0088079

ORP Project Managers Meeting
March 23, 2010
2440 Stevens Ctr.
Richland, Washington

Meeting Minutes Transmittal

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J. J. Lyon	Ecology	H0-57
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ADMINISTRATIVE RECORD – Heather Childers (two copies): H6-08

Please send comments on distribution list to Woody Russell (Woody_Russell@orp.doe.gov).

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March 23, 2010
2440 Stevens Ctr.
Richland, Washington

Meeting Minutes Transmittal

The undersigned indicate by their signatures that these meeting minutes reflect the actual occurrences of the above dated Project Managers Meeting.

Bob Lober, DOE-ORP — Date: 4/27/2010

Chris Kemp, DOE-ORP — Date: 4-27-10

Wahed Abdul, DOE-ORP — Date: 4/27/10

Jeff Trent, DOE-ORP — Date: 4/27/10

~~Garth Reed~~, DOE-ORP — Date: 4/27/10

Gary Olson

J. Lyons, Project Manager,
Washington State Department of Ecology — Date: 4/27/10

J. D. McDonald. Project Manager,
Washington State Department of Ecology — Date: 04-27-10

Purpose: ORP Project Managers Meeting

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1.0 Administrative Items

Acton Items: The status of open action items was not addressed at this meeting due to the absence of those assigned actions. Attachment A is the current remaining open actions.

The list of attendees for the March 23, 2010 PMM is provided as Attachment B. The Monthly Milestone Review Meeting Status Report and handouts are provided as Attachment C. The draft status report was provided to Ecology electronically on March 17, 2010. No comments were received.

Next PMM is scheduled for April 27. 2010

Quarterly Milestone Review Meeting is scheduled for May 20, 2010.

Administrative Record Items (Attachment D)

- Approved Document Modification Notice Number 2010-1 to RPP-9937 SST Functions and Requirements, Rev 3
- Approved Document Modification Notice Number 2009-6 to RPP-22393, Rev. 4B, 241-C-102, 241-C-104m 241-C-107, 241-C-108 and 241-C-112 Tanks Waste Retrieval Work Plan
- Approved 2/16/10 Interim Measures Meeting Minutes
- Approved Construction Start: TY Barrier Placement Meeting Minutes

2.0 Review of the ORP Project Summary Discussion Agreements and Commitments (Attachment C Project Summary/Handouts)

Tank Farms

M-45-00: In significant accomplishments the following are updates : Retrieval of C-104 was reported to be currently 75% complete. The C-108 heel sample analysis performed at 222S was completed in January. For planned activities in the next six months, C-110 heel sampling was stated to be scheduled for June. Ecology has approved Change Notice 2009-6 which will modify the TWRWP for adding a caustic solution to the C-108 tank heel prior to the heel water flush. The caustic will be used to improve retrieval of waste from the tank by breaking down certain hydrated aluminum hydroxide solids to enable their removal.

M-15-05A: Ecology inquired how soil waste was handled from the Tank S-102 spill. ORP stated that the waste was designated, drummed and disposed of in RCRA trenches 31 and 34.

M-45-15 -15A, 15-B, 15-C: ORP reported that these milestones are listed at risk due to the difficult nature of the S-102 tank heel.

M-45-13C: ORP reported that the milestone is at risk due to delay in the EIS. The PA component of the Closure Plan has to agree with the EIS and now that the EIS is scheduled for

release in summer or fall of 2011, this milestone is at risk. ORP will discuss with WRPS the feasibility of doing all the other work associated with producing the update to the S-112 Component Closure Activity Plan with the exception of the risk based modeling. ORP agreed to provide the path forward at the next PMM.

Interim Stabilization Consent Decree: ORP reported that the S-102 exhauster was off due to an electrical outage. Ecology inquired if the exhauster will be restarted. ORP committed to get back to Ecology with the exhauster operation plans. Ecology also inquired if ORP will submit an interim stabilization completion package.

In Tank Characterization and Summary: Ecology inquired about what is being revised in the Chemistry Control DQO and the sampling status of C-109. ORP committed to provide information on both of these items.

M-47-00, M-90-00, and M-62-00: Nothing to report.

Critical Path: Two handouts of C-Farm retrieval critical path information were provided; a single-page summary (C-Farm Retrieval, Life-Cycle Baseline PMB, 2014 Compliance Case) and a more detailed, multi-page critical path schedule. ORP expressed desire that the critical path data would eventually replace the C-Farm Retrieval Summary Schedule Forecast table currently in the status report.

Milestone Statistics: ORP indicated there will be an effort to reduce the size of the ORP PMM and Quarterly status packages. Historical milestone information is planned to be removed.

TOC Performance Reporting: ORP reported that WRPS plans to recover unfavorable schedule variance by June. Good progress was made for the month of February.

