M-45-02P-A, Embedded Milestone; Within 60 days of receiving the DST Space Evaluation Document, the Three Parties Shall meet to Establish New Milestones, If Required, for Acquisition of Additional Tanks**  
Due: 4/30/12  
Status: On schedule.
- **M-45-02Q, Submit Biennial Update to SST Retrieval Sequence Document**  
Due: 03/01/14  
Status: On Schedule
- **M-45-02Q-A, 3 Parties Shall Meet to Establish New Milestones Within 60 Days**  
Due: 04/30/14  
Status: On Schedule
- **M-045-02R, Submit Biennial Update to SST Retrieval Sequence Document**  
Due: 03/01/16  
Status: On Schedule
- **M-045-02R-A, 3 Parties Shall Meet to Establish New Milestones Within 60 Days**  
Due: 04/30/16  
Status: On Schedule
- **M-45-02S, Submit Biennial Update to SST Retrieval Sequence Document**  
Due: 03/01/18  
Status: On Schedule
- **M-45-02S-A, 3 Parties Shall Meet to Establish New Milestones Within 60 Days**  
Due: 04/30/18  
Status: On Schedule

## II. Significant Accomplishments

None.

## III. Significant Planned Activities in the Next Six Months

- None.

## IV. Issues

- None.

## TANK RETRIEVALS WITH INDIVIDUAL MILESTONES

### Tank 241-C-106

#### I. Deliverables

- **M-45-05M-T01, Submit C-106 Waste Retrieval Results, Analysis of Residual Waste(s), and (if appropriate) Request for Exception to the Criteria Pursuant to Agreement Appendix H**

Due: 2/27/04

Status: Complete.

#### II. Significant Accomplishments

- None.

#### III. Significant Planned Activities (PA) in the Next Six Months

- Continue U.S. Nuclear Regulatory Commission (NRC) review of the C-106 exception request. A Request for Additional Information (RAI) was received from the NRC in February 2009.
- Continue PA workshops with Ecology, EPA, NRC, and DOE HQ focused on residual waste in C Farm tanks and pipelines following retrieval.

#### IV. Issues

- C-106 Closure Plan approval and SST radiological Categorical Notice of Construction (NOC) Phase 3 (closure) and a toxics categorical NOC application are pending completion of the Tank Closure and Waste Management Environmental Impact Statement (EIS) and associated Record of Decision (ROD); forecast completion for the final EIS ROD is in 2010.

### Tank 241-S-102

#### I. Deliverables

- **M-45-05A, Complete Waste Retrieval from Tank S-102**

Due: 3/31/07

Status: Missed. As a result of equipment failure on March 14, 2007, retrieval operations were suspended at Tank S-102 with retrieval approximately 91% complete and approximately 423,000 gallons total waste removed.

- **M-45-15, Interim Completion of Tank S-102 SST Waste Retrieval and Closure Demonstration Project**

Due: 6/30/11

Status: On Schedule. Change Request M-45-07-01 approved by DOE and Ecology on December 4, 2007.

- **M-45-15A, Embedded Milestone, Submit a Retrieval Data Report Pursuant to Agreement Appendix I**  
Due: 6/30/11  
Status: On schedule.
- **M-45-15B, Embedded Milestone, Remaining Wastes have been adequately Characterized, and a Risk Assessment has been completed for residuals that remain in the tank**  
Due: 6/30/11  
Status: On schedule.
- **M-45-15C, Embedded Milestone, An update to the S-102 Component Closure Activity Plan has been submitted by DOE**  
Due: 6/30/11  
Status: On schedule.
- **M-45-15D, Embedded Milestone, if appropriate, DOE has requested an exception to waste retrieval criteria pursuant to Agreement Appendix H**  
Due: 6/30/11  
Status: On schedule.

## II. Significant Accomplishments

- None.

## III. Significant Planned Activities in the Next Six Months

- None.

## IV. Issues

- Retrieval of Tank 241-S-102 was not completed by TPA milestone date of March 31, 2007, due to pump failure.

## Tank 241-S-112

### I. Deliverables

- **M-45-03C, Complete Full-Scale Saltcake Waste Retrieval Technology Demonstration at Single-Shell Tank S-112**  
Due: 6/30/05  
Status: Complete.
- **M-45-13, Interim Completion of Tank S-112 SST Waste Retrieval and Closure Demonstration Project**  
Due: 6/30/11  
Status: On Schedule. Change Request M-45-07-01 approved by DOE and Ecology on December 4, 2007.

- **M-45-13A, Embedded Milestone, Submit a Retrieval Data Report Pursuant to Agreement Appendix I**  
Due: 12/31/07  
Status: Completed (ORP letter, 07-TPD-066, dated December 21, 2007). Added by Change Request M-45-07-01 approved by DOE and Ecology on December 4, 2007.
- **M-45-13B, Embedded Milestone, Remaining Wastes have been adequately Characterized, and a Risk Assessment has been completed for residuals that remain in the tank**  
Due: 12/31/07  
Status: Completed (ORP letter, 07-TPD-066, dated December 21, 2007). Added by Change Request M-45-07-01 approved by DOE and Ecology on December 4, 2007.
- **M-45-13C, Embedded Milestone, An update to the S-112 Component Closure Activity Plan has been submitted by DOE**  
Due: 6/30/11  
Status: On schedule.
- **M-45-13D, Embedded Milestone, if appropriate, DOE has requested an exception to waste retrieval criteria pursuant to Agreement Appendix H**  
Due: 6/30/11  
Status: On schedule.

## II. Significant Accomplishments

- Ecology letter of August 28, 2008, concurred with ORP that retrieval of Tank S-112 is complete.

## III. Significant Planned Activities in the Next Six Months

- None.

## IV. Issues

- None.

## Interim Stabilization Consent Decree

### I. Near-Term Deliverables:

#### D-001-00, Complete Interim Stabilization of all 29 SSTs

Due: 09/30/04

Status: Completed on March 31, 2004, with discontinuation of pumping in U-108 and subsequent consultation with Ecology staff. Interim stabilization of S-102 and S-112 held in abeyance by third amendment to the Consent Decree. ORP's obligation to interim stabilize S-102 and S-112 will be satisfied upon completion of retrieval operations. Retrieval of S-102 has been impacted by the spill at this tank.

### II. Significant Accomplishments:

- None.

### III. Significant Planned Actions in the Next 6 Months:

- None.

### IV. Issues

Tank S-102 retrieval not completed by milestone M-45-05A date of March 31, 2007.

