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**Office of River Protection**

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Tri-Party Agreement  
Managers Milestone Review Meeting  
October 22, 2009



**Office of River Protection**

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

September 2009

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## Agenda

Office of River Protection  
Tri-Party Agreement  
Managers Milestone Review Meeting  
2440 Stevens Center, Conference Room 1200  
October 22, 2009  
9:00 a.m. – 12:00 p.m.

Page	Topic	Leads	Time
25	M-45, -50, -60 Single-Shell Tank Corrective Action	Bob Lober / Joe Caggiano	9:00
27	M-45-00, Complete Closure of All Single-Shell Tank Farms	Chris Kemp / Jeff Lyon	9:10
37	Interim Stabilization Consent Decree	John Long / Nancy Uziemblo	9:20
38	In Tank Characterization and Summary	John Long / Michael Barnes	9:25
39	M-47-00, Tank Waste Treatment, Storage and Disposal Facilities	Ben Harp / Les Fort	9:30
41	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
42	M-62-00, Complete Pretreatment Processing and Vitrification of Tank Wastes	Ben Harp / Ed Fredenburg	10:00
	<b>BREAK</b>		
3	TPA Milestone Statistics	Woody Russell / Ed Fredenburg / Jeff Lyon	10:20
21	FY 2009 ORP TPA Cost & Schedule Performance (CHG)	Janet Diediker / Ed Fredenburg / Jeff Lyon	10:30
44	BNI Cost & Schedule Performance for Immobilization Plant (WTP) Project	Wahed Abdul / Fred Hidden / Garth Reed / Ed Fredenburg	10:40

## TPA Milestone Statistics

(Including target milestones)

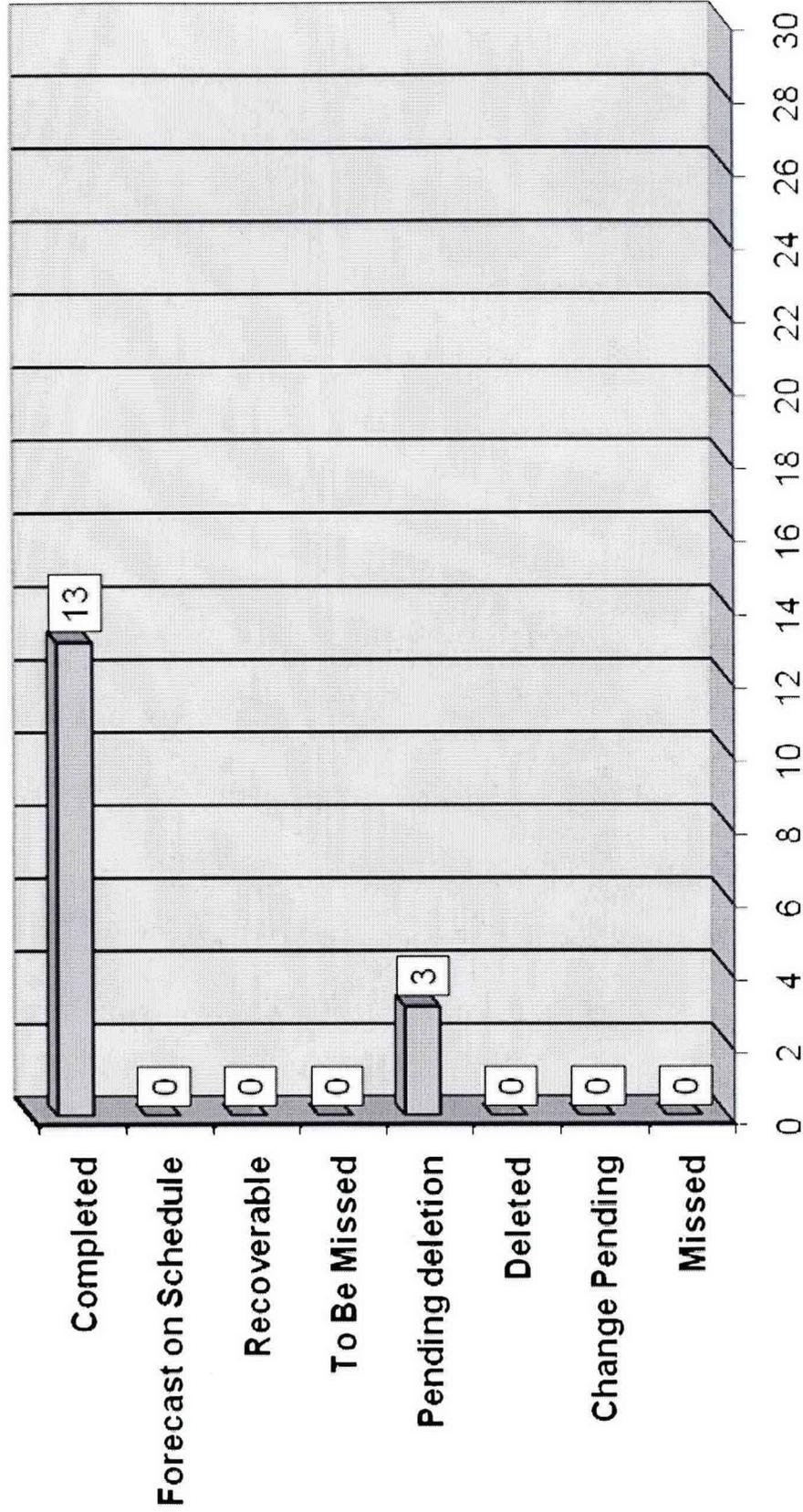
Milestone	Due Date	Total Active as of 02/24/08 10/01/09	Milestone Number	Due Date	Milestone Number	Due Date
<b>M-20-00</b> , Submit Part B Permit Application on Closure/Post Closure Plans for all RCRA TSD Units	12/31/08 (M-20-00)	0				
<b>M-42-00A</b> , Provide Additional DST Capacity	TBD	1	M-42-00 M-42-00A	TBD		
<b>M-45-00</b> , Complete Closure of all SST Farms	09/30/24 (M-45-00) 01/31/43	35 19	M-45-00 M-45-00B M-45-00C M-45-00D M-45-02 M-45-02Q 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  M-45-70 M-45-80 M-45-81 M-45-82 M-45-83 M-45-84 M-45-85  M-45-86	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  12/31/40 01/31/11 09/30/14 09/30/15 06/30/19 01/31/17 01/31/22  12 months after each tank retrieval	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  <b>M-45-13</b> <b>M-45-15</b> <b>M-45-56</b> <b>M-45-59</b>  <b>M-45-61</b>  <b>M-45-62</b>  M-45-90 M-45-91 M-45-92  M-45-100  M-45-101	09/30/15 03/01/16 09/30/16 09/30/17 03/01/18 09/30/24 03/31/12 03/31/14  <b>06/30/11</b> <b>06/30/11</b> <b>TBD</b> <b>TBD</b>  12/31/10 12/31/14 07/31/12 06/30/15  09/30/10 09/30/10 09/30/16  60 days after milestone adoption  60 days after milestone adoption
<b>M-47-00</b> , Complete All Work for Phase 1 Operations Work Necessary to Provide Facilities for Management of Secondary Waste from the WTP.	02/28/18 (M-47-00) When WTP Achieves Initial Plant Operation	3 2	<b>M-47-00</b>  M-47-03A	02/28/18 When WTP Achieves Initial Plant Operation 03/31/09	<b>M-47-06</b>	06/30/10 06/30/12
<b>M-50-00</b> , Complete Pretreatment Processing of Hanford Tank Waste	12/31/28 (M-50-00)	4	M-50-00	12/31/28		
<b>M-51-00</b> , Complete Vitrification of Hanford High	12/31/28 (M-51-00)	4	M-51-00	12/31/28		

## TPA Milestone Statistics

(Including target milestones)

Milestone	Due Date	Total Active as of 02/24/08 10/01/09	Milestone Number	Due Date	Milestone Number	Due Date
Level Tank Waste						
<b>M-61-00*</b> (alternate path), Complete Pretreatment & Immobilization of Hanford Low Activity Tank Waste	12/31/28 (M-61-00)	4	M-61-00	12/31/28		
<b>M-62-00</b> , Complete Pretreatment Processing and Vitrification of Hanford High Level (HLW) and Low Activity (LAW) Tank Wastes	12/31/28 (M-62-00) 12/31/47	13 12	M-62-00 M-62-00A M-62-07B M-62-04S <b>M-62-01T</b> <b>M-62-01U</b>	12/31/28 02/28/18 12/31/07 07/31/09 <b>01/31/10</b> 07/31/10	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
			M-62-20 M-62-21  M-62-30	06/30/10 02/28/23  12 months after milestone adoption	M-62-31-T01 M-62-32-T01 M-62-33-T01 M-62-34-T01 M-62-40 M-62-45 M-62-49	TBD TBD TBD TBD 10/31/10 04/30/15 10/31/11
<b>M-90-00</b> , Interim Storage and Disposal of LAW and Interim Storage of HLW	TBD (M-90-00) When WTP Achieves Hot Start	2	<b>M-90-00</b>   <b>M-90-11</b>	TBD When WTP Achieves Hot Start  08/31/10 12/31/12		
<b>Interim Stabilization Consent Decree</b>	09/30/04 (D-001-00)	1	D-001-00			
<b>RPP Consent Decree</b>						
<b>WTP Construction and Startup: Appendix A</b>	<u>12/31/22</u>	<u>19</u>	A-1 A-2 Interim A-3 Interim A-4 Interim A-5 Interim A-6 Interim A-7 Interim A-8 Interim A-9 Interim A-12 Interim A-13 Interim A-14 Interim A-15 Interim A-16 Interim	12/31/22 12/31/16 06/30/18 12/31/19 12/31/12 12/31/17 12/31/14 12/31/18 12/31/19 12/31/12 12/31/15 12/31/17 12/31/18 12/31/19	A-17 A-18 Interim A-19 Interim A-20 Interim A-21 Interim	12/31/19 12/31/09 12/31/14 12/31/10 12/31/12
<b>Tank Waste Retrievals: Appendix B</b>	<u>9/30/22</u>	<u>4</u>	B-1 B-2 B-3 B-4	09/30/14 09/30/14 12/31/17 09/30/22		
<b>Total Active Milestones:</b>		<b>59 61</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 1. 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	