Waste Treatment Plant

PT: Ecology is skeptical that ductwork recovery can be met by spring of 2011. Only 3,000 lbs of duct was installed in all of last year leaving 150,000 lbs to be installed. ORP is confident the recovery will be met.

Mixing issue (M3) testing continues on schedule with completion expected by April 22.

Ecology requested design modifications to vessels be provided quickly so that necessary permit modifications can be processed to support the schedule.

HLW: Ecology inquired if there were any of the retrofit designs for the filter caves that they could start reviewing.
LAW: OPR discussed that the material requisitions for the Thermocatalytic Oxidizer (TCO) and Exhausters were being finalized and that the engineering specification for the TCO was issued in February. ORP also discussed the path forward for the LAW Annex Roof Assembly

compliance with the Highly Protected Risk section of DOE O 420.1. ORP reported that the analysis to support resolution of the excessive heat retention in some melter pour cave equipment is now scheduled to be completed in April.

LAB: ORP discussed that BNI LAB engineering continues to focus on the confirmation of design. ORP stated that BNI has delayed the factory acceptance testing (FAT) for the LAB Autosampling System (ASX) equipment due to upgrading the overall BNI FAT program. Regarding the LAB ASX, Ecology inquired if the ORP Quality Assurance Team had verified corrective actions associated with the BNI factory acceptance testing program. ORP committed to provide answers to this question. ORP stated that BNI is evaluating the cost and schedule impacts of bringing the LAB Roof Assembly into compliance with the Highly Protected Risk section of DOE O420.1. BNI will present the selected option to ORP in April.

BOF: ORP discussed the status of the emergency diesel generator (EDG) procurement. ORP committed to provide Ecology with an updated schedule for the EDGs and associated facilities.

General: Ecology requested an updated list of project managers, project engineers and facility representatives for each of the WTP facilities. ORP requested a listing of the Ecology leads associated with each of the facilities

3.0 Agreements: It was agreed that .....

No formal agreements were made at this PMM. Various commitments by ORP and Ecology are captured in Section 2.0 of these meeting minutes.

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Attachment A: Action Tracking
(1 page)

Open (O)/ Closed (X)	Action No.	Co.	Actionee	Project	Action Description	Status
O	100-167	ORP	W. Russell	General	Develop spreadsheet of document deliverables, scheduling tool of when due, status of Ecology review	
O	100-169	ORP	J. Trent	WTP	Include CPI and SPI in future status report performance charts for WTP.	Open: 1/25/10; Action:

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Attachment B: List of Attendees
(2 pages including this coversheet)

March Manager's Monthly Milestone Review Meeting

March 23, 2010

Name	ORG	MSIN	Phone
CJ King	ORP	H6-60	373-0649
DAVE MEARS	ECOLOGY		372-7899
Tom Kaw	ORP	H6-60	376.4434
Rob Lobec	ORP	H6-60	373-7949
GLYN TRENCHARD	ORP		373 4016
JOHN LONG	ORP		376-5416
Michelle Hendrickson	Ecology		372-7970
Joe Caggiano	Ecology		
Terri Noland	MSA		376-6574
Nancy Uzenbles	Ecology		372-7926
Gavin Reed	ORP		376-2626
Fred Swarens	ORP		376-1760
Jason Young	ORP		376-0375
Dan McDonald	ECY		372-7988
Fred Hidden	ORP		373-9393
Tracy Gao	ECY		372-7901
Robbie Biyani	ECY		372-7834
Waheed Abdul	ORP		438-0445

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Richland, Washington

Meeting Minutes Transmittal

Attachment C: Presentation Materials

ORP TPA Project Summary and Handouts
(71 pages including this coversheet)

Office of River Protection

Tri-Party Agreement
Monthly Milestone Review Meeting
March 23, 2010

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

March 2010

Agenda

Office of River Protection
Tri-Party Agreement
Monthly Milestone Review Meeting
ORP Conference Room 1200
March 23, 2010
9:00 a.m. – 11:30 a.m.