## In Tank Characterization and Summary

For the period from March 1 – March 31, 2009:

### I. Accomplishments:

- Completed tank 241-AW-106 grab sampling for the evaporator operations on March 9, 2009.
- Completed 244-CR Vault Cells (four cells) grab sampling for transfer requirements on March 31, 2009.
- Completed sampling and analysis plan, RPP-PLAN-40578, *Tank 241-AY-101 Sampling and Analysis Plan in Support of Corrosion Mitigation for Fiscal Year 2009* on March 17, 2009.
- Completed tank sampling and analysis plan RPP-PLAN-40573, *Tank 241-AN-106 Grab Sampling and Analysis Plan to Address Recovery Plan TF-RP-09-01* on March 26, 2009.
- Completed sampling and analysis plan RPP-PLAN-40585, *Sampling and Analysis Plan For Waste Solids in Tank 241-C-108* on March 30, 2009.

### II. Planned Action within the next Six Months:

- Tank Sampling
  - Tank 241-AZ-102 liquid grab samples scheduled for May 2009.
  - Tank 241-AP-107 liquid grab samples scheduled for August 2009.
  - Tank 241-AN-106 liquid grab samples for pre caustic addition scheduled for June 2009.
  - Tank 241-AY-101 liquid grab samples scheduled for August 2009.
  - Tank 241-AN-101 mid C-104 retrieval samples scheduled for August 2009.
  - Tank 241-AN-106 liquid grab samples for post caustic addition scheduled for July 2009.
  - Tank 241-C-108 solid samples for retrieval data scheduled for May 2009.
- BBI Updates
  - Six tanks were evaluated for updates in the second quarter of FY 2009. Four tanks were updated. One of the six tanks had a text change only; the BBI was not changed and one of the six was not updated because the data was not representative.
  - Four of the six tanks were published on April 6, 2009.
- Data Quality Objectives (DQO)
  - Complete SST Component Closure DQO, Rev. 4 in June 2009.
  - Complete Evaporator DQO Rev. 7 in August 2009.

### III. Issues:

- None.

## **Milestone M-47-00, Complete Work Necessary to Support Acquisition and Phase I Operations of Hanford Site High-Level Radioactive Waste Treatment, Storage, and Disposal Facilities**

### **I. Near-Term Deliverables:**

- **M-47-03A, Complete startup and turnover activities for waste retrieval and mobilization systems for selected initial high-level waste feed tank**  
Due: 03/31/09  
Status: Missed.
  
- **M-47-06, Complete negotiation of additional agreement requirements (milestones, target dates, and associated language) governing work necessary to support completion of treatment complex Phase I operations by 2018**  
Due: 06/30/10  
Status: Negotiations are not yet underway.

### **II. Significant Accomplishments:**

- None.

### **III. Significant Planned Actions in the Next Six Months:**

- None.

### **IV. Near-term Actions Needed by DOE or Ecology:**

- None.

### **V. Issues:**

- Nothing to report.

## 242-A Evaporator Status (previously reported under Milestone M-48, which has been closed out)

### EVAPORATOR CAMPAIGNS

Fiscal Year	Campaign No.	Feed Source	Slurry Tank	Comments
FY09	09-01	AP-101/AP-105	AP-104	Previously planned as 08-01, this campaign will be performed "back-to-back" with Campaign 09-02 in March/April/May 2009.
FY09	09-02	AP-101/AP-105	AP-104/ AP-101	Previously planned as 08-02, this campaign will be performed "back-to-back" with Campaign 09-01 in March/April/ May 2009.
FY10	10-01	AW-106	AP-104	Detailed planning for FY10 and outyear campaigns subject to retrieval activities and Tank Operations Contractor commitments and requirements. Forecast FY10 campaigns are based on preliminary planning associated with blending AZ-102.
FY10	10-02	AP-107	AP-104/ AP-107	Detailed planning for FY10 and outyear campaigns subject to retrieval activities and Tank Operations Contractor commitments and requirements. Forecast FY10 campaigns are based on preliminary planning associated with blending AZ-102.
FY10	10-03	AZ-102	AP-107	Detailed planning for FY10 and outyear campaigns subject to retrieval activities and Tank Operations Contractor commitments and requirements. Forecast FY10 campaigns are based on preliminary planning associated with blending AZ-102.

**Milestone M-90-00, Complete Acquisition of New Facilities, Modifications of Existing facilities, and/or Modifications of Planned Facilities, as Necessary for Storage of Hanford Site Immobilized High Level Waste (IHLW), Immobilized Low Activity Waste (ILAW), and Disposal of ILAW, and M-20-00, Submit Part B Permit Applications**

**I. Near-Term Deliverables:**

- **M-90-10, Ready to Accept Placement of ILAW Waste in ILAW Disposal Facility**  
Due: 8/31/08  
Status: Complete.
  
- **M-90-11, Complete Canister Storage Facility Construction**  
Due: 8/31/10  
Status: To Be Missed. To be renegotiated to align with WTP schedule.

**II. Significant Accomplishments:**

- None to report.

**III. Significant Planned Actions in the Next Six Months:**

- None to report.

**IV. Issues**

- None to report.

## Milestone M-62-00, Complete Pretreatment Processing and Vitrification of Hanford High-Level (HLW) and Low-Activity (LAW) Tank Wastes

### I. Near-Term Deliverables:

- **M-62-00, Complete Pretreatment Processing and Vitrification of Hanford High-Level (HLW) and Low-Activity (LAW) Tank Wastes**  
Due: 12/31/2028  
Status: To Be Missed.
  
- **M-62-00A, Complete WTP Pretreatment Processing and Vitrification of Hanford HLW and LAW Tank Wastes**  
Due: 02/28/2018  
Status: To Be Missed.
  
- **M-62-01R, Submit Semi-Annual Project Compliance Report**  
Due: 01/31/2009  
Status: Complete.
  
- **M-62-01S, Submit Semi-Annual Project Compliance Report**  
Due: 07/31/2009  
Status: On Schedule.
  
- **M-62-07B, Complete Assembly of Low Activity Waste Vitrification Facility Melter #1 So That It Is Ready for Transport and Installation in the LAW Vitrification Building (BNI Baseline Schedule Activity 4DL321A200 as Part of DOE Contract No. DEAC27-01RV14136), and Complete Schedule Activity ID 4DH46102A2 – Move #1 Melter into the High Level Waste Vitrification Facility**  
Due: 12/31/2007  
Status: Missed.
  
- **M-62-08, Submittal of Hanford Tank Waste Supplement Treatment Technologies Report, Draft Hanford Tank Waste Treatment Baseline and Draft Negotiations Agreement in Principle**  
Due: 06/30/2006  
Status: Missed.
  
- **M-62-09, Start Cold Commissioning – Waste Treatment Plant**  
Due: 02/28/2009  
Status: To Be Missed (based on current DOE Baseline planning).

- **M-62-10, Complete Hot Commissioning – Waste Treatment Plant**  
Due: 01/31/2011  
Status: To Be Missed (based on current DOE Baseline planning).
  