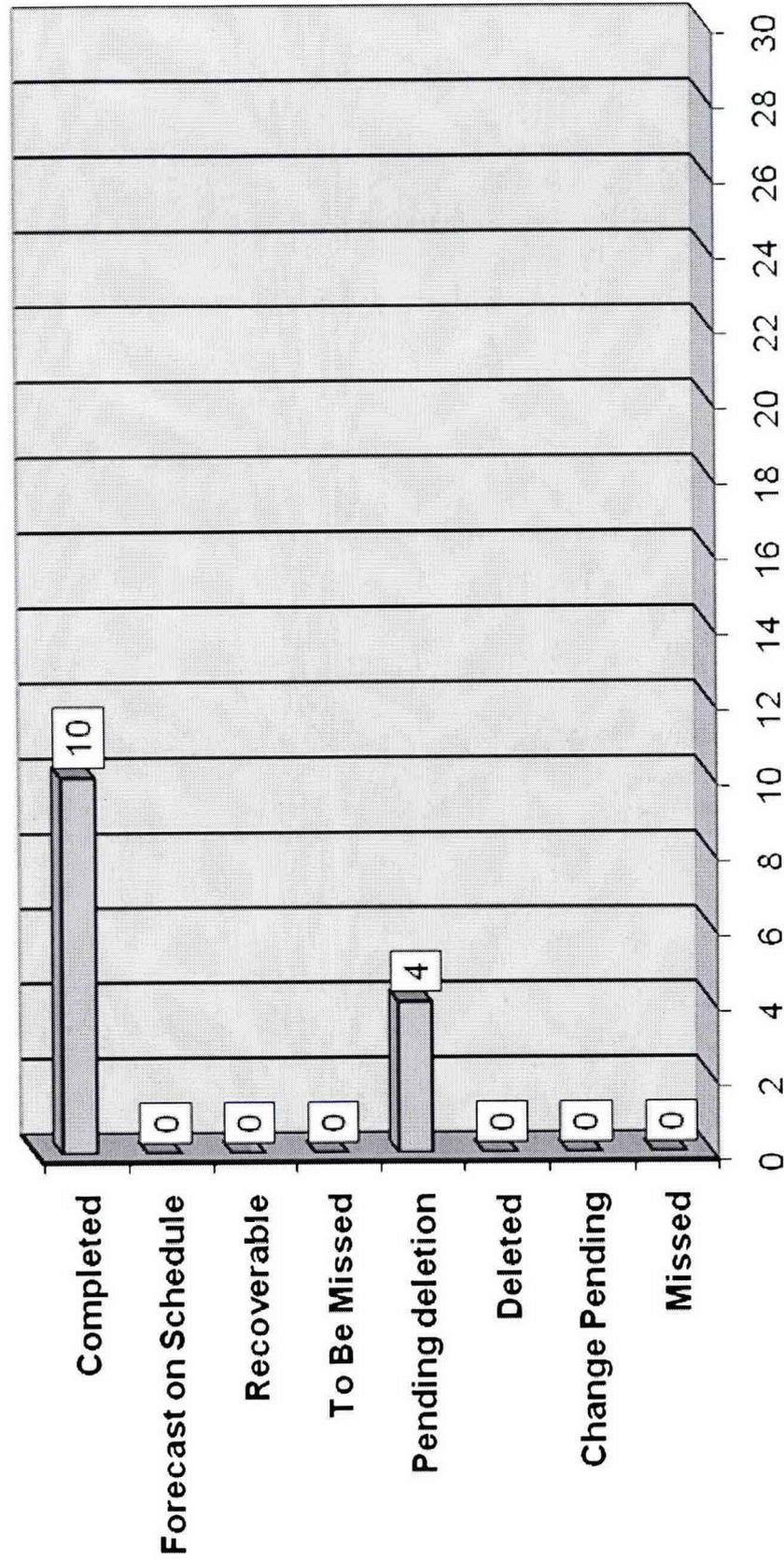
### Fiscal Year 2006 Tri-Party Agreement Milestone Status

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).	06/30/06							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-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

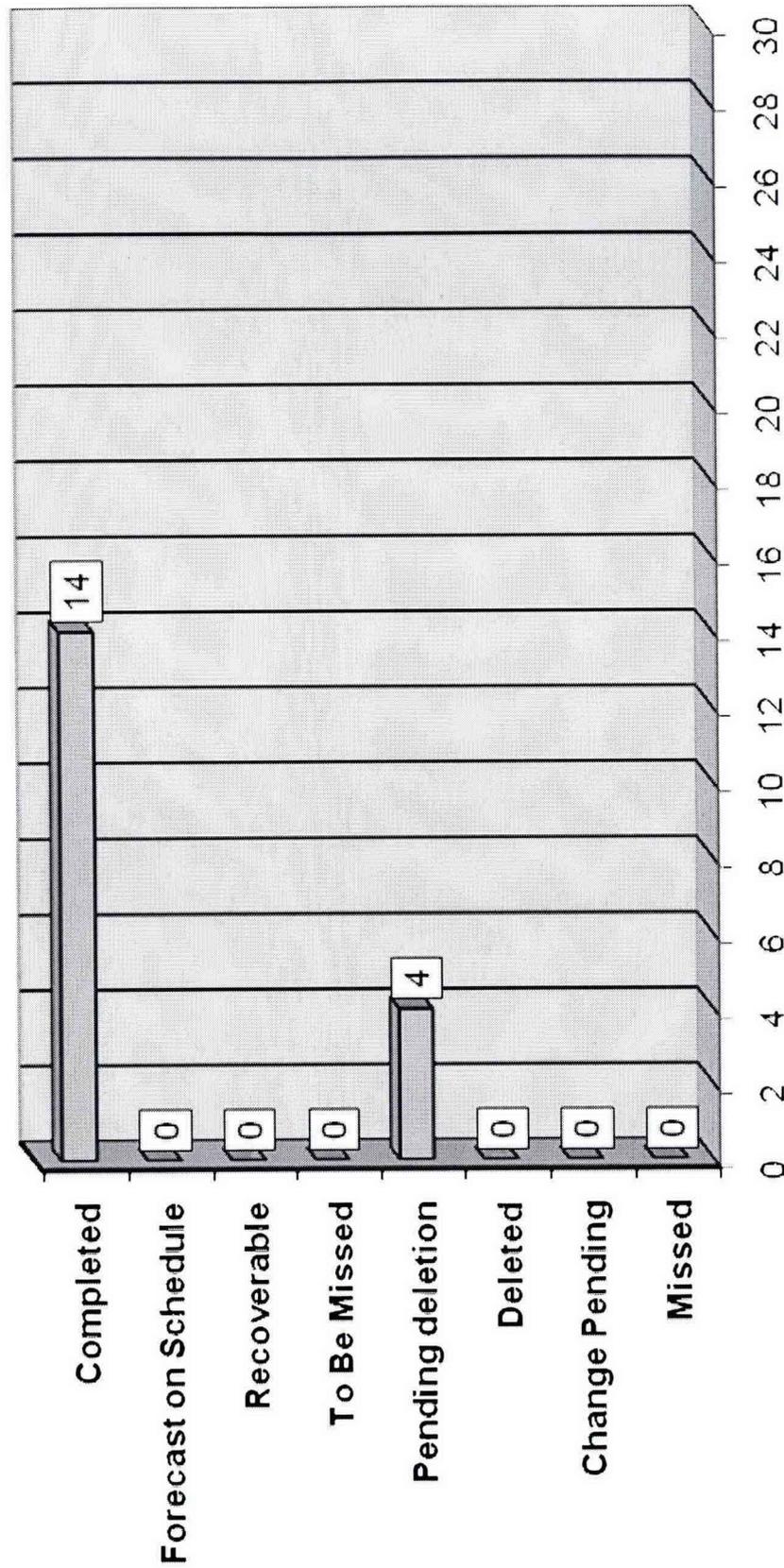
Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Unrecoverable	Missed	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk						
M-045-05A	Complete Waste Retrieval from S-102.	3/31/07							X		
D-001-00-R32	DOE shall, on a quarterly basis, submit to Ecology a written 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 Vitirification Facility melter #1 and complete move of #1 melter into the HLW Vitirification 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 WMAs.	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								

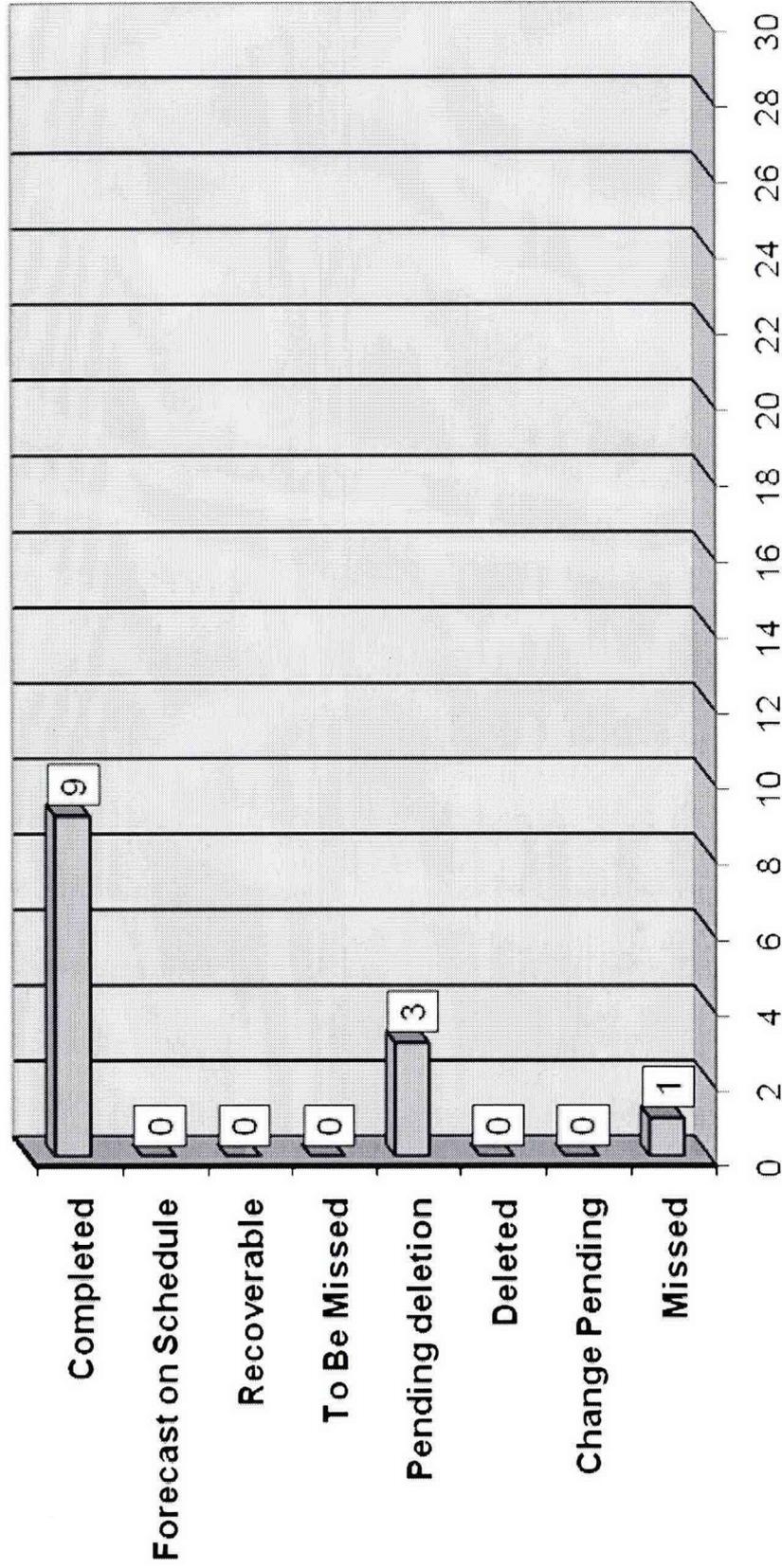
### Fiscal Year 2008 Tri-Party Agreement Milestone Status

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		
M-045-XX	Remove pumpable liquid from Catch Tank S-302	9/30/08	9/30/08								