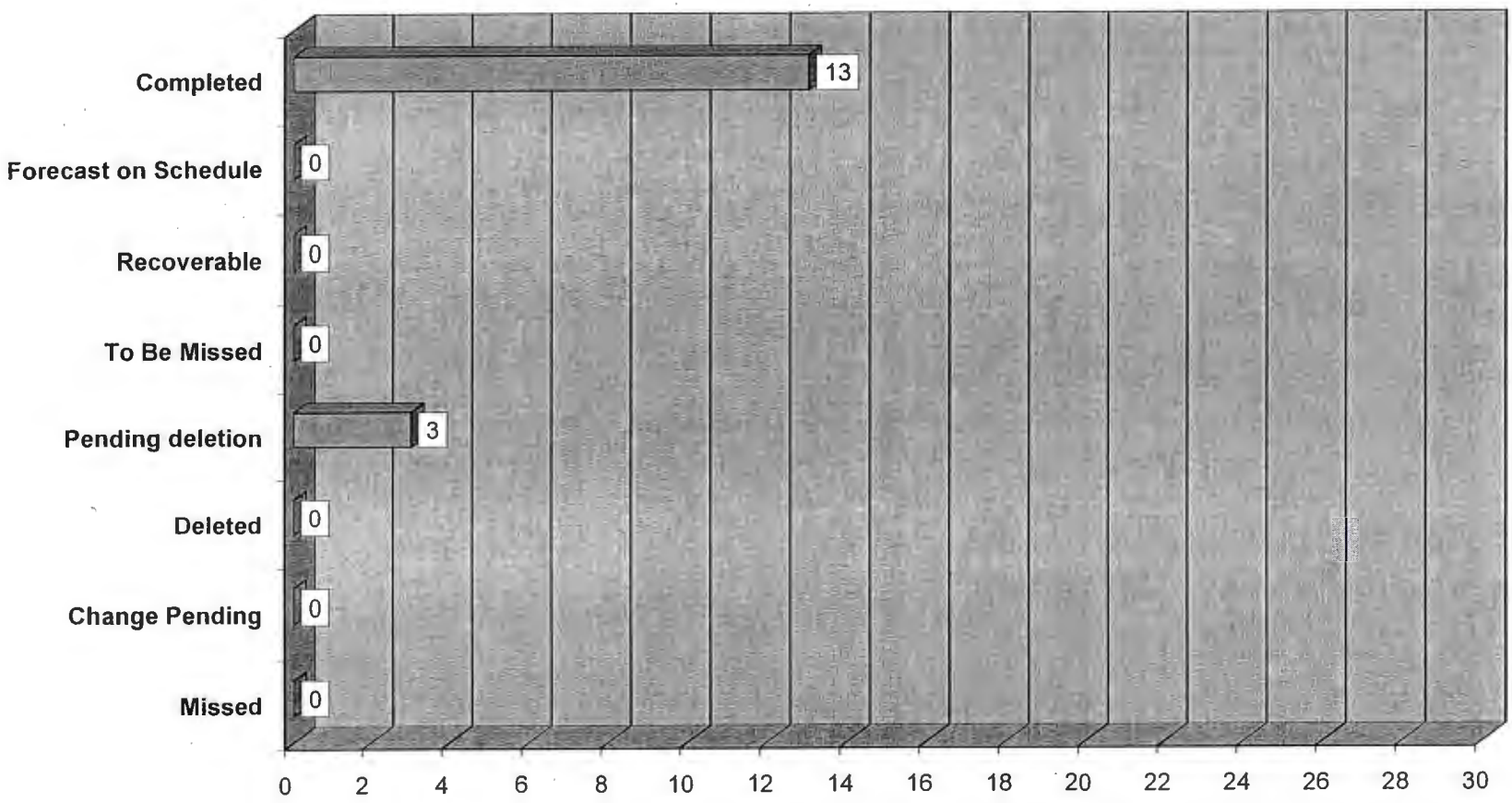
Page	Topic	Leads	Time
39	M-45, -50, -60 Single-Shell Tank Corrective Action	Bob Lober / Joe Caggiano	9:00
41	M-45-00, Complete Closure of All Single-Shell Tank Farms	Chris Kemp / Jeff Lyon	9:10
48	M-62-40, Tank Waste System Plan	Chris Kemp / Michelle Mandis	9:20
53	Interim Stabilization Consent Decree	John Long / Nancy Uziemblo	9:30
54	In Tank Characterization and Summary	John Long / Michael Barnes	9:35
55	M-47-00, Tank Waste Treatment, Storage and Disposal Facilities	Ben Harp / Michelle Mandis	9:40
57	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 / Dan McDonald	9:45
58	M-62-00, Complete Pretreatment Processing and Vitrification of Tank Wastes	Ben Harp / Dan McDonald	9:50
	BREAK		
3	TPA Milestone Statistics	Woody Russell / Dan McDonald / Jeff Lyon	10:15
25	FY 2009 ORP TPA Cost & Schedule Performance	Janet Diediker / Dan McDonald /Jeff Lyon	10:25
60	BNI Cost & Schedule Performance for Immobilization Plant (WTP) Project	Wahed Abdul /Jeff Trent / Garth Reed / Dan McDonald	10:40

TPA Milestone Statistics

(Including target milestones)