- **M-62-11, Submit a Final Hanford Tank Waste Treatment Baseline**  
Due: 06/30/2007  
Status: Missed.

**II. Significant Accomplishments:**

- None to report.

**III. Significant Planned Actions in the Next Six Months:**

- The Early LAW initiative is currently on hold, pending further funding for FY 2009. Should funding be made available, planned work scope will include Research and Development (R&D) testing of an in-tank alternative and a review of several configurations; i.e., vault system, in-tank system.

**IV. Issues:**

- None.

## **Hanford Waste Treatment and Immobilization Plant (WTP) Project**

There are 1,365 people assigned to the WTP construction site (all facilities); 830 manual and 535 non-manual. Overall project percent complete through February 2009 is 46%, design and engineering is 73% complete, and construction is 42% complete.

### BNI Internal Re-plan

Review of the BNI internal re-plan is completed. The team, including staff from DOE, the Office of Engineering and Construction Management (OECM), and the Consolidated Business Center (CBC) assessed the accuracy and reasonableness of adjustments to the WTP project cost and schedule baseline. ORP completed in mid-March a draft report, documenting DOE observations and findings. ORP is still finalizing the report.

### Material at Risk (MAR)

In March, ORP continued discussions with the DNFSB on the conclusions and recommendation of the Material at Risk (MAR) review team; further meetings are scheduled for April 15 and 16. BNI chartered and convened its first Safety Input Review Committee (SIRC) modeled on the SRS process; on April 2, the BNI Safety Analysis Manager made two presentations at SIRC: Unit Liter Doses for MAR Update and PT and HLW Seismic Event Scenarios. DNFSB staff attended the meeting. ORP is currently evaluating this material.

### DOE-STD-1066

ORP is pursuing compliance with DOE-STD-1066, Section 14, Nuclear Filter Plenum Fire Protection, using the alternate approach permitted by the standard. The alternate approach will demonstrate a comparable level of safety to that achieved by verbatim compliance with the Section 14 requirements. In accordance with the Standard, the alternate approach was approved by the ORP Authority Having Jurisdiction (Office Manager), after consultation with the ORP qualified fire protection engineer. The DOE Headquarters Office of Nuclear Safety, Quality Assurance and Environment has formally acknowledged the AHJ's authority for utilizing the alternate approach to Standard compliance.

### Broad Based Review (BBR)

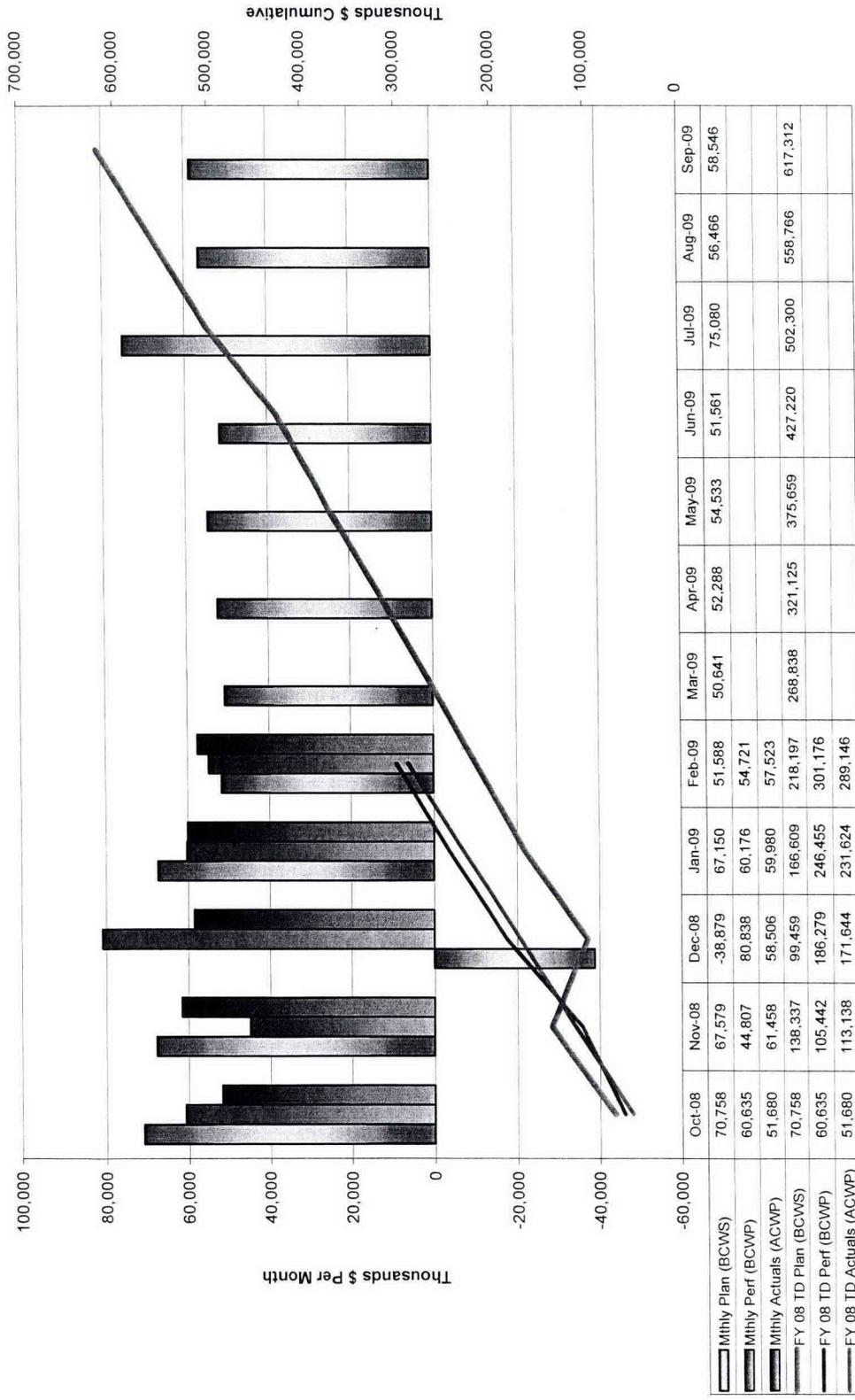
Approximately 25% of the corrective action reports (PIERs & CRPTs) tracking closure of BBR issues have been dispositioned to date. BNI transmitted a letter to ORP (CCN 185941) on April 1, 2009, in response to comments given by ORP on the BBR Overview Report. BNI also issued a revision to the BBR Overview Report to respond to and completely address ORP comments.