# 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								

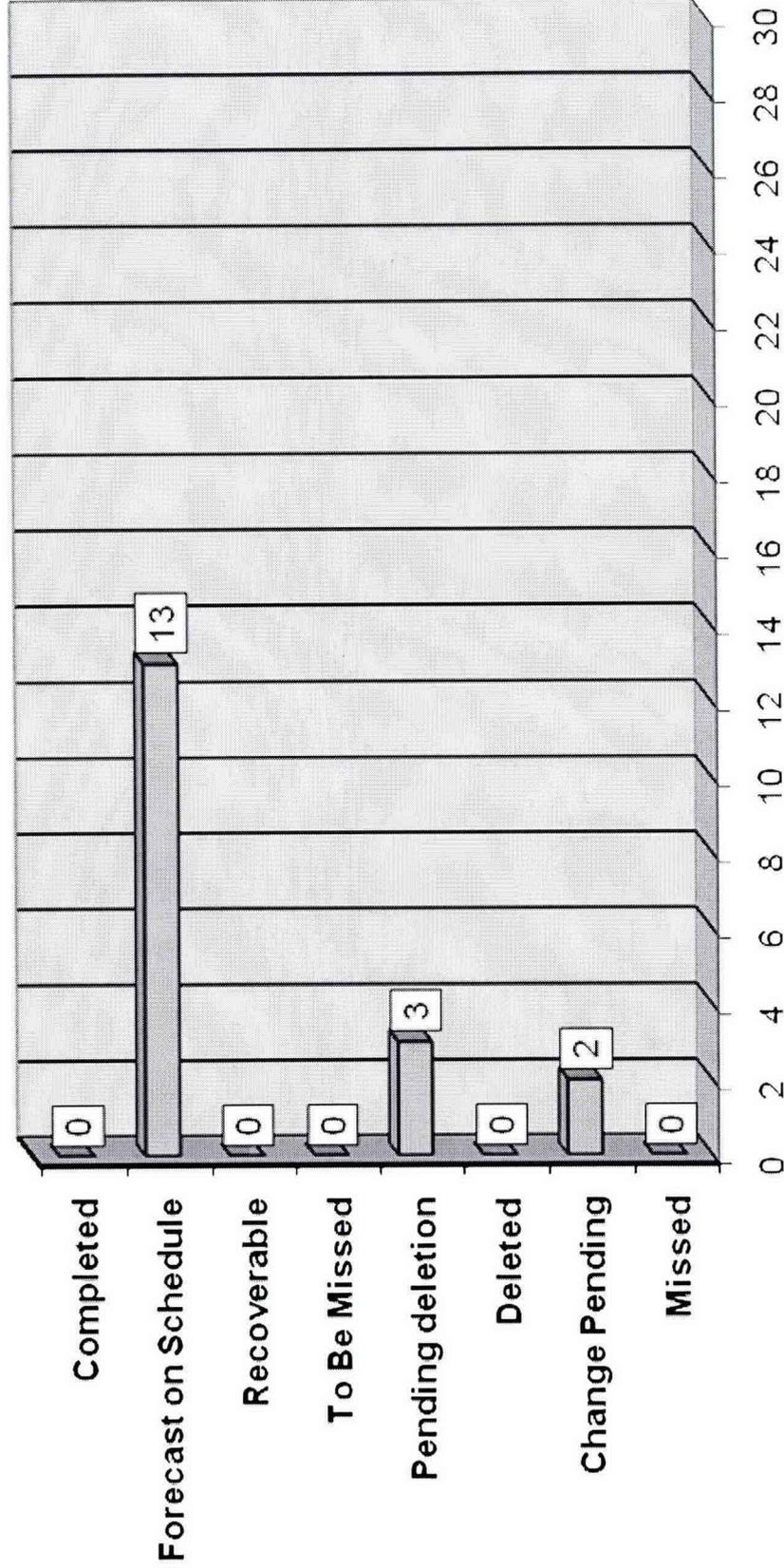
### Fiscal Year 2009 Tri-Party Agreement Milestone Status

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	04/29/09								
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	07/21/09								

### 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-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	07/31/09								
M-062-01S	Submit Semi-Annual Project Compliance Report	07/31/09	07/31/09								
M-045-05-T07	Initiate tank retrieval from 7 additional SSTs	09/30/09						X	X		

# FY 2010 MILESTONE PERFORMANCE



## Fiscal Year 2010 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-001-00R-42 (existing)	Quarterly Report	10/31/09		X							
D-001-00R-43 (existing)	Quarterly Report	01/31/09		X							
D-001-00R-44 (existing)	Quarterly Report	04/30/10		X							
D-001-00R-45 (existing)	Quarterly Report	07/31/10		X							
M-45-02O (existing)	Biennial Update to SST Waste Retrieval Sequence	03/01/10							X		
M-45-02O-A (existing)	New SST milestones within 60 days	04/30/10							X		
M-45-05-T08 (existing)	Initiate Tank Retrieval from 8 Additional SSTs	09/30/10							X		
M-45-56F (existing)	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.	07/31/10		X							
M-62-01T (existing)	Submit Semi-Annual Project Compliance Report	01/31/10		X							
M-62-01U (existing)	Submit Semi-Annual Project Compliance Report	07/31/10		X							
M-47-06 (existing)	Complete Negotiation of Agreement Requirements-Treatment Complex	06/30/10									X
M-90-11 (existing)	Complete Canister Storage Facility Construction	08/31/10									X
M-45-90 (CR)	Complete Interim Barrier Demonstration for the T-106 Interim Barrier	09/30/10		X							
M-45-91	Establish a panel and provide a	09/30/10		X							

Fiscal Year 2010 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						
(CR)	report on SST Integrity Assurance Review										
M-45-100 (CR)	Submit to Ecology as an Agreement Primary Document a Catch Tank "assumed leak" response plan.	60 days after milestone adoption		X							
M-45-101 (CR)	Submit report on all Catch Tanks and associated pipelines that are identified in SST System Part A	60 days after milestone adoption		X							
M-62-20 (CR)	Close all 28 issues identified in Comprehensive Review of Hanford Waste Treatment Plant Flowsheet and Throughput Assessment, issued March 2006.	06/30/10		X							
A-18 Interim (CD)	Complete Structural Steel Erection Below Elevation 56' in PT Facility	12/31/09		X							

**CR – Change Request****CD – Consent Decree**

# Tank Farm Project Executive Summary

## August 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.

The following information is a summary of cumulative-to -date earned value performance.

### PROJECT BASELINE PERFORMANCE STATUS

WRPS August Project Performance - (\$k)										
	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
CM	27,579.8	31,239.9	26,955.9	3,660.1	4,284.0	1.13	1.16			
CTD	241,977.1	238,968.4	219,291.6	(3,008.7)	19,676.7	0.99	1.09	2,119,099.6	2,103,304.6	15,795.0

Blue shaded cells indicate increase from last month; grey shaded cells indicate no change; Red shaded cells indicate decrease.

The Current Month (CM) Schedule Variance (SV) was \$3,660.1K with a Schedule Performance Index (SPI) of 1.13; the CM Cost Variance (CV) was \$4,284.0K with a Cost Performance Index (CPI) of 1.16. The Cumulative to Date (CTD) SV was -\$3,008.7K with an SPI of 0.99; the CTD CV was \$19,676.7K with a CPI of 1.09.

### The favorable CM SV of \$3,660k is driven by:

#### SST Retrieval East Area

- C-110 Retrieval due to realignment of accelerated procurement and construction activities to anticipated vendor delivery dates of major equipment.
- C-104 Retrieval due to performing construction activities scheduled to be completed in prior months, and the realignment of scheduled activities due to "as found" conditions (high radiation readings in 04A-Pit).

#### Tank Farm Upgrades

- RA- DST Farm Upgrades regarding the Vent reliability Study; the original planned scope for the Study was to evaluate all five (5) farms; however after the technical evaluation, it was determined that the study on the AN Farm Exhauster reliability will bound all the DST Exhauster systems eliminating four (4) additional studies.
- RA- SY Farm Upgrades Electrical and Exhauster Upgrade projects started ahead of schedule; and the original plan for the Drawing Reconstitution was to perform the same activities for each facility versus new direction to focus work on following outages at the facility. The schedule is accelerated due to the SY Farm outage being extended.

- 242-A Evaporator due to performance taken on approved emergent work identified as a result of the FY09 Exhaust Skid Performance Specification, and the elimination of duplicate work scope within two (2) baseline WBSs.

**The favorable CM CV of \$4,284k is due to:**

## Tank Farm Upgrades

- Primarily attributed to the Vent Reliability Study planned to evaluate all five (5) Farms; however, after the technical evaluation, it was determined that the study on the AN Farm Exhauster reliability will bound all the DST Exhauster systems, therefore performance are taken against the studies for all Farms resulting in a positive current month cost variance.

## Retrieval /Closure Program

- Interim Barrier is primarily attributable to a current month cost transfer from Interim Barrier Construction to Interim Barriers G&A COP Allocations. This correction was required due to the implementation of work scope for G&S/COP allocations/liquidations for Interim Barriers.
- Retrieval Technology Development due to the realignment of baseline to address strategy changes relating from risk mitigation of the design, development, and fabrication of the MARS.

## RA- Project Support

- Post proposal subcontracts support was less than planned and the ability to eliminate Pacific Northwest National Laboratory (PNNL) simulant studies by utilizing previous data.

**The unfavorable CTD SV of (\$3,009k) is due to:**

## Tank Farm Upgrades

- The DST Valve Assembly Upgrades AW-B field work was delayed due to the 242-A Evaporator Campaign completing later than expected and RA DST Infrastructure Upgrades were deferred to FY 10.

## Base Operations

- Due to the reallocation of Pipefitters to higher priority work, both C-108 Grab Sampling and AW-106 Caustic Addition were delayed.

## TOC Facility Operations

- RA electricians were supporting higher priorities.

## SST Retrieval East Area

- C Farm Infrastructure previously giving resource priority to C-110 Retrieval Operations and C-104 Construction; delays in procurement and construction contract awards; resolution of Commercial Grade Item Dedication (CGID) issues on Safety Significant components; and purchasing issues involving HRR/LDM Equipment.

**The favorable CTD CV of \$19,677k is due to:**

## Project Support

- RA Project Support resulting from lower allocation of applicable G&A/COP costs than planned (this lower allocation is a direct result of under runs in the RA Program).
- Workforce Resources attributable to labor efficiency gains by streamlining Lockout-Tag out and Maintenance Safety Classification training classes; cost savings from subcontracted training charges with the two major training

class providers; and, fewer relocation claims were processed - the average amount per claim was less than planned.

- Business Services due to the elimination of the Business and Occupational (B&O) tax resulting from a high tech credit (Finance Support), and fiscal year under runs in material/labor accounts within Information Resource Management and Facility and Property Management. These under runs have been included in the overall EAC to allow fiscal year funds to be utilized by the TOC project.

#### Retrieval/Closure Program

- HIHTL Disposition resulting from efficiencies in engineering and field work activities- multiple hoses were grouped together to be worked in parallel; several of the HIHTL's were less contaminated than anticipated, and incorporation of lessons learned from previous HIHTL removals.
- Catch Tank & Pipeline Reporting due to using direct labor rather than contract dollars for the initial planning scope and efficiencies with using existing database and records.

#### **TOC contract to date (CTD) unfavorable schedule variance (SV) of (\$3,009k) is driven by:**

##### Base Operations

- DST TSR/Basic Maintenance lag on completed field work packages for preventative maintenance activities being recorded in Computerized History and Maintenance Planning Software (CHAMPS) has led to performance being understated. Management is reevaluating rules of credit and scheduling approach.
- DST Infrastructure Upgrades due to 242-A Evaporator Campaigns completing later than anticipated directly effecting AW-B field work activities for the DST Valve Assembly; and delayed start up of the Cathodic Protection Upgrades due to late completion of the annual Cathodic Protection System adjustments caused by critical resources being reassigned to electrical outages in AP Farm.
- Tank Waste Sampling due to the delay of C-108 Grab Sampling and AW-106 Caustic Addition in order to relocate Pipefitters to higher priority work. This work included drain seal replacement (RA), 2704HV HVAC compressor replacement (RA), and West Area MUST's.

##### Recovery Act

- RA- DST Infrastructure Upgrades related to work scope integration and Tank Farm availability - Cathodic Protection Upgrades currently planned for FY09 are being deferred to FY10.
- RA- 242-A Evaporator Upgrades evaporator instruments deliveries are the prime contributor to the variance and are expected to arrive in September; and drawing reconstitution teams have revised their walk down approach to coincide with available facility outages.