Milestone	Due Date	Total Active as of 10/01/09	Milestone Number	Due Date	Milestone Number	Due Date
M-42-00A, Provide Additional DST Capacity	TBD	1	M-42-00A	TBD		
M-45-00, Complete Closure of all SST Farms	01/31/43	19	M-45-70 M-45-80 M-45-81 M-45-82 M-45-83 M-45-84 M-45-85 M-45-86	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-45-13** **M-45-15** **M-45-56** **M-45-59** **M-45-61** **M-45-62** M-45-90 M-45-91 M-45-92 M-45-100 M-45-101	**06/30/11** **06/30/11** **TBD** **TBD** 12/31/14 06/30/15 09/30/10 09/30/10 09/30/16 60 days after milestone adoption 60 days after milestone adoption
M-47-00, Complete Work Necessary to Provide Facilities for Management of Secondary Waste from the WTP.	When WTP Achieves Initial Plant Operation	2	**M-47-00**	When WTP Achieves Initial Plant Operation	**M-47-06**	06/30/12
M-62-00, Complete Pretreatment Processing and Vitrification of Hanford High Level (HLW) and Low Activity (LAW) Tank Wastes	12/31/47	12	**M-62-01T** **M-62-01U** M-62-20 M-62-21 M-62-30	**01/31/10** 07/31/10 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
M-90-00, Interim Storage and Disposal of LAW and Interim Storage of HLW	When WTP Achieves Hot Start	2	**M-90-00**	When WTP Achieves Hot Start	**M-90-11**	12/31/12

FY 2006 MILESTONE PERFORMANCE



Fiscal Year 2006 Tri-Party Agreement Milestone Status

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

Fiscal Year 2006 Tri-Party Agreement Milestone Status

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

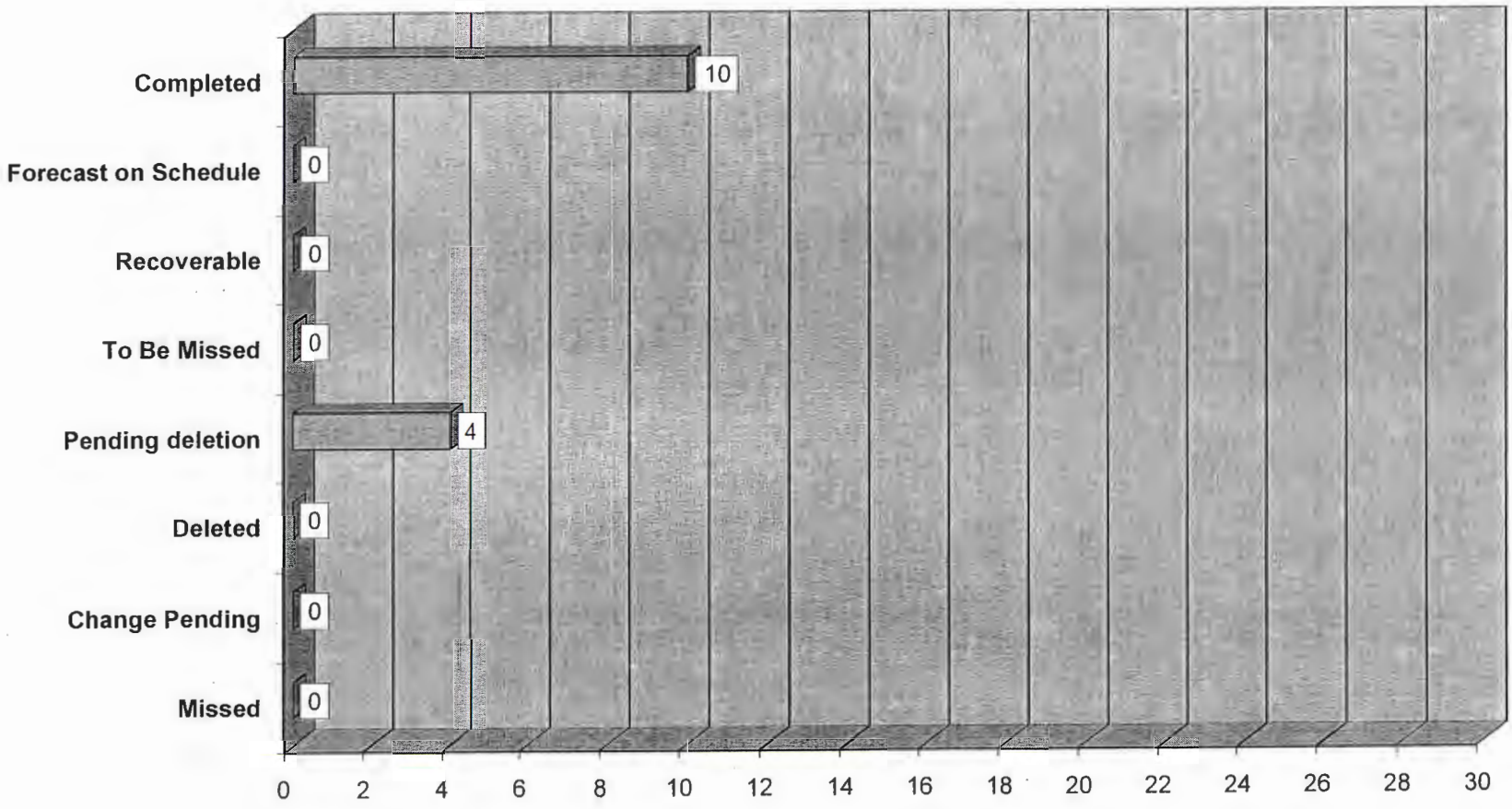
Fiscal Year 2006 Tri-Party Agreement Milestone Status