### Black Cell Piping

As part of BNI's evaluation of the approximately 14,000 pipe spools for the black cells, the last of 107 open spools were dispositioned. BNI submitted a Basis of Design Change Notice (BODCN) (24590-WTP-BODCN-09-0007) to address inspection criteria for the outer pipe of dual containment piping installed in hard to reach areas. ORP is reviewing the submitted BODCN. Upon resolution to the BODCN, BNI will have completed corrective actions associated directly with black cell piping.

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### WTP – Fiscal Year To-Date Performance



### **Pretreatment (PT) Facility**

The PT Facility will separate radioactive tank waste into high-level waste (HLW) and low-activity waste (LAW) fractions and transfer each waste type to the respective vitrification facility for immobilization. Overall facility percent complete is 41%, engineering/design is 72% complete, and construction is 27% complete.

DOE review of the BNI internal re-plan by ORP, the Office of Engineering and Construction Management (OECM), and PT&C assessing the accuracy and reasonableness of adjustments to the WTP project cost and schedule baseline is ongoing, and is forecasted to be completed in April 2009.

Construction installations for the month included: 570 yd<sup>3</sup> of concrete, 176 tons of rebar, and 78,151 lbs of embeds. Over 184 tons of tier-3 structural steel was also erected.

Construction forces at the +56 elevation placed concrete for walls 4-32 and slabs 5628 and 5632. Crews are also continuing to install tier-3 structural steel. Crane RWH-12 was installed on the facility's southeast side. In addition, fabrication and installation of temporary platforms for planning areas 11E, 11W and 13E are ongoing. Crews at the 0' elevation continue; installing liner and grillage in the south cells; fabricating rebar curtains; building scaffolding; welding piping in black cells; and installing drain piping and performing radiography on the module at the west end of the facility. At the +28 elevation, crews continue to sandblast and coat walls and floors on the facility's north side.

Testing at the PEP, with prototypical equipment used to confirm the performance of the PT ultrafiltration system and leaching processes, was completed on March 31, to close issues raised by the External Flowsheet Review Team (EFRT). Preliminary data shows that the performances have been better than anticipated. Test data are being analyzed, and final reports will be issued in December 2009.

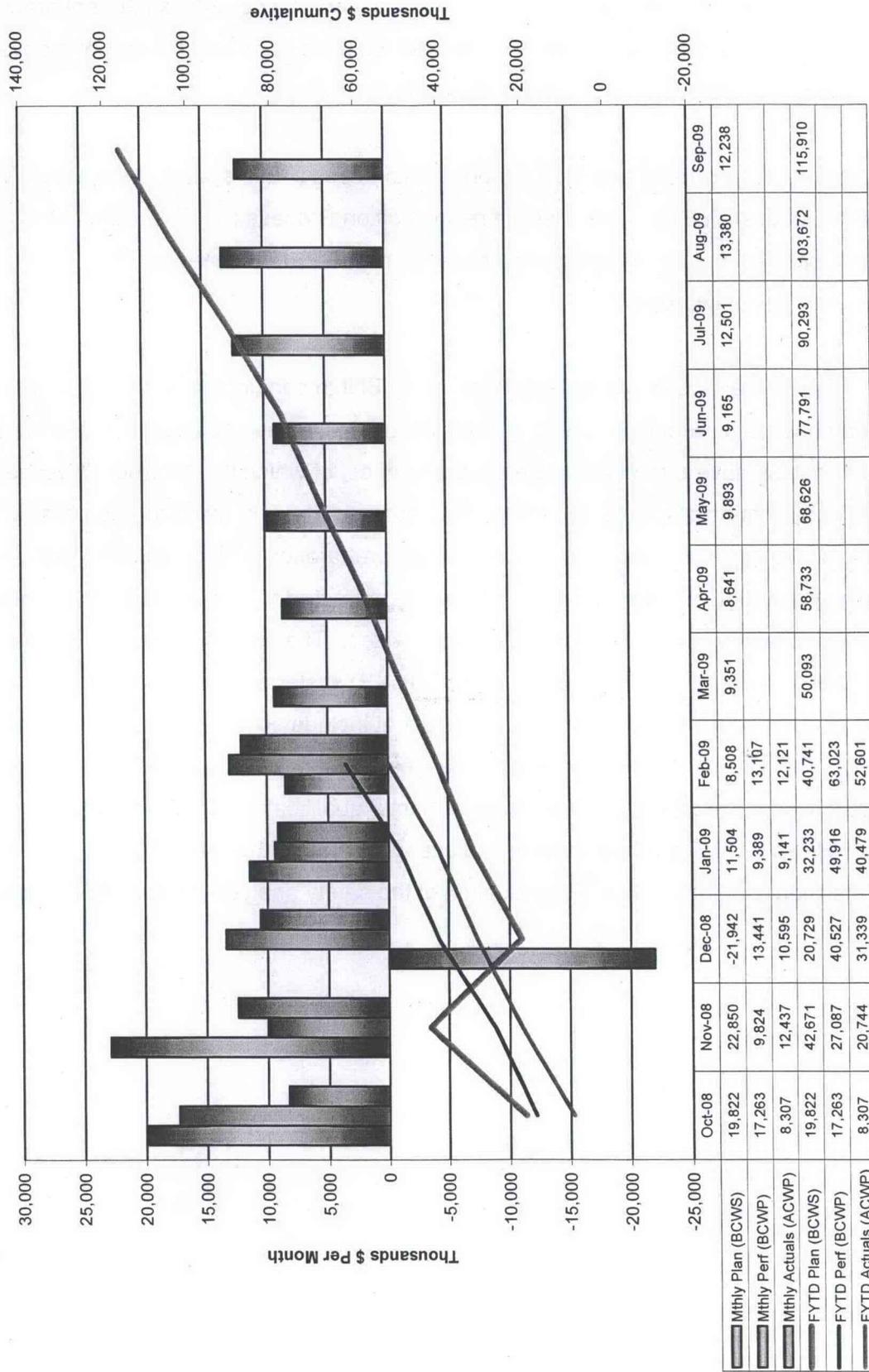
Over 400 piping isometric drawings were issued this month. All design drawings for the fourth-lift wall (56' – 77') have been issued, meeting a key milestone. Computational fluid dynamics (CFD) modeling for the Ultrafiltration system (UFP) steam heating system has been completed. Model review of the maintenance platform for the crane maintenance area has been completed. DOE approvals for the use of WTP site-specific ground motion (WSGM) have been given for a number of vessels in the black cell and all of the equipment and jumpers in the hotcell. HVAC

orthographic drawings for the 0' elevation have been issued. General Arrangement drawings for the Control building have been issued for review. BNI has approved the use of grooved coupling for the fire- water piping below 56' elevation.

Material requisitions for the Waste feed evaporation process (FEP) system, Treated LAW evaporation process (TLP) system, Cesium resin addition Process (CRP) system bulge, Jumper ball valves, compressors and rotary pumps have been issued. Procurement of Magnetic flowmeters has been awarded.