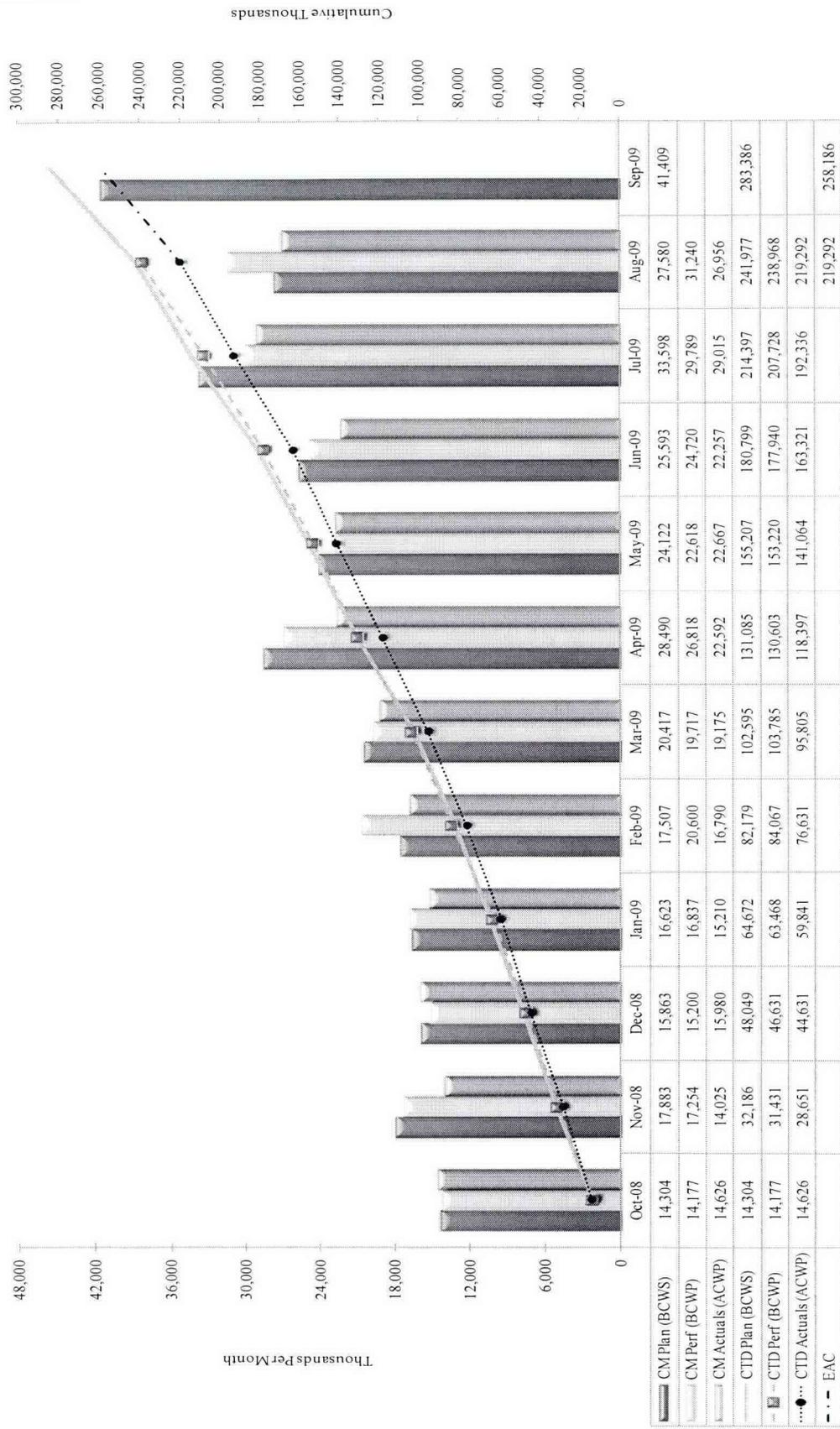
## CONTRACT-TO-DATE PERFORMANCE MEASUREMENT - 10/2008 - 08/2009

## 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%
5.1	BASE OPERATIONS								
5.1.1	Base Operations	62,699.7	62,094.0	60,685.2	(805.7)	-1.3%	1,406.6	2.3%	413,552.2
5.1.2	DST Space Management	4,961.9	4,514.4	6,080.7	(447.5)	-9.0%	-1,566.2	-34.7%	43,567.7
5.1.3	TOC Facility Operations	19,150.0	18,713.3	17,372.5	(436.7)	-2.3%	1,340.8	7.2%	151,412.1
5.1.4	Tank Farm Upgrades	7,357.4	6,533.3	4,344.7	(824.1)	-11.2%	2,188.6	33.5%	107,190.7
5.1.5	Project Support	<u>82,121.8</u>	<u>82,082.9</u>	<u>69,875.6</u>	<u>(38.9)</u>	<u>0.0%</u>	<u>12,207.1</u>	<u>14.9%</u>	<u>525,448.5</u>
	TOTAL	<u>178,490.8</u>	<u>173,937.9</u>	<u>158,258.9</u>	<u>(2,552.9)</u>	<u>-1.4%</u>	<u>15,579.1</u>	<u>9.0%</u>	<u>1,241,171.2</u>
5.2	RETRIEVE AND CLOSE SSTs								
5.2.1	Retrieval/Closure Program	29,116.5	29,272.6	25,910.2	156.1	0.5%	3,352.4	11.5%	165,698.1
5.2.2	SST Retrieval East Area	20,466.7	20,178.6	23,264.5	(308.1)	-1.5%	-3,085.9	-15.3%	217,300.6
5.2.3	SST Retrieval West Area	552.1	395.8	369.9	(156.4)	-28.3%	25.9	6.5%	3,422.9
5.2.4	Closure Program	1,289.2	1,237.2	910.4	(32.0)	-2.5%	326.8	26.4%	9,066.4
5.2.5	SST Closure	<u>703.0</u>	<u>722.2</u>	<u>329.6</u>	<u>19.2</u>	<u>2.7%</u>	<u>392.6</u>	<u>54.4%</u>	<u>24,328.5</u>
	TOTAL	<u>52,127.5</u>	<u>51,806.4</u>	<u>50,784.6</u>	<u>(321.2)</u>	<u>-0.6%</u>	<u>1,021.8</u>	<u>2.0%</u>	<u>420,016.5</u>
5.3	WFD/TREATMENT PLNG/DST RETRIEVAL/CLOSURE								
5.3.1	WTP Feed Delivery Program	8,500.4	8,669.2	6,607.1	168.5	2.0%	2,062.1	23.8%	96,093.1
5.3.2	Construct DST Retrieval Systems	1,853.7	1,802.9	1,581.6	(50.8)	-2.7%	221.3	12.3%	108,559.5
5.3.3	RA - Transfer System Mod Project	222.0	212.1	69.7	(9.9)	-4.5%	126.4	59.6%	19,082.5
5.3.6	Immobilization Program	836.1	784.3	598.4	(51.8)	-6.2%	187.9	24.0%	51,097.0
5.3.7	WTP Operational Readiness	886.9	703.4	547.9	(186.5)	-21.0%	155.5	22.1%	15,888.6
5.3.8	East Area Waste Receiving Facility	0.0	0.0	0.0	0.0	0.0%	0.0	0.0%	511.4
5.3.9	Tank Waste Pretreatment Project	90.0	21.7	11.6	(56.2)	-64.7%	20.1	63.3%	34,690.8
5.3.10	Secondary Waste Treatment/ETF	523.0	587.4	446.2	64.4	12.3%	141.2	24.0%	39,079.9
5.3.11	Next Generation Projects	<u>413.8</u>	<u>403.0</u>	<u>269.0</u>	<u>(10.8)</u>	<u>-2.6%</u>	<u>134.0</u>	<u>33.3%</u>	<u>53,668.4</u>
	TOTAL	<u>13,328.9</u>	<u>13,194.0</u>	<u>10,145.6</u>	<u>(134.7)</u>	<u>-1.0%</u>	<u>3,046.5</u>	<u>23.1%</u>	<u>419,651.2</u>
5.4	SUPPLEMENTAL TREATMENT								
5.4.1	Supplemental Treatment	<u>30.0</u>	<u>30.0</u>	<u>2.4</u>	<u>0.0</u>	<u>0.0%</u>	<u>27.6</u>	<u>92.0%</u>	<u>24,270.2</u>
5.5									
5.5.2	Waste Treatment Facility	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0%</u>	<u>0.0</u>	<u>0.0%</u>	<u>13,990.30</u>
	TFC TOTAL	<u>241,977.1</u>	<u>238,968.4</u>	<u>219,291.6</u>	<u>-3,008.7</u>	<u>-1.2%</u>	<u>19,676.7</u>	<u>8.2%</u>	<u>2,119,099.60</u>

WRPS Cumulative-to-Date Performance (\$000)  
October 2008 - September 2009



## 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: Complete. ORP and Ecology met on July 21, 2009 to discuss completed FY2008 interim measures:  
Future interim measures were discussed.
- **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.
- **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.
- Continued direct push characterization in C Farm per the Phase 2 RFI/CMS work plan and SAP for WMA C. Five sites have been investigated with 40 samples having been collected and submitted for analysis.
- Continued the joint process with Ecology and other regulatory agencies and stakeholders to define the inputs, approaches, assumptions and methods that will be used for development of a performance assessment for Waste Management Area C.
- Completed analysis of Surface Geophysical Exploration (SGE) data for SX-Farm.
- Completed reanalysis of T Farm SGE data using updated analysis tools.
- Completed initial test of prototype technetium-99 detector.

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

- Continue direct push campaign in C Farm.
- Initiate SGE data collection at one additional UPR site in C Farm.
- Initiate well-to-well SGE survey of A and AX Farms to support evaluation of a potential future barrier site.
- Initiate additional direct push sampling in S Farm based on findings of SGE analysis of SX data, to support evaluation of a potential future barrier site.
- Submit the TY Barrier design to Ecology for approval, prior to initiating barrier construction.

**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. (The draft consent decree has been modified to include changes to the dates for these milestones.)

## **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, C-110 or C-111): Not completed. C-101 start of retrieval is currently projected for FY 2011. (Note: C-110 retrieval commenced using modified sluicing in compliance with a TWRWP approved by Ecology on 7/3/08. C-111 will have retrieval performed using modified sluicing in compliance with a TWRWP submitted to Ecology on 5/28/09.)
  
  - 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

- Completed C-111 ventilation and equipment installation design.
- Completed Construction Acceptance Testing on C-104 WRS and on AN-101 DST transfer pump.
- Continued C-108 heel sample analysis at 222S laboratory.
- Continued MARs Phase II testing at Cold Test Facility.
- Completed AN-101 and C-104 Construction and initiated Operations Acceptance Tests
- Initiated removal of legacy equipment from C-111

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

- Begin retrieval of C-104.
- Award C-111 construction contract for retrieval system installation.
- Analyze C-108 heel.
- Complete phase II testing of MARs.
- Commence design of C-107 Waste Retrieval System (MARs deployment)
- Achieve 'interim stabilized' liquid levels on S-102. Issue interim stabilization documentation.

## 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 will be completed sometime after December 11, 2009, when public review and comment on the newly proposed Consent Decree is complete.

**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	4/1/11	3/23/12	4/8/12	5/8/12	8/11/14	7/11/14	1/13/15
C-102	9/30/11	9/20/12	10/2/12	11/2/12	8/19/14	7/19/14	4/16/15
C-103	Complete	Complete	Complete	Complete	Complete	Complete	Complete
C-104	Complete	Complete	Complete	10/23/09	4/15/12	3/15/12	12/7/12
C-105	6/28/11	6/18/12	7/1/12	8/1/12	8/19/14	7/19/14	4/8/15
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>c</sup>	Complete	Complete	Complete	Complete	11/9/10	10/9/10	7/8/11
C-109 <sup>cd</sup>	Complete	Complete	Complete	Complete	12/21/11	11/21/11	8/16/12
C-110	Complete	Complete	Complete	Complete	8/21/11	7/21/11	4/17/12
C-111	9/30/09	5/20/10	6/3/10	7/3/10	1/21/13	12/21/12	9/13/13
C-112	8/16/10	8/5/11	8/20/11	9/20/11	4/22/13	3/22/13	2/13/14
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 September month-end Integrated Mission Execution Schedule (IMES) as of 9/30/09 and the Near Term Baseline Schedule (NTBS) and are subject to change as efforts continue to identify and implement schedule efficiencies.
- c. Sluicing was performed to the limits of the sluicing system technology.
- d. Hard Heel Retrieval using MRT complete to limits of technology, not achieving less than 360 cu ft residual, awaiting future retrieval path forward.

## 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. (It has been discussed with the NRC that much of the additional information requested is dependent upon development of C-Farm residual waste PA and, therefore, cannot be provided until the PA is published.)
- 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. Retrieval was restarted on July 25, 2007 and halted on July 26, 2007 when an aboveground waste spill occurred. Retrieval is estimated to be approximately 93.3% complete with 433,000 gallons of 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

- Continued to operate the S-102 exhauster to reduce the volume of supernatant liquid in the tank. Video review of the tank has shown that the supernatant liquid volume is approximately 4500 gallons. This is below the criteria for interim stabilization of less than 5000 gallons supernatant liquid.

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

- Continue to operate the S-102 exhauster. Issue interim stabilization documentation.

## 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 is held in abeyance by third amendment to the Consent Decree. ORP's obligation to interim stabilize S-112 was satisfied upon completion of retrieval operations. Retrieval of S-102 has been impacted by the spill at this tank. A video taken in S-102 in November 2008 indicated the tank supernatant liquid probably exceeded the 5,000 gallons maximum for a tank to meet IS criteria. The exhaustor on the tank was restarted to induce evaporation of the water from the liquid pool.