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								
M-045-05A	Complete Waste Retrieval from	3/31/07							X		

Fiscal Year 2007 Tri-Party Agreement Milestone Status

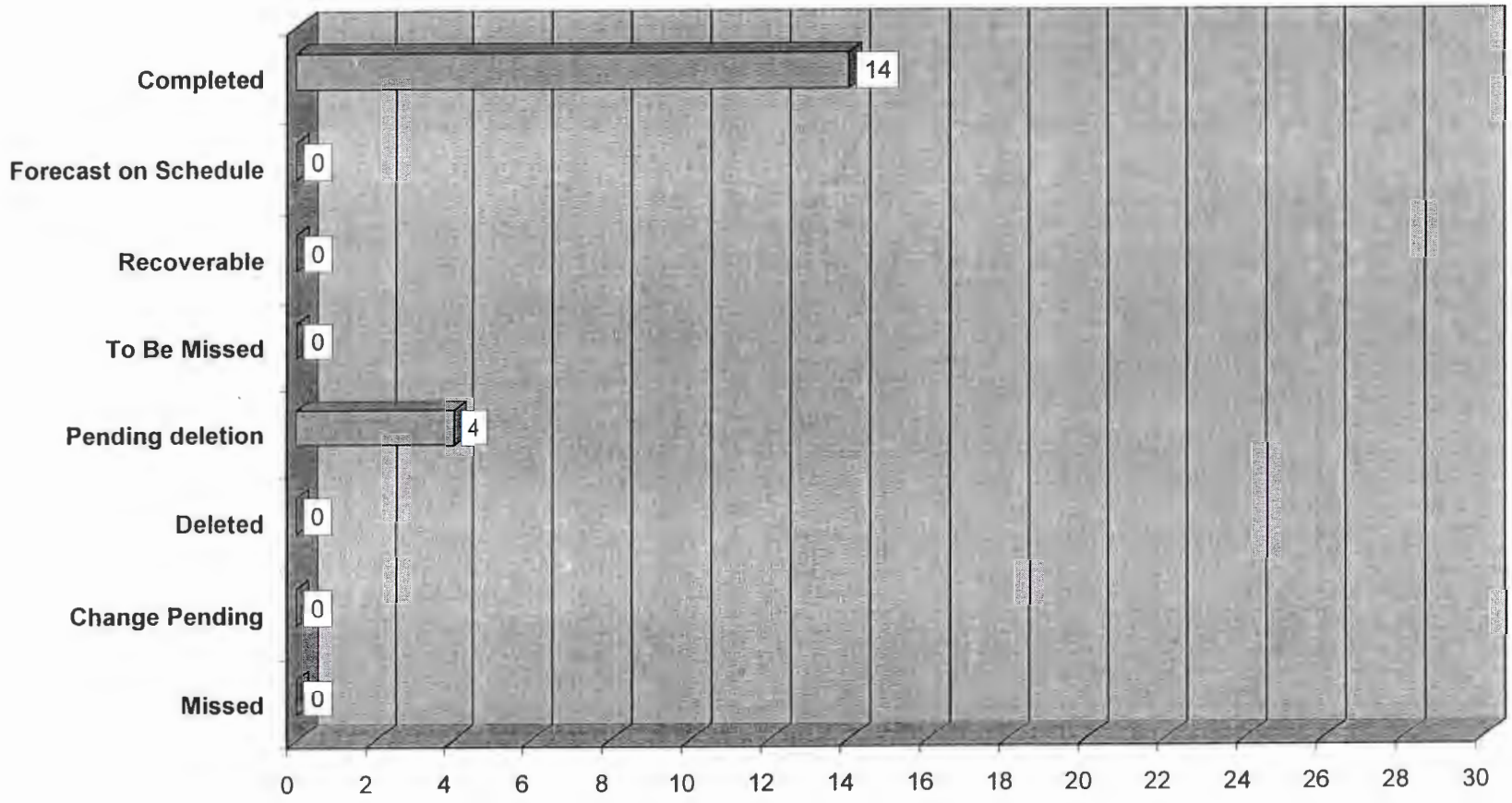
Milestone No.	Description	Due Date	Completed	Forecast		Recoverable	Unrecoverable	Missed	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk						
	S-102.										
D-001-00-R32	DOE shall, on a quarterly basis, submit to Ecology a written report documenting tank stabilization activities 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-062-01O	Submit Semi-Annual Project Compliance Report.	07/31/07	07/31/07								
M-048-15	Submit a report to Ecology for the re-examination of six (6) DSTs by ultrasonic testing in all areas previously examined to provide comparative data from which to calculate corrosion rates in each of the six DSTs examined.	09/30/07	09/26/07								
M-045-05-T05	Initiate tank retrieval from five additional single-shell tanks.	09/30/07							X		
M-048-00	Complete Tank Integrity Assessment activities for Hanford's Double Shell Tank (DST) system.	09/30/07	09/26/07								