A number of technical issues are being worked on by BNI in conjunction with DOE. Details of the second phase of vessel mixing testing and CFD analyses have developed to resolve EFRT issue M3. Vessels have been categorized in four groups, of which the 1<sup>st</sup> group of vessels has completed confirmation of mixing capability. Fabrication of the test stand for the phase 2 testing has been completed and received at Hanford for the preparation of large scale testing. Additionally, Washington State University has been contracted to perform a number of tests to determine parameters of mixing for various particle sizes. The cesium nitric acid recovery process (CNP) and cesium ion exchange process (CXP) systems are being evaluated for the resolution of operability and maintainability issues that include solids precipitation and corrosion evaluations. BNI plans to determine design changes are needed by June 2009. Other key issues being worked are the Equipment environmental qualification (EEQ), material at risk (MAR) and HPAV. DOE has approved an AB change to define the "harsh" and "Mild" conditions towards the requirement of EEQ. Reevaluation of the safety analysis for the HPAV is ongoing.

### Pretreatment Facility - Fiscal Year To-Date Performance



## High-Level Waste (HLW) Facility

The HLW Facility will receive the high-level waste fraction from the Pretreatment (PT) Facility. The waste will be mixed with glass formers, converted to glass, and placed in stainless steel canisters that will initially be stored in the Hanford onsite Canister Storage Building. Final disposition is proposed to be at the national geologic repository. HLW engineering/design and construction completions are 77% and 23%, respectively. Overall, facility completion is 43%. Implementation of the Workable Backlog Program (WBP) plan is continuing. The WBP strategy is to establish a rolling six-month backlog of materials and approved construction work packages prior to hiring additional craft in FY 2009, fourth quarter (Q4). The intent is to stabilize construction resource loading and reduce the impacts caused by late design changes and unavailable materials. Construction will lag behind the baseline schedule until the backlog is established and then accelerate, with additional craft, to regain lost schedule. The schedule baseline "lag/gap" will be corrected by February 2010. In December 2008, the Concrete Backlog accounted for less than two weeks (i.e., less than 10,000 man-hours) of field work. With the increased Project Management focus on improving these levels, the backlog has grown to over one month in January to nearly four months in March.

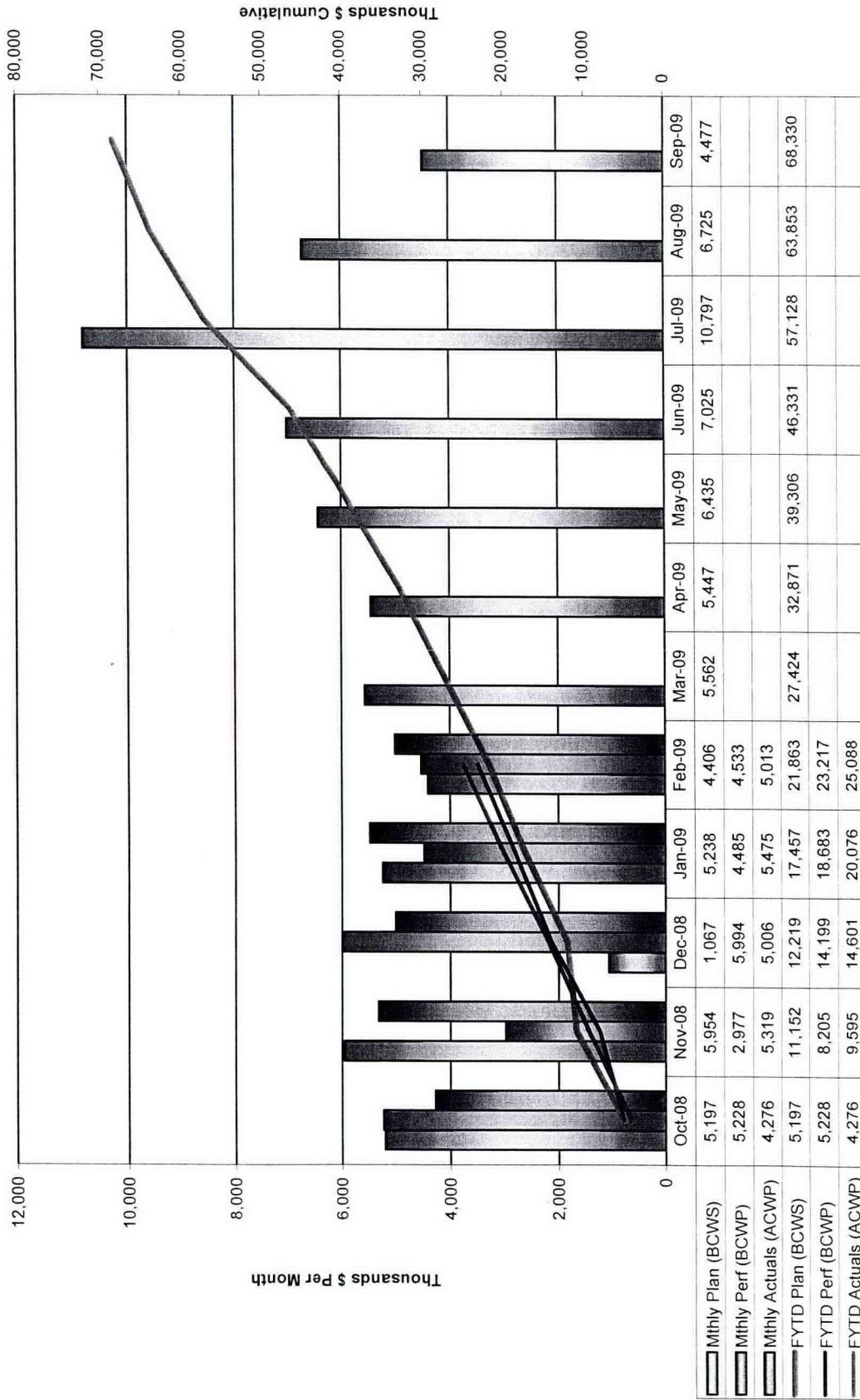
The workable backlog levels have shown only modest improvements in recent months because of offset wall-penetration ("joggle") delivery delays. The WTP Contractor has developed metrics to improve status visibility, provide early warnings, and mitigate potential future delays. In addition, the team has implemented a detailed schedule review process to monitor future joggle design and procurement processes. Recent meetings with the joggle vendor has set fabrication and delivery sequences to support construction priorities. As large joggle orders are delivered to the site in the upcoming months, multiple walls can be released for construction and the workable backlog levels should increase significantly.