### II. Significant Accomplishments:

Continued to operate the S-102 exhaustor to reduce the volume of supernatant liquid in the tank. As of 9/3/2009, it is estimated that the supernatant liquid pool is about 4500 gallons.

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

Continue to operate the S-102 exhaustor..Issue S-102 interim stabilization documentation.

### 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 September 1 – September 30, 2009:

### I. Accomplishments:

- The latest Tank Characterization Report for each of the 177 Hanford tanks was issued to the Integrated Document Management System.

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

- Tank Sampling
  - Tank 241-AZ-102 liquid grab samples scheduled for October 2009.
  - Tank 241-AP-107 evaporator grab samples scheduled for November 2009.
  - Tank 241-AY-101 liquid grab samples scheduled for November 2009.
  - Tank 241-AN-101 mid C-104 retrieval samples scheduled for November 2009.
  - Tank 241-AN-102 corrosion mitigation samples scheduled for October 2009.
- BBI Updates
  - Ten tanks were updated for the fourth quarter of fiscal year 2009.
    - The ten tanks were published to TWINS on October 1, 2009.
    - Five tank updates are planned for the first quarter of fiscal year 2010.
- Data Quality Objectives (DQO)
  - Complete revision 4 of the SST Component Closure DQO in October 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	Entered OPERATION MODE on 3/17/09 and returned to SHUTDOWN MODE on June 25, 2009. Campaign 09-01/09-02 processed approximately 2.1mgal of DST waste achieving 948kgals (45%) waste volume reduction.
FY09	09-02	AP-101/AP-105	AP-104/ AP-101	
FY10	10-01	AP-107	AP-104	Detailed planning for FY10 and out-year campaigns subject to retrieval activities and Tank Operations Contractor commitments and requirements. Forecast FY10-11 campaigns are based on preliminary planning associated with blending AZ-102.
FY10	10-02	AW-106	AP-104/ AP-107	
FY11	11-01	AZ-102	AP-107	
FY11	11-02	AY-101	AP-017	

**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: Complete.
- **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:**

- None to report.

**IV. Issues:**

- None.

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

There are about 2,950 FTE equivalent contractor [Bechtel National Inc. (BNI)] and subcontractor personnel working on the WTP Project, with about 840 craft, 370 non-manual, and about 150 subcontractor personnel FTE equivalents working at the WTP construction site (all facilities). Overall project percent complete through August 2009 is 50%, design and engineering is 76% complete, and construction is 46% complete.

The overall WTP Project cost performance was again positive in August; however, the schedule performance was negative for the first time in several months. The monthly cost and schedule performance was mostly positive for engineering, and the construction cost performance was positive; however, the construction schedule performance in August was negative.

Following is the status through the end of September for issues under evaluation for opportunities to reduce design complexities:

### Material at Risk (MAR)

Based on recommendations by the Material at Risk (MAR) team chartered in December 2008, ORP and BNI have evaluated team recommendations that could result in reclassification of systems that would allow removing unnecessary complexity in the control strategy, while still maintaining safety commensurate to the risk. The MAR change package was submitted to ORP for approval in July; however, comment resolution has revealed that the inter-relationships between MAR, vessel hydrogen control and HPAV require a combined change package be prepared to effectively respond to all comments. ORP and BNI are in progress of finalizing the integrate safety basis change package and preparing a draft safety evaluation report to support approval by October 21, 2009.

### Hydrogen in Piping and Ancillary Vessels (HPAV)

Based on recommendations by the HPAV team chartered in February 2009, ORP and BNI have evaluated team recommendations that could result in removing unnecessary complexity in the control strategy, while still maintaining safety commensurate to the risk. Much progress has been made in understanding the new information gained from 2008 HPAV testing, including the conclusion that piping 4 inches and less will not fragment eliminating secondary effects of many components. Additional testing in 2009 to evaluate the impact of HPAV for piping sizes larger

than 4-inch, and analyzing minimum detonable gas volumes and geometries is in progress and scheduled to complete in late October 2009. In addition, confirmatory testing by California Institute of Technology is being conducted through December 2009, with a report anticipated by the end of January 2010.

#### DOE-STD-1066

An alternate approach was developed that demonstrated a comparable level of safety to that achieved by verbatim compliance with the Section 14 requirements. A ventilation system evaluation and gap analysis between DOE-STD-1066-97, Section 14, and WTP alternate approach design - including gaps, submitted by the Contractor has been accepted and concurred with by the DOE EM Program Secretarial Officer (PSO). ORP has directed the WTP Contractor to implement the alternate approach by revising the Safety Requirements Document and Preliminary Documented Safety Analysis to incorporate the alternate approach. Implementation is scheduled for October 30, 2009.

#### Recent Issues:

##### **Vendor Commercial Grade Dedication (CGD) Issue Extent of Condition Review:**

Of the 56 Active Vendors, all 56 have had an Extent of Condition Review. Twenty-two (22) of the vendors are cleared to ship with no restrictions, 7 are cleared to ship with restrictions, and 3 more cleared to ship specific items.

Review of records and desk audits of the 31 Inactive Vendors has begun. It is anticipated that by mid-October more than one-half will be approved and determined to be clear of any dedication concerns. To date, there are no impacts to construction, and ORP continues to closely monitor BNI's efforts to identify vendor CGD problems and address WTP indeterminate quality materials. Additionally, critical analysis of vendor's records and programs has shown that commodities in concrete were appropriately dedicated.

### WTP – Fiscal Year To-Date Performance



**Pretreatment (PT) Status for September 2009 (August 2009 EVM Data)**

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 46%, engineering/design is 76% complete, and construction is 27% complete.

Construction installations for the month included: 558 cubic yards (CY) of concrete, 225 tons of rebar, 37,950 lbs of embeds and over 85 tons of tier-3 structural steel. BNI has been meeting the recovery plan for concrete placements, completing a total of 11 placements in August and September. Construction had faced additional material verifications before installation, due to recent concerns regarding Vendor Commercial Grade Dedication (VCGD). However, the construction team made aggressive planning and mitigation efforts that prevented delays to the recovery schedule and kept them on track to meet the October placement schedule. Rebar installation for slabs at the 77-ft elevation continues with the first slab placement planned in October. Structural steel installations and concrete placements are ongoing at the 56-ft elevation, as well as the installation of stainless steel drain lines. Application of special protective coatings to walls and floors are ongoing at the 28-ft elevation. Installation of HVAC ductwork and supports continues. Application of fireproofing on columns and the fabrication of rebar curtains, and the installation of grounding are continuing.

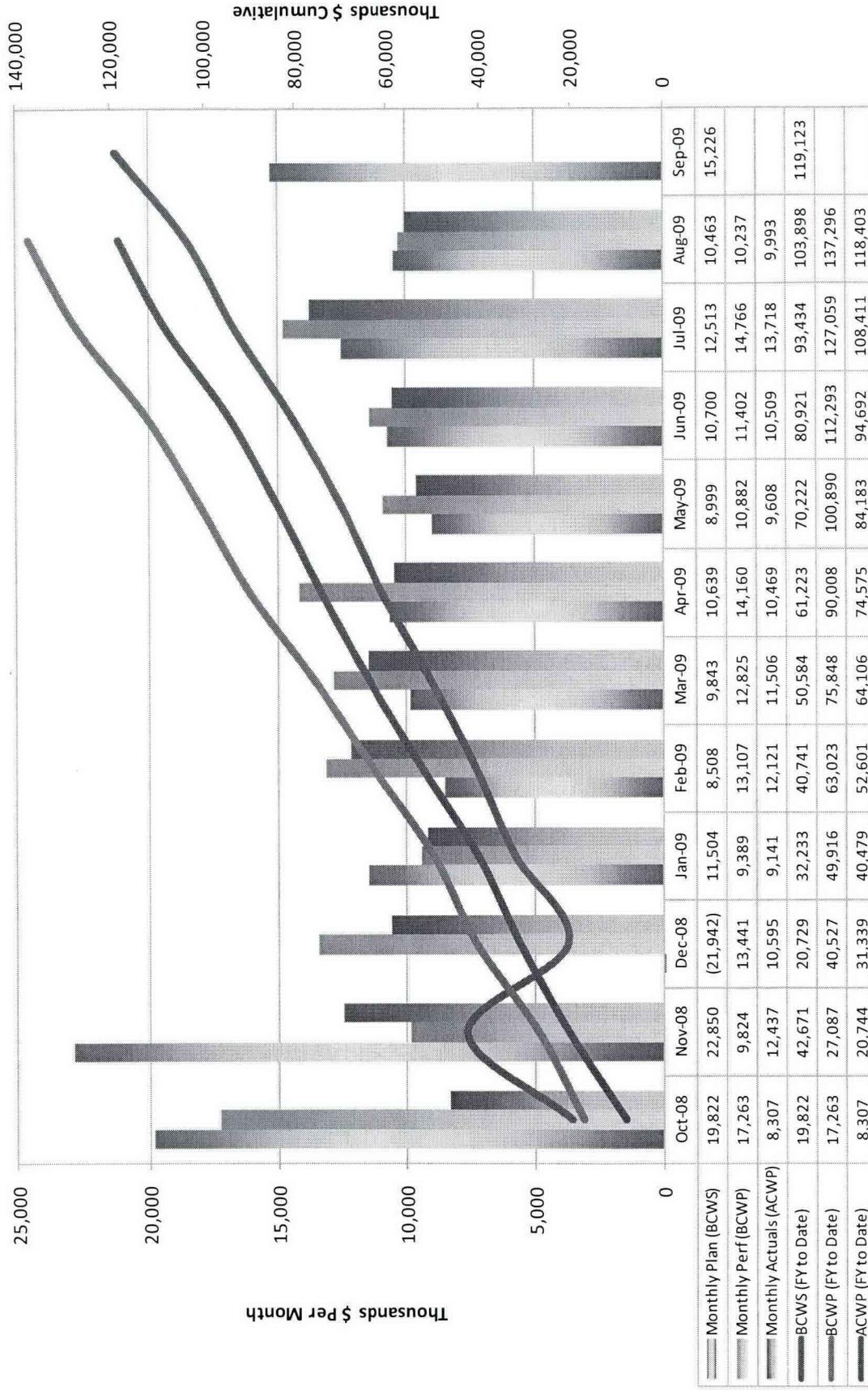
For engineering, 324 piping isometric drawings were issued this month. Current efforts are focused on planning areas with critical path schedules to minimize the impacts of implementation. Additionally, conceptual designs for Jumper/framing in the hot cell have been advanced to facilitate system integration with the piping and equipment design and reduce procurement risks.

A number of technical issues are being worked on by BNI in conjunction with DOE. Regarding the External Flowsheet Review Team (EFRT) issue of Vessel Mixing, M3, preliminary evaluations identified 26 of the 38 PJM mixed vessels to be acceptable in accordance with the WTP vessel mixing criteria. Nine vessels are anticipated to require modifications to meet the required mixing criteria. Testing is in progress to evaluate the remaining vessels, determine acceptability, and identify any potential upgrade requirements. The need for modifications and testing and validations of those has delayed the closure of this issue previously forecasted for

September 25, 2009. BNI is developing detailed plan for these activities, which will be provided to DOE in October 2009.

Resolution pathways for technical issues with the CNP system are being finalized. The proposed material and design changes are being evaluated and discussed with the supplier, and the BNI decision on the design modification would be made in October 2009. BNI developed a risk mitigation plan for solids formation in the CXP system. The two leading design modification alternatives were evaluated during an engineering review by prior EFRT members, representatives from Savannah River, and BNI engineering personnel. Following the evaluation a recommendation was presented by the panel to BNI management for review. BNI engineering and project management is reviewing the recommendation prior to presenting the WTP program recommendation to ORP. BNI decision on the design modification will be made in October 2009. Upon receipt, ORP will review the recommended alternative and supporting documentation prior to acceptance.