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

FY 2008 MILESTONE PERFORMANCE



Fiscal Year 2008 Tri-Party Agreement Milestone Status

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

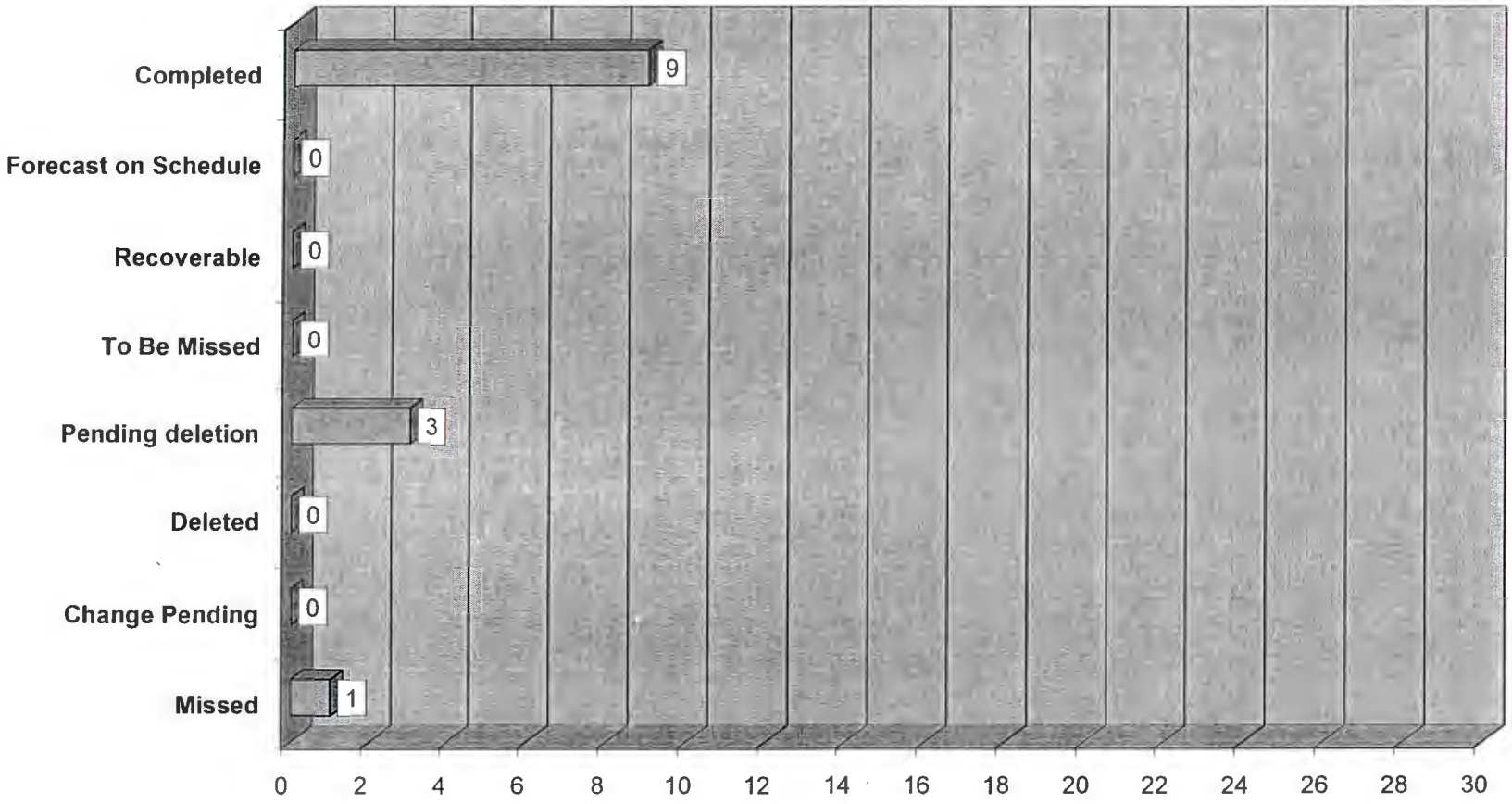
Fiscal Year 2008 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Completed	Forecast		Recover able	Will Be Missed	Missed	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk						
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								
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		