Engineering activities for this period include: reviewing vendor drawings for the melter power supply, melter discharge and start-up heater power supplies; completion of the model reviews for the nitric acid reagent (NAR) and sodium hydroxide reagent (SHR) systems; reviewing steel and embed shop drawings; completion of the modeling of pipe support embeds for the elevation +37' to +58' walls; and approval of fire protection orthographic drawings. Other engineering activities include the issuance of calculations for the canister rinse bogie runway and monorail beam and support system design, system block diagrams for the radioactive liquid waste disposal (RLD) system, issuance of instrument/valve data sheets, logic documents and piping and instrumentation diagram (P&ID) enhancements, and piping isometric drawings. Most

notably, engineering released all of "Release One" and "Release Two" joggle designs to the procurement group to begin the fabrication of over 275 joggles.

Construction forces placed 595 cubic yards (CY) of concrete for slab 1025 over the west black cell area, wall 1141 at the east end of the 0' elevation, slabs 2010 and 2017 at the +14' elevation and wall 2101 above the +14' elevation. At the -21' elevation, crews continue to work on ducting; install structural steel, conduit, and cable tray supports; and apply coatings in drum transfer tunnel. At the 0' elevation, crews continue to install wall and slab rebar, embeds, and commodities at the east end; decking, ledger, and structural steel and supports; liner plate and a door liner in pour tunnel #2 (bogie maintenance room). Crews at the +14' elevation continue installing rebar, embeds, forms, and decking in the west and central areas of the facility. A notable achievement this month was the erection of structural steel and decking at the +14' elevation in the central area between the melter cave no. 2 and the wet process cell.

### High-Level Waste Facility - Fiscal Year To-Date Performance



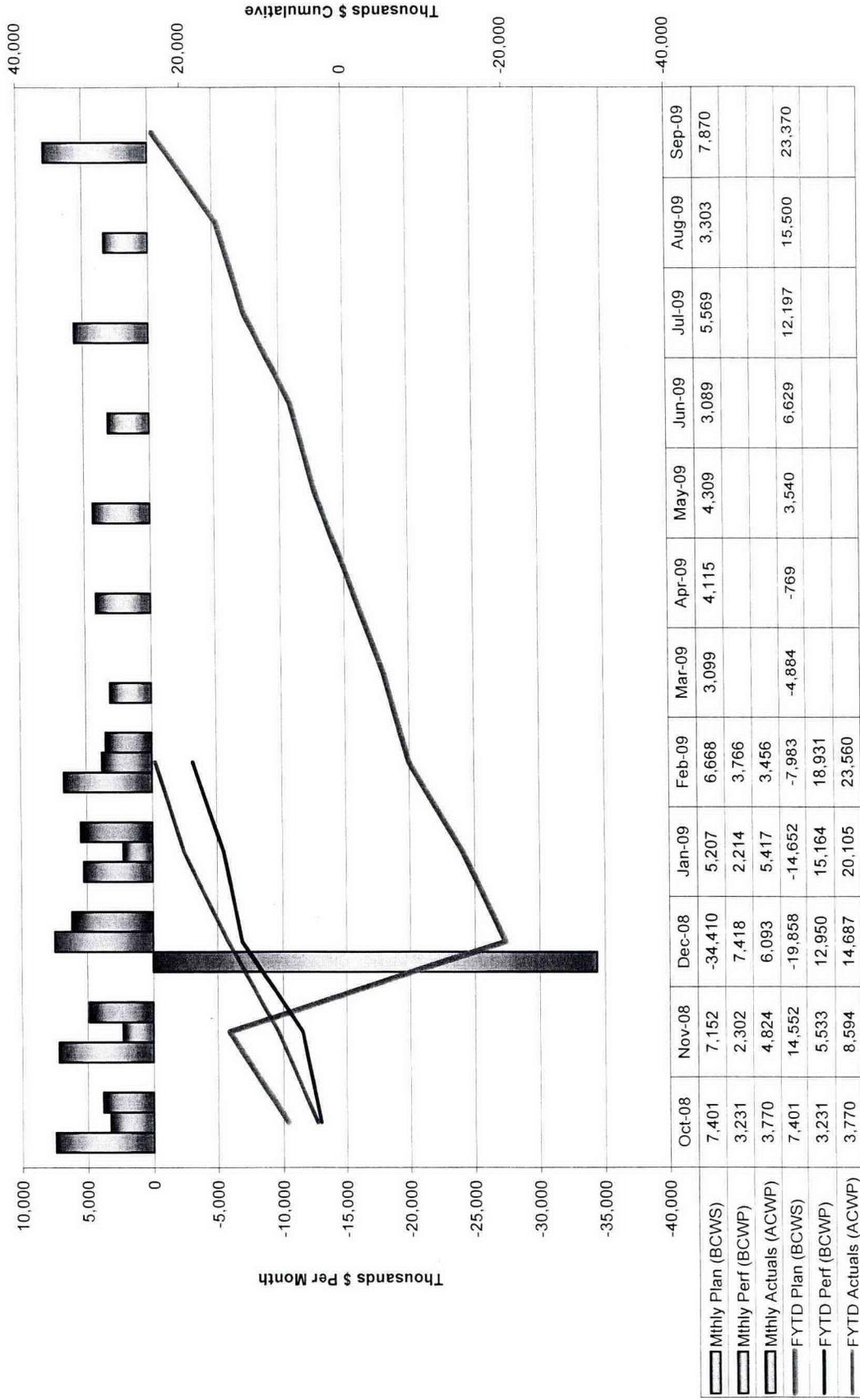
### **Low-Activity Waste (LAW) Facility**

The LAW Facility will vitrify low-activity waste from the PT Facility. Waste will be mixed with glass formers, vitrified into glass at an average daily rate of 30 metric tons, and placed in stainless-steel containers that will be disposed on site in the Integrated Disposal Facility. Overall facility percent complete is 64%, design is 88%, and construction is 58%. The change in LAW design percent complete from 86% in January to 88% in February is partially due to the inclusion of Research and Testing, Process Engineering, and Environmental and Nuclear Safety.

Significant February equipment deliveries include: mixer #1, hot cell trolleys, power supplies for melter 1 and 2, south bogie recovery system, container finishing handling system control panels, north lidding bogie, and three fan coil units.

Construction forces set nine air displacement slurry pumps into the melter #2 feed vessels and completed installation of melter rail #1 and #2, except for a small transition point from inside to outside on all the melter rails. A low pressure leak test on the C2 exhaust duct (and inline components) installed in the northwest corner of the +48' elevation was conducted. Crews continue to install structural steel for the Loading Dock; metal partition walls in the Switchgear Building; fireproofing of the metal decking in the Annex; microporous insulation on the walls of melter #1 pour cave; steel framing for the elevator doors; cooling panel supports in pour cave #2; ductwork from the C3 fans to the exhaust stack on the +48' elevation; glass former mixer frames; piping; electrical conduit; and drywall on various levels. Repair of the intumescent fireproofing continues on the +3' and +28' elevations.