Pretreatment Facility - Fiscal Year To-Date Performance



## High-Level Waste (HLW) Facility Status for September 2009 (August 2009 EVM Data)

The HLW Facility will receive the high-level waste fraction from the Pretreatment (PT) Facility. The concentrate is sampled and analyzed to determine the optimum blend of glass formers to add to the waste that will produce a vitrified waste form that is compliant with disposal requirements and also meets the required production rate. The blended slurry is converted into molten glass in one of the two HLW melters, and then poured into cylindrical stainless steel canisters for cooling. The canisters are sealed and moved to a decontamination cell where any surface contamination is removed prior to shipment to interim or final storage. HLW engineering/design is 81% complete and construction is 22% complete. The overall facility completion is 47% complete.

The primary focus of the HLW Project Team is relocating the Secondary C5V filters from the Filter Cave to the +37' elevation. This effort has engaged all areas of the project: multiple engineering disciplines to redesign the layouts, ducting, and calculating the seismic requirements for the housings, support structures, and nozzles/dampers; Plant Equipment to procure the housings and dampers; Materials Group to procure the commodities, pipe (ducting), and support steel; and Construction to optimize and coordinate the installation activities. The secondary filters are being relocated as one of the conditions to demonstrate a comparable level of safety as delineated in DOE-STD-1066 Section 14, *Nuclear Filter Plenum Fire Protection*. The secondary filters are being changed from remote-change to contact-handled "safe change" units to allow manual filter changes if the primary filters are loaded and/or destroyed by a fire in the facility. The filter housings and dampers are long-lead items requiring one year for fabrication. The installation of this equipment (C5V/PJV/HOP) and piping/ducting is critical because it must be placed by crane "over the top" of the surrounding Filter Cave walls prior to the placement of slab 3027 at the +37' elevation above. The erection of structural steel and decking for slab 3027 is scheduled for February, 2012.

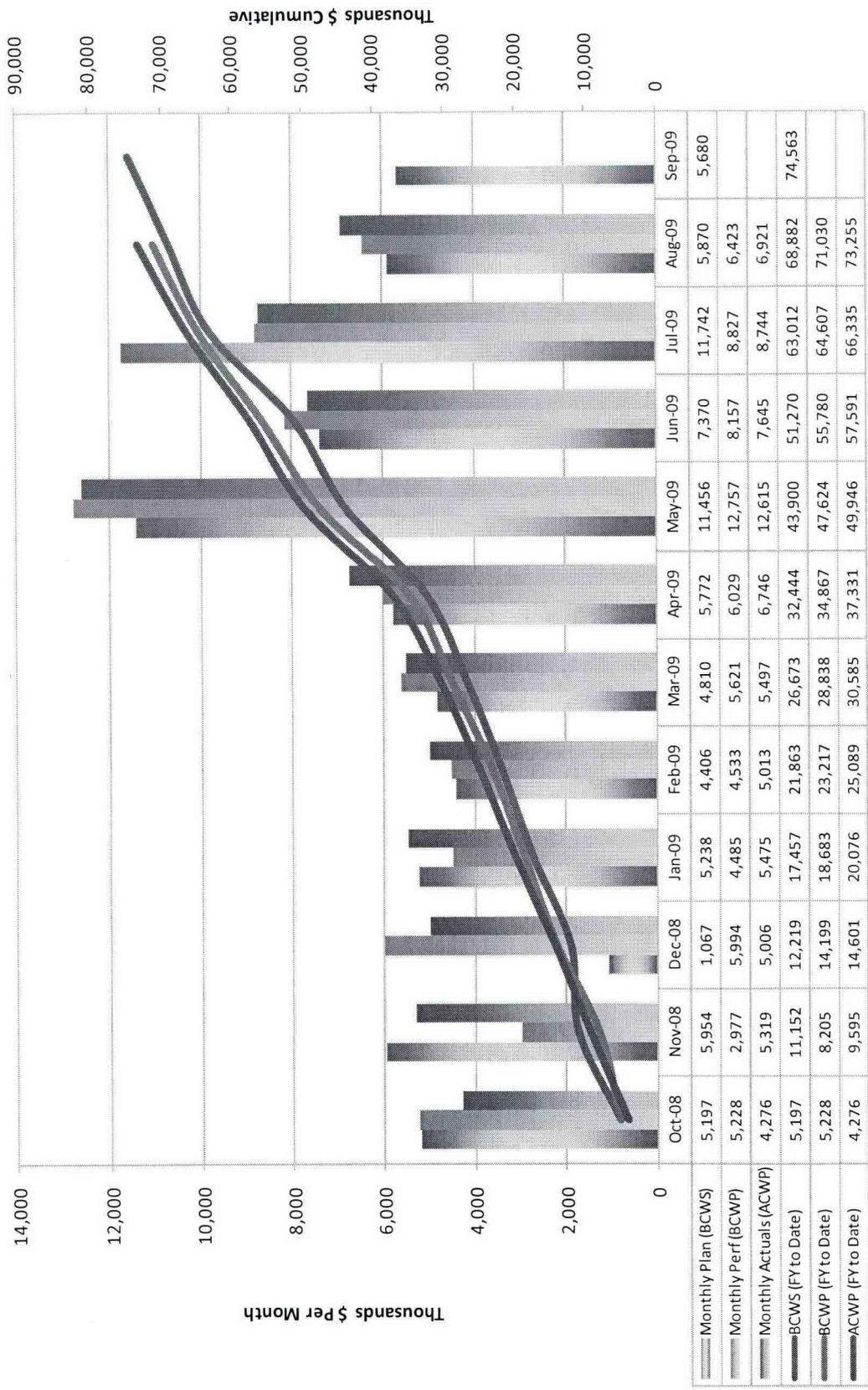
Construction forces placed a total of 423 cubic yards (CY) of concrete in September. Walls 1146 (at the south end of Melter Cave #1), wall 1138 (enclosing the Canister Swab and Monitoring area), and wall 1124 (south end of the Wet Process Cell in the center of the facility) were completed at grade in September. Walls 2104 and 2107 were placed at Elevation +14' to further extend the Annex. By achieving five concrete placements in September, Construction continues to maintain their production goal.

- At the -21' elevation, Construction crews continued: the installation of cable tray and piping; aligning and installing bogie rails and supports in the Canister Storage Transfer and Cask Handling tunnels; the fabrication and installation of HVAC ductwork and fire dampers; and the application of coatings.
- At the +0' elevation, crews continued to: install slab and wall rebar, embeds, wall forms, structural steel and decking; and install piping supports.
- At the +14' elevation, crews continued to: erect structural steel and decking; install wall and slab rebar; and install embeds, joggles and formwork for multiple walls and slabs.

Near-Term *Proposed* Consent Decree Milestones:

Project	Description	Specified Completion Date	Current Schedule Date
A-20 Interim	Complete Construction of Structural Steel to Elevation 14' in HLW Facility	12/31/2010	2/22/2010

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



**Low-Activity Waste (LAW) Facility Status for September 2009 (August 2009 EVM Data)**

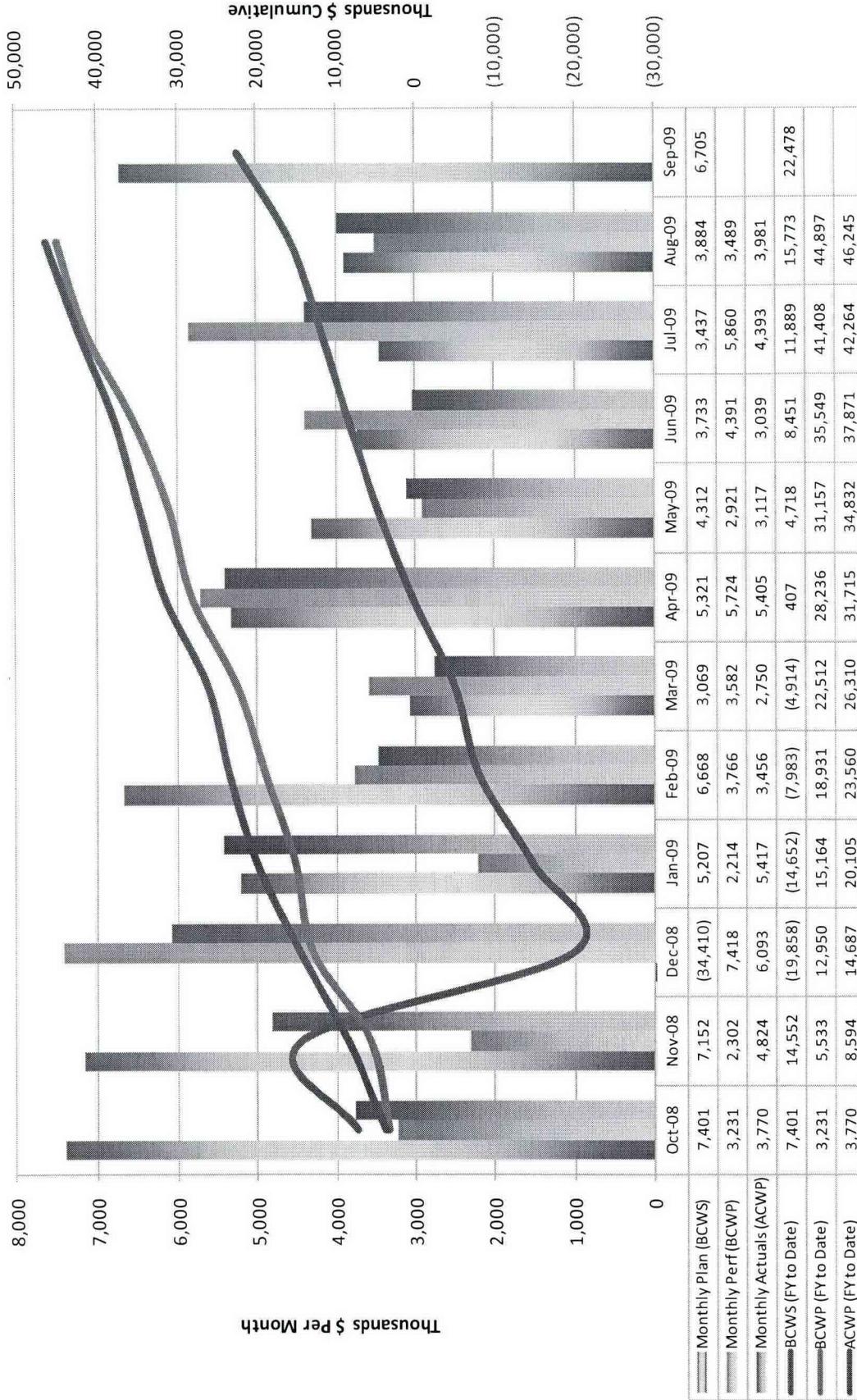
The LAW Facility will vitrify low-activity waste from the PT Facility. Waste will be mixed with glass formers, vitrified into glass at an average daily rate of 30 metric tons, and placed in stainless-steel containers that will be disposed on site in the Integrated Disposal Facility. Overall facility percent complete is 67%, design is 90%, and construction is 55%.

In the month of September, WTP Construction completed performing the load tests on the pour cave monorail and the pull test on the Gorbel® crane temporary supports. Construction continued: installation of piping and hangers, grillage and insulation in the pour caves, conduit, buss ductwork and cable tray supports; erecting wall support steel for the elevator on +3'; and, mounting the motor control centers.

Engineering has issued a complete revision of the C5V system ventilation and instrumentation diagrams, incorporating new fire screens to meet DOE standard DOE-STD-1066-99, Fire Protection Design Criteria. Additionally, engineering has also issued 143 termination schedules to support design of the following systems: plant cooling water, non-radioactive liquid waste disposal, uninterruptible power electrical, low voltage electrical (LVE), LAW primary offgas process, radioactive liquid waste disposal, LAW container pour handling, LAW melter handling, LAW melter feed process, LAW melter equipment support handling, radioactive solid waste handling, LAW secondary offgas/vessel vent process, and sodium hydroxide reagent. Engineering also issued 40 panel schedules to support design of the LVE and lighting electrical systems.