Fiscal Year 2008 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Completed	Forecast		Recover able	Will Be Missed	Missed	Pending Deletion	Deleted	Change Pending
				On Schedule	Schedule at Risk						
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								
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								

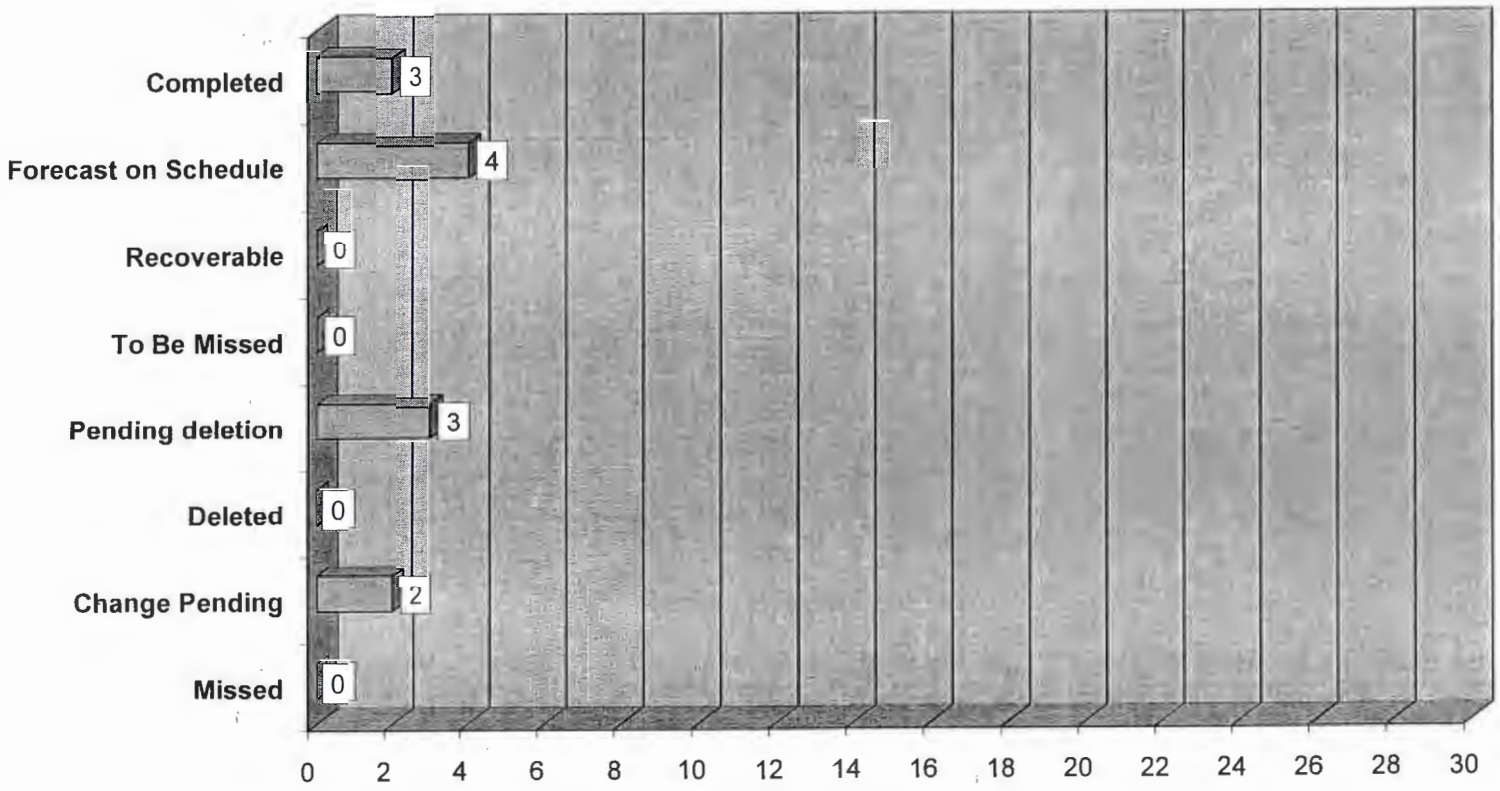
Fiscal Year 2009 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Completed	Forecast		Recover able	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		Recover able	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	10/28/09								
D-001-00R-43 (existing)	Quarterly Report	01/31/09	1/28/10								
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	1/29/10								
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

Tank Farm Project Executive Summary

January Reporting

General

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 earned value analysis is not intended to be a measurement of performance against existing Tri-Party Agreement Milestones.