### Low-Activity Waste Facility - Fiscal Year To-Date Performance



**Analytical Laboratory (LAB)**

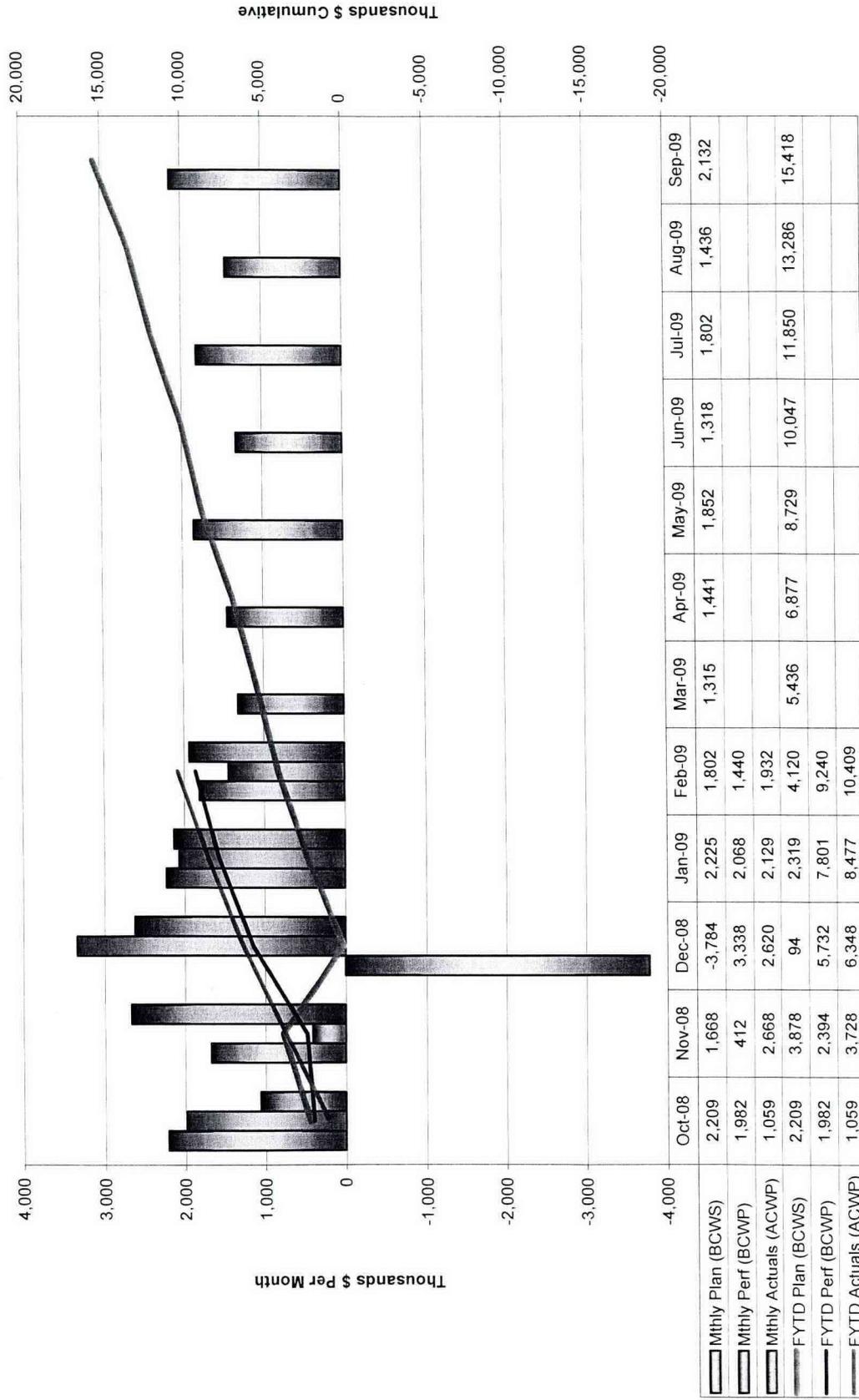
The LAB will support WTP operations by analyzing feed, vitrified waste, and effluent streams. Overall facility complete for LAB is 42%, design is 74%, and construction is 53%. The change in LAB design percent complete from 80% in January to 74% in February is due to the inclusion of Research and Testing, Process Engineering, and Environmental and Nuclear Safety in addition to the Engineering dollars.

BNI is substantially complete with the engineering design; however, there are some vendor designs of various components that are still outstanding. The ASX is undergoing testing to ensure that it meets adequate reliability and reproducibility. This is important, as quality of sample reproducibility will have impacts upon glass loading. The portions of the ASX that are still being tested are the HLW and PT samplers.

The design compliance matrix for the in-cell monorail system was released along with 5 isometric drawings and 29 control logic documents for the radioactive liquid waste disposal system. Four power manipulators were delivered and the fabrication of the C5V system fans was completed and are scheduled to ship late March.

Construction crews completed installation of the hot cell east/west partition walls and trolley covers. Pipefitters continued to install pipe and hangers in the southeast section of the building, 0' elevation. At the north end of the hot cell, ironworkers continued installing rebar for completing the north wall. Electricians are installing cable tray, and conduit for lighting/fire detection/communications. Laborers are performing cleanup support and subcontract work includes installation of framing and drywall at available locations throughout the building. On the +17' elevation, the subcontractor continued installing drywall, ducting, and supports for ventilation. Pipefitters continued to install chill water piping and steam piping/hangers for the steam system.