Engineering is working on Technical Issue 2009-0003: LAW Overpacks/Elevators Temperature Impacts. Resolution of technical issue for excessive heat retention in some Melter Pour Cave equipment continued. A high temperature condition has been calculated to occur in certain container handling equipment that could significantly reduce the yield stress of these items. Computational Fluid Dynamics calculation results will be analyzed for equipment stresses by a sub contractor (Energy Solutions), and if a potential problem remains, design changes will be made to rectify the issue. A kick-off meeting was held with Energy Solutions October 5<sup>th</sup>, and expected completion date of the analysis is December 2009.

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



**Analytical Laboratory (LAB) Status for September 2009 (August 2009 EVM Data)**

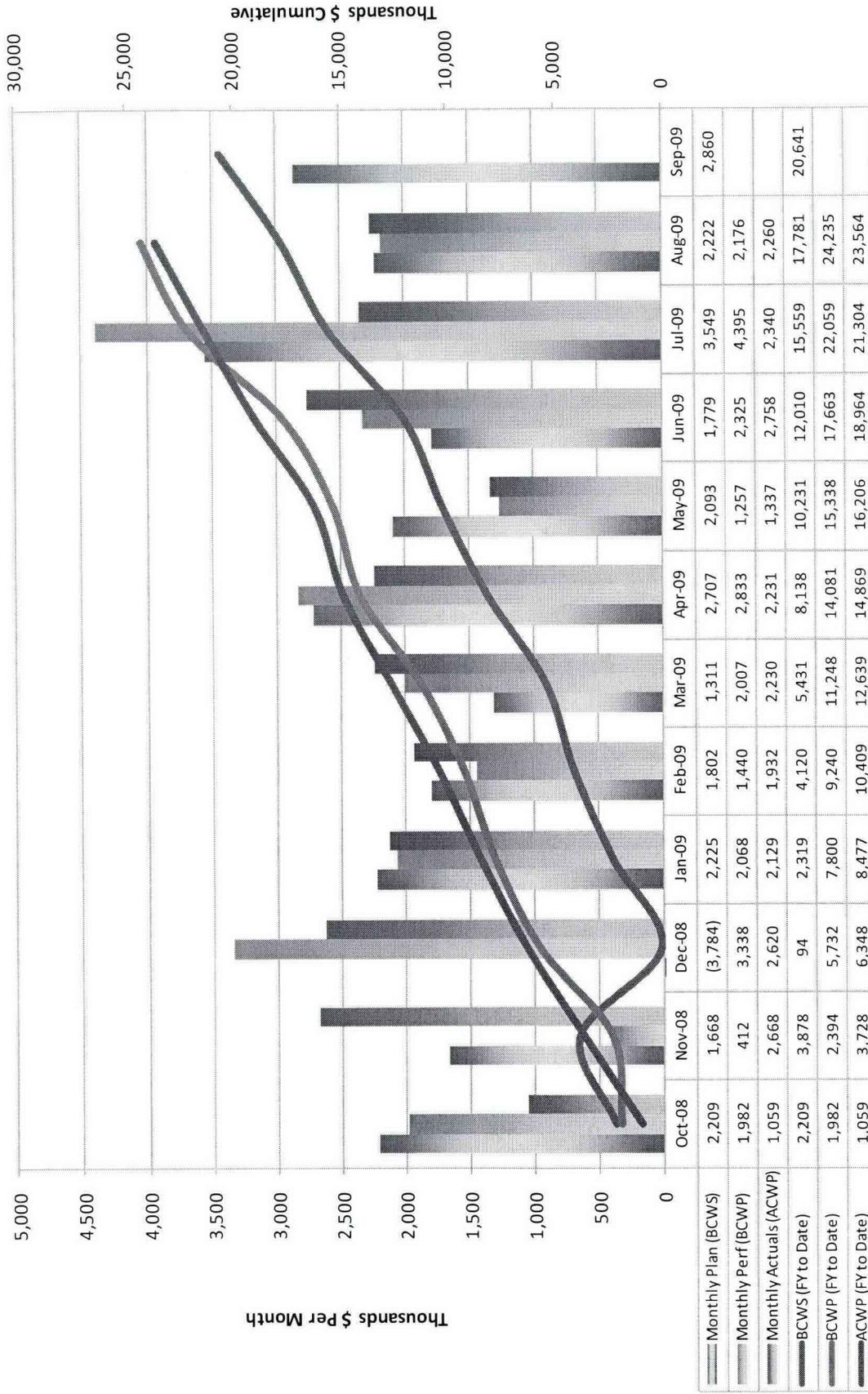
The LAB will support WTP operations by analyzing feed, vitrified waste, and effluent streams. Overall facility complete for LAB is 46%, design is 78%, and construction is 53%.

LAB engineering does not currently have any major technical issues and BNI continues to focus on confirmation of design. During September, engineering advanced the confirmation of design documents associated with Plant Service Air and Breathing Service Air Systems. The engineering SPI and CPI during August were 0.93 and 1.09 respectively.

During September, construction began installing the main control center and continued installation of ductwork, piping and hangers, electrical equipment, and partition walls. Construction completed installing piping for the low pressure steam system in 2 planning areas, and rough-set fans for the C5V system.

Receipt of the hotcell waste transfer system is the near-term activity milestone for the LAB. The dates for factory acceptance testing moved from the week of September 21<sup>st</sup> to the week of October 5<sup>th</sup>, due to vendor closing out issues related to commercial grade dedication. Delivery of the hotcell waste transfer system is now scheduled for the end of October. The construction schedule is not impacted by the movement of the receipt date.

Analytical Laboratory - Fiscal Year To-Date Performance



**Balance of Facilities (BOF) Status for September 2009 (August 2009 EVM Data)**

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 51%, design/engineering is 77%, and construction is 55%.

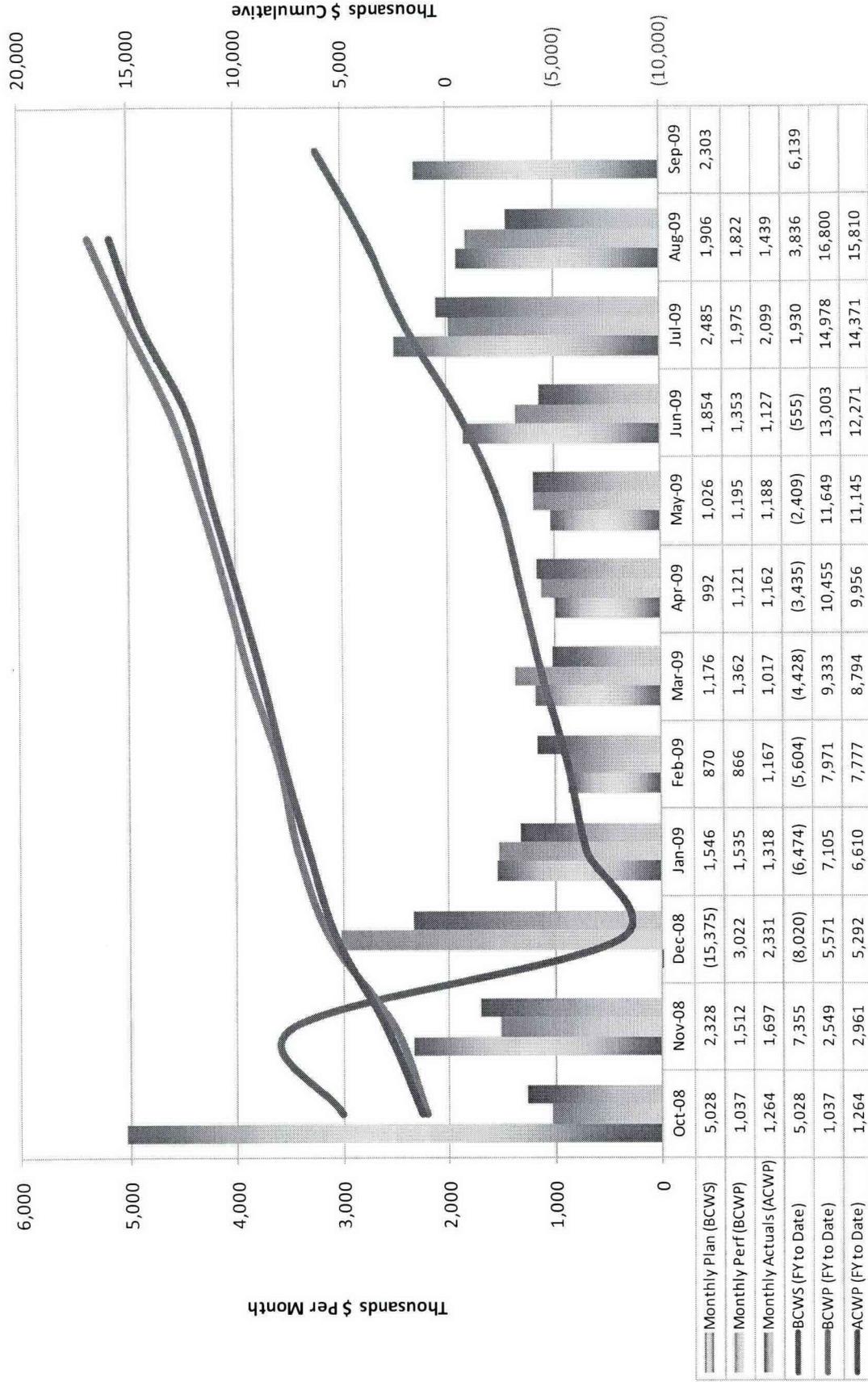
During September, construction completed placing six controlled density fill pours for the DOE lines in trench 4Z and pulling cable to the air filters in the Chiller Compressor Building. Construction continued installing: scheduled and unscheduled conduit, the fire alarm detection system in the warehouse building, cathodic protection for the diesel fuel oil lines, welding and coating diesel fuel oil pipe, and excavating the plant service air system pipe.

The focus for BOF engineering is design and procurement of the emergency diesel generators and confirmation of engineering design. BNI engineering continues to hold bi-weekly meetings to discuss the progress and path forward for procurement of the emergency diesel generators. The major engineering document issued by BNI during September related to the emergency diesel generators was the Engineering Specification for the emergency diesel generators.

In September, BNI presented to ORP the results of the updated electrical load calculations for the WTP electrical load requirements during operations. Based on the updated calculation and the potential conversion of temporary construction power for permanent use, there is no immediate need to upgrade the A6 substation. However, BNI is conducting a study to determine the optimal approach to converting the existing temporary construction power to permanent. At this time, it is expected that this will provide a sufficient electrical load contingency. The study will be completed in December 2009.

Two other items focus items are the Cathodic Protection System and extent of condition piping excavations for underground piping corrosion. BNI has turned over the Cathodic Protection System from Startup to Operations. Although the Cathodic Protection has been turned over to Operations, BNI continued to work on completion of the activity milestone package for the Cathodic Protection System during September and has not yet submitted the completion package to ORP. BNI continued excavations to determine the extent of condition for piping corrosion due the corrosion issues found of the PSA piping near the Pretreatment Facility. BNI plans to complete all excavations by the end of October 2009.

Balance of Facilities - Fiscal Year To-Date Performance



Waste Treatment Plant Project - Percent Complete Status Through August 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	1,655.5	1,103.0	67%	205.1	185.1	90%	289.0	159.9	55%
Analytical Lab	631.2	291.1	46%	48.6	37.9	78%	85.9	45.9	53%
Balance of Facilities	981.1	504.6	51%	68.0	52.5	77%	214.3	117.9	55%
High-Level Waste	2,571.9	1,209.3	47%	314.0	254.7	81%	508.0	111.9	22%
Pretreatment	4,076.9	1,882.2	46%	569.0	434.4	76%	818.0	217.9	27%
Shared Services	incl. above	incl. above	incl. above	1,057.9	762.0	72%	1,331.5	839.7	63%
Undistributed Budget	9.0	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>Total WTP</b>	<b>9,925.6</b>	<b>4,990.2</b>	<b>50%</b>	<b>2,262.6</b>	<b>1,726.6</b>	<b>76%</b>	<b>3,246.7</b>	<b>1,493.2</b>	<b>46%</b>

Source: WTP Contract Performance Report

Note: Starting with the June 2009 report, facility construction percent complete values decreased significantly, and a couple of Design/Engineering facility percent complete values went down as well. The decrease in values was tied to Phase I of BNI's elimination of WBS 1.08, Plant Wide EPCC; scope from WBS 1.08 was moved to facilities as appropriate or to WBS 1.90, Shared Services. This resulted in an increase in the facility construction budgets, which has correspondingly reduced the to-date percent complete values.