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

WRPS January Project Performance - ($k)								
	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC
CM	26,983.7	30,305.6	27,435.5	3,321.8	2,870.0	1.12	1.10	
FYTD	111,470.2	112,357.8	104,469.2	887.6	7,888.6	1.01	1.08	467,251.2
CTD	398,209.8	389,627.8	366,136.7	(8,581.9)	23,491.1	0.98	1.06	2,065,281.8

Red shaded cells indicates any SPI/CPI less than .90;
Green shaded cells indicate any SPI/CPI between .90 and .99; and
Blue shaded indicates any SPI/CPI greater than or equal to 1.

TOC CM favorable SV of $3,321k is driven by:

1) **Recovery Act, $3,101k:** 1) Progress for the *242-A Evaporator Upgrades* was taken for the receipt of Vendor's Preliminary Design Package of the Exhauster Upgrade project which occurred ahead of schedule. The budget resides in July and August 2010; 2) a point adjustment was made for the Refurbishing ENRAFs as a result of implementing Baseline Change Request (BCR) River Protection Project (RPP)-10-078 which modified the start dates of some activities due to decomposing the schedule. In addition, the development of Engineering Change Notices (ECNs) were ahead of schedule; 3) An adjustment was made in the current month to transition single bar activity to multiple discrete activities for *RA-Remove Obsolete Equipment* creating a positive variance; 4) The Certification Flow Loop project is approximately two months ahead of schedule;. 5) Additional walk-downs for the *RA- 222S Drawing Reconstitution and As-building scope* resulted in a positive schedule variance; 6) *RA- WFE Technology Maturity Validation*, a point adjustment was made as a result of the implementation of BCR RPP-10-063 which re-aligns schedule to appropriate sequence and duration; 7) The Liquid Chromatograph/Mass Spectrometer was received ahead of schedule; 8) *RA- AW COB Isolation* construction was completed two months ahead of schedule to support start of the 242-A Evaporator campaign; and 9) *RA- WFE Application*

Viability, a point adjustment was made as a result of the implementation of BCR RPP-10-063 which re-aligns schedule to appropriate sequence and duration.

2) **WFD/Treatment Planning/DST Retrieval/Closure, $898k:** 1) *Early Transition LAW/BOF/LABS* scope was cancelled by ORP in December 2009. Scope was revised in January to reflect current path forward for EM-1 initiatives. This is offset by an unfavorable SV in *Lithium/Bayer Pretreatment Program* due to delay in receipt of Technology Innovation & Development (EM-30) funding from DOE which has prevented work from progressing as originally planned.

TOC CM favorable CV of $2,870k is driven by:

1) **Recovery Act, $2,228k:** 1) Lower than anticipated allocation of applicable G&A/COP costs than planned; 2) Continued efficiencies in-house engineering oversight for Tank Mixing & Sampling as well as acceleration of Test Loop Demonstration work; 3) *RA- Electrical Upgrade* efficiencies gained by consolidating tasks to obtain baseline field information and using existing engineering documents. In addition, work scope was advanced that did not require engineering staff which caused additional savings; 4) *RA- Tank Chemistry Control*, the estimate for fabrication coming in lower than planned resulting from applying lessons learned by the design of similar probes; 6) *RA- Interim Barrier Construction*, the re-coding of TY Barrier Construction from Baseline to Recovery Act. Timecard corrections, for labor cost, and a cost correction, for other resource types are being processed during February to move the cost from the Baseline WBS (5.2.1.4.9.4) to the Recovery Act WBS (5.2.1.10.2.1). The cost corrections will correct the to-date reporting for this activity; 7) received the Liquid Chromatograph/Mass earlier than planned; 8) *RA - DST Valve Assembly Upgrades*, over accrual of subcontractor cost in December; 9) *RA- 222S Drawing Reconstitution and As-building*, more walk-downs taking placed than planned increasing performance.

2) **Waste Feed Delivery/Treatment Planning/DST Retrieval/Closure, $1,264k:** 1) Interim Hanford Storage Facility (IHSF) draft engineering study reports were accomplished with less than planned contract resources; 2) implementation of cost transfer for 1200 Jadwin facility lease and furniture to capture cost consistent with scope and budget; 3) contracts to support flow sheet development not being awarded, unfilled engineering positions, and undefined scope; 4) unfilled positions and the delays in issuing contracts in Waste Feed Delivery.

TOC CTD unfavorable SV of ($8,582k) is driven by:

1) **Retrieval and Closure, ($5,882k):** 1) delays in starting C-104 retrieval operations as a result of problems with AN-101 Hot Operational Acceptance Test (OAT), the AN-101 supernatant pump over-pressurization protection, frozen water lines, and the repair of the Pressure/Flow Indicators in