### Analytical Laboratory - Fiscal Year To-Date Performance



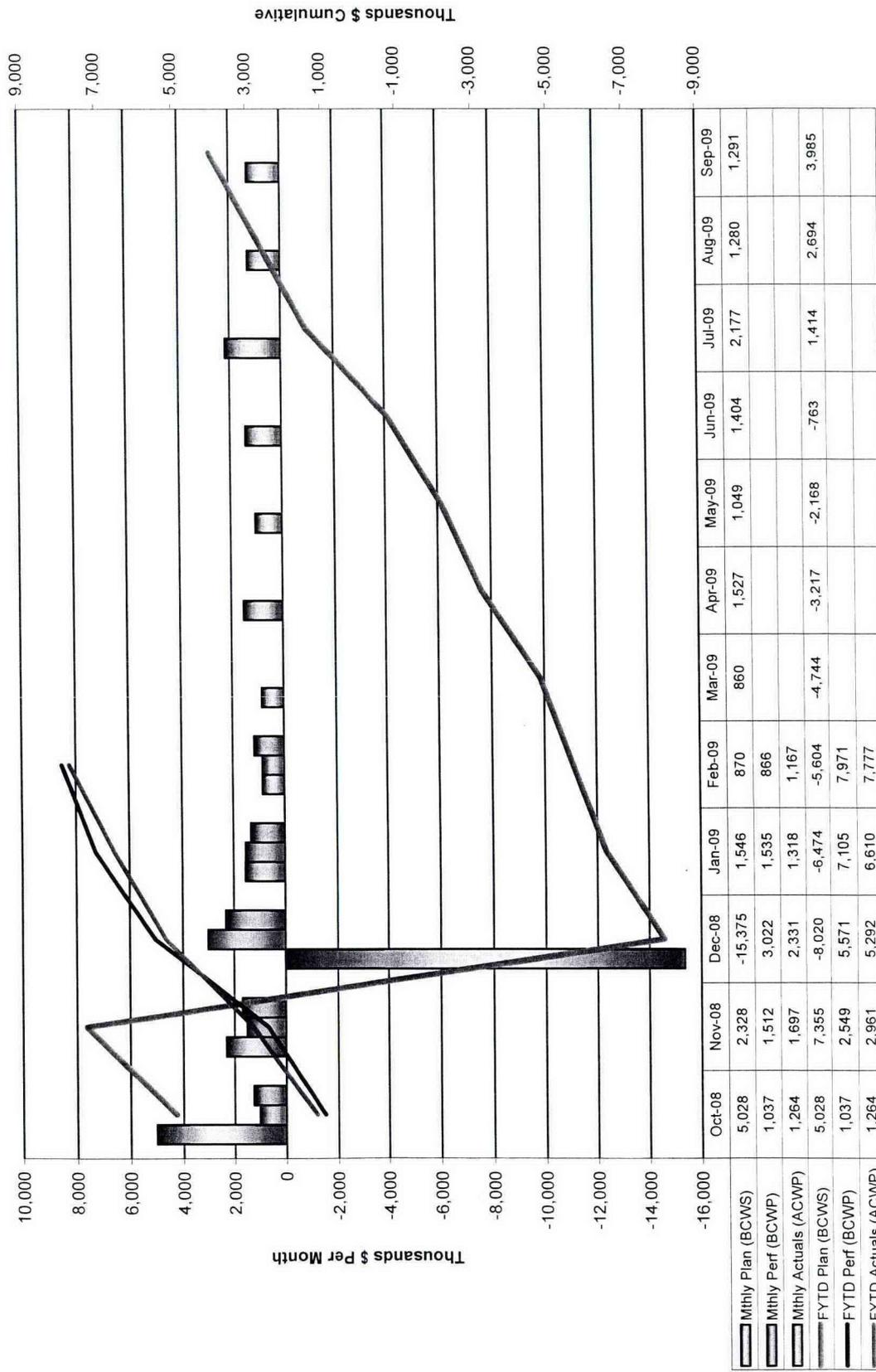
**Balance of Facilities (BOF)**

BOF provides services and utilities to support operation of the main production facilities – PT, HLW, LAW, and LAB. Overall facility percent complete for BOF is 50%, design/engineering is 71%, and construction is 61%. The change in BOF design percent complete from 72% in January to 71% in February is due to the inclusion of Research and Testing, Process Engineering, and Environmental and Nuclear Safety in addition to the Engineering dollars.

Major accomplishments include completion of the cathodic protection system, pulling over 8,000 linear feet of electrical cable, and completing over 100 terminations in the switchgear building and the Chiller Compressor Plant (CCP). In addition, crews completed pressure testing the CCP plant cooling water (PCW) supply line, which benchmarks completion of the PCW piping installation. Construction crews also completed insulating the non-radioactive liquid waste disposal system non-dangerous/non-radioactive effluent pumphouse tanks.

Electricians continued installing conduits and control cables to overhead cable trays in the CCP. Other electrical work included terminating cables in the BOF Switchgear Building 91 and feeder cables to the centrifugal rotary compressors. In Switchgear Building 87, electricians continued working on switchgear drip shield and conduit installations into gutters located in between switchgear sections. Pipefitters continued making progress installing supports and piping in the Water Treatment Building while electricians installed cable tray.

### Balance of Facilities - Fiscal Year To-Date Performance



Waste Treatment Plant Project - Percent Complete Status Through February 2009									
(Dollars - Millions)	Overall Facility Percent Complete Allocated Dollars			Design/Engineering Unallocated Dollars			Construction Unallocated Dollars		
	Budget at Completion (BAC)	Budgeted Cost of Work Performed (BCWP)	% Complete	Budget at Completion (BAC)	Budgeted Cost of Work Performed (BCWP)	% Complete	Budget at Completion (BAC)	Budgeted Cost of Work Performed (BCWP)	% Complete
Facilities									
Low-Activity Waste	1,638.4	1,049.7	64%	205.8	180.5	88%	253.1	147.5	58%
Analytical Lab	620.7	258.2	42%	48.8	36.1	74%	71.1	37.6	53%
Balance of Facilities	964.9	486.4	50%	69.6	49.4	71%	184.8	113.4	61%
High-Level Waste	2,581.1	1,109.2	43%	314.6	241.2	77%	433.9	98.9	23%
Pretreatment	4,158.0	1,720.4	41%	561.9	402.8	72%	717.5	195.9	27%
Plant Wide/Gen Services	incl. above	incl. above	incl. above	692.7	474.8	69%	1,641.3	786.2	48%
Undistributed Budget	7.9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>Total WTP</b>	<b>9,971.0</b>	<b>4,623.9</b>	<b>46%</b>	<b>1,893.4</b>	<b>1,384.8</b>	<b>73%</b>	<b>3,301.7</b>	<b>1,379.5</b>	<b>42%</b>

Source: WTP Contract Performance Report

Note: Beginning with the February 2009 status report, Design/Engineering dollars now include, in addition to Engineering dollars, dollars for Research and Testing (R&T), Process Engineering, and Environmental & Nuclear Safety (E&NS).

### WTP Project - KEY COMMODITY QUANTITY PROGRESS

Commodity	Unit of Measure	Current Forecast at Completion Quantity	Installed through February 2009	Percent Complete
Concrete	1000 cy	262.30	182.78	69.7%
Structural Steel	1 ton	39,427	13,192	33.5%
Piping (in buildings)	1000 lf	922.13	148.54	16.1%
Piping (underground)	1000 lf	116.01	95.40	82.2%
HVAC Duct	1000 lbs	4,215.28	947.42	22.5%
Conduit (in buildings)	1000 lf	919.38	99.12	10.8%
Conduit (underground)	1000 lf	193.11	176.16	91.2%
Cable Tray	1000 lf	97.67	19.07	19.5%
Cable and Wire	1000 lf	4,912.01	236.77	4.8%