**WTP Project - KEY COMMODITY QUANTITY PROGRESS**

<b>Commodity</b>	<b>Unit of Measure</b>	<b>Current Forecast at Completion Quantity</b>	<b>Installed through August 2009</b>	<b>Percent Complete</b>
Concrete	1000 cy	262.30	189.22	72.1%
Structural Steel	1 ton	38,586	14,186	36.8%
Piping (in buildings)	1000 lf	920.93	160.80	17.5%
Piping (underground)	1000 lf	116.01	95.67	82.5%
HVAC Duct	1000 lbs	4,298.96	1,013.23	23.6%
Cable Tray	1000 lf	98.45	20.20	20.5%
Conduit (in buildings)	1000 lf	1,008.67	105.36	10.4%
Conduit (underground)	1000 lf	193.11	176.16	91.2%
Cable and Wire	1000 lf	4,950.44	250.81	5.1%

### **WBS 5.01.01 Base Operations**

This work element provides the activities required to ensure the Tank Farm facilities are managed in a safe and environmentally compliant operating condition awaiting waste retrieval and closure. Work scope (including RA funded work) includes Base Operations Project Mgmt activities for overall Base Operations management and administration, Project Controls, Base Operations ESH&Q and Performance Assurance. TSR surveillance and maintenance activities such as performing surveillance and monitoring of Tank Farm facilities; performing preventive and corrective maintenance on systems and components, providing facility engineering, maintenance of the tank technical specifications, and maintenance of the Tank Farms technical compliance programs including the configuration management program, systems engineering program, and System Design Descriptions. Implementation of TSR administrative controls, the criticality safety program; event reporting and investigation; emergency preparedness; waste characterization for TSR compliance and waste compatibility; radiation control and As Low As Reasonably Achievable (ALARA) program compliance; industrial safety and health program; and DST corrosion mitigation. Core Services for TOC procedure development, maintenance and administration for all technical and administrative functions. Tank Chemistry and Integrity ensures that the waste within the DSTs complies with the chemistry control limits. These activities are based on periodic assessments as part of the DST Chemistry Control Program. The SST and DST Integrity Program's objective is to maintain and improve the longevity of the systems through-out their life-cycle. Solid Waste Management provides guidance and direction related to tank farm waste generation, management/transportation, and shipping.

### **WBS 5.01.02 DST Space Management**

This WBS element provides activities necessary for physical movement and reduction of waste volumes in the tank farm system. Activities include transfers of waste between DSTs (DST to DST), external transfers of waste from the 222-S Analytical Laboratory to the SY Tank Farm, catch tank transfers to move condensed rainwater from the capture tanks into DSTs, performance of cross-site transfers of supernate waste from SY Farm to East tank farm, operations and maintenance of the 242-A Evaporator, and additional RA funded scope related to the Evaporator.

### **WBS 5.01.03 TOC Facility Operations**

This WBS element includes the work scope for operations and maintenance of the 222-S Analytical Laboratory. Specific scope includes laboratory management, safe and compliant operations, general support, facility reliability and maintenance, analytical support, CENRTC modifications and equipment, technology development of new or modified analytical methods, laboratory waste handling, and subcontractor support. Specific laboratory upgrades are RA funded.

### **WBS 5.01.04 Tank Farm Upgrades**

This WBS element provides field projects support to maintain continued safe storage and operation of TOC facilities. This includes 242-A Evaporator Upgrades, AY/AZ Farms Upgrade Projects, AP Farm Upgrade Project, AN Farm Upgrade Projects, AW Farm Upgrade Project, SY Farm Upgrade Project, DST Infrastructure Upgrades, and Farm Upgrades Program Support. The work is both base and RA funded.

### **WBS 5.01.05 Project Support**

This WBS element provides performance of the cleanup mission in the Hanford Tank Farms and related facilities beginning with Project Management and progressing through Integrated Safety Management, Environmental, Safety, Health and Quality (ESH&Q), Security and Emergency Services, interactions, and interface management. Work will be conducted in an integrated manner that protects the worker, public and environment while enabling efficient cleanup. RA funded work is included.

### **WBS 5.02.01 Retrieval/Closure Program**

This work element provides the programmatic 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 retrieval system development. Finally, this work element includes the retrieval, deactivation, and/or closure of non-tank SST facilities and inactive waste sites. This work scope includes management support, SST retrieval demonstration documentation, and procurement and testing of the MRS. National Environmental Policy Act of 1969 (NEPA), closure, and permitting documentation including the NEPA EIS, RCRA closure plan updates, DOE O 435.1 documentation, and air permit applications. Retrieval and closure technology development, Cold Test Facility (CTF) management and maintenance, Vadose Zone investigations and risk assessments supporting compliance with the TPA and facility closure requirements. Isolation of the 244-CR vault and disposition of hose-in-hose transfer lines (HIHTLs).

### **WBS 5.02.02 SST Retrieval East Area/WBS 5.02.03 SST Retrieval West Area**

The WBS element includes activities to retrieve waste from the 200 East/West Area SSTs. The SST Tank Farms included in this scope include the 241-A, 241-AX, 241-B, 241-BX, 241-BY, 241-C, 241-S, 241-SX, 241-T, 241-TX, 241-TY, and 241-U farms. Retrieval activities include design, procurement, construction, startup, readiness, and operation of SST waste retrieval systems.

### **WBS 5.02.04 Closure Program**

This work element provides Closure and Permitting Program Management support to the RPP mission to retrieve wastes from and close all SSTs, DSTs, miscellaneous underground storage tanks (MUSTs), inactive waste sites, Tank Farm support facilities, immobilized waste storage and disposal facilities, tank waste treatment facilities, and ancillary equipment for which the TOC has contractual responsibilities. It also provides the regulatory documentation necessary to complete the SST and DST tank retrieval and closure mission including EISs, NEPA/ State Environmental Policy Act of 1971 (SEPA) documents, RCRA closure plan updates, Air Notices of Construction (NOCs), Tank Farms risk assessments, and Tank Farms Data Quality Objectives.

### **WBS 5.02.05 SST Closure**

This work element provides for the closure of the 149 SSTs, nearby ancillary equipment, and associated tank farms. After retrieval of waste from the SSTs, individual tanks will be interim closed. Interim closure will occur after retrieval is completed, and once all the tanks in a farm are interim closed, the tank farm will be closed. Interim closure activities include characterization, engineering evaluation and reporting, deactivation and isolation of transfer lines, pits and penetrations to the tank, and placement of a grout layer in the bottom of the tank to stabilize the residual waste. The activities associated with farm closure include Tank Stabilization, Ancillary Equipment Stabilization, and Enhanced RCRA Subtitle C Barrier placement.

### **WBS 5.03.01 WTP Feed Delivery Program**

This WBS element provides the WFD program required technical analysis, waste characterization, and project definition activities necessary to provide waste to the WTP. The WFD program work activities include a variety of cross-cutting programmatic activities in support of WFD to the waste treatment facilities, including characterization, WFD engineering and modeling support including management and maintenance of the retrieval and transfer technical baseline, WFD program/project management support, and DST retrieval/transfer management. This work element will provide feed delivery evaluations using the HTWOS model.

### **WBS 5.03.02 Construct DST Systems**

This work element includes the activities necessary to install waste retrieval systems in the DSTs. The work includes design, procurement and construction, testing, and startup support to deliver operable retrieval systems for DSTs.

### **WBS 5.03.03 RA - Transfer System Mod Project**

This work element provides for RA funded upgrades to DST transfer systems. Work scope includes Refurbishment and replacement of SY Farm supernate and slurry transfer lines for RCRA compliance. Installation of a condensate return line to Tank AZ-101 and Completion of AW Farm Clean Out Box (COB) isolation and removal work started by Project W-525.

### **WBS 5.03.06 Immobilization Program**

The Immobilization Program work element includes the scope necessary to design, construct and procure, startup, test, and operate an interim storage facility for the IHLW. This is currently planned to be a HSF which will have the capacity to store 2000 IHLW containers. The facility will also have expansion capabilities; however, at this time no expansions are planned in the baseline. Each additional module would be sized to store an additional 2000 IHLW containers each. Scope also includes Immobilized Low-Activity Waste (ILAW) glass testing to ensure performance assessment requirements can be maintained for proper long term storage/disposal and IHLW and ILAW.

### **WBS 5.03.07 WTP Operational Readiness**

This WBS element includes conducting a continuing in-process evaluation of the WTP operational readiness to promote Contractor understanding of and planning for future WTP operations, verify that there are no deficiencies that would preclude successful Contractor operations, and support safe and efficient turnover of completed WTP facility(ies). Also includes WTP Interface Management and Assessment of the WTP Pretreatment Engineering Platform (WTP-PEP).

### **WBS 5.03.09 Tank Waste Pretreatment Project**

The Tank Waste Pretreatment Project WBS element includes projects necessary to provide supplemental pretreatment capacity beyond the WTP Pretreatment facility. A Lithium/Bayer Pretreatment is planned with near term technology studies, testing, and demonstration and then a full scale production facility and long term operations of the pretreatment support for waste processing at the WTP and Second LAW facilities.

### **WBS 5.03.10 Secondary Waste Treatment/ETF**

The Secondary Waste/ETF Project WBS element provides for the overall management and operations of a Secondary Waste Treatment and ETF. This includes upgrades and modification to ensure that Secondary Waste/ETF includes appropriate activities required to modify the ETF and associated tank farm infrastructure (i.e., utilities and buildings) to enable treatment and solidification of WTP LAW secondary waste. This includes the pipeline from WTP to ETF. The Secondary Waste/ETF upgrade mission involves several activities over an approximate 40 year life-cycle that need to be implemented to fulfill the WTP mission, including: evaporator upgrades at ETF, performance testing of grout to demonstrate Technetium-99 retention, and design, installation and startup of a grout facility. This work is both base contract and RA funded.

#### **WBS 5.03.11 Next Generation Projects**

The Next Generation Projects WBS element defines work scope to maximize cost efficiency of operations through WTP startup and operation beyond traditional tank retrieval, storage, and transfer activities. This WBS structure captures unique projects that address waste management life-cycle improvements impacting all phases of the treatment process. Projects developed and deployed will have unique systems that address long term cost issues-mitigate single-point failure processes, provide major improvements to existing waste management practices, provide maximum space availability for optimum WTP feed staging while minimizing transfers, and reduce WTP secondary effluent volumes. This work is both base contract and RA funded.

#### **WBS 5.04.01 Supplemental Treatment**

This WBS element will provide a Second LAW facility that will provide throughput capacity of ~59 metric tons glass/day, three times the current WTP's LAW rate. The new facility would be designed, constructed, and operated separately from the WTP LAW facility. The Second LAW facility is needed to maintain the completion of waste feed processing in the FY 2045 timeframe. The initial WTP was never sized to accommodate all of the waste. It was always assumed that an additional facility(ies) would be necessary to process all of the TOC waste. The decision to have a Second LAW facility is based on an independent panel that recommended the use of a continuous vitrification process.

There is no TRU Packaging scope planned in the NTB. However, in the OPER, The CH-TRU treatment and packaging process will use a modular approach. The facility will be first located at B-Farm, the tank supplying the initial CH-TRU feed, and then be relocated to T-Farm, which supplies the remaining CH-TRU feed. An Interim Storage (IS) Facility will be provided adjacent to the CH-TRU site to enable packaged wastes to be staged pending transfer by truck trailer to the Waste Receiving and Processing (WRAP) facility in 200 West Area. Drums of CH-TRU product staged at WRAP are validated by instrument systems and strict quality assurance protocols to meet WIPP acceptance criteria. This service is expected to be performed by the Centralized Characterization Project team from WIPP. Upon confirmation of acceptable product criteria, the drums are loaded into special shipping containers and shipped to WIPP.

#### **WBS 5.05.02 Waste Treatment Facility**

This work element provides for WTP Pre-Operations and Commissioning; Operations Transition; all activities required to operate, maintain, and manage the WTP and associated facilities from turnover after hot commissioning to the completion operations; and WTP D&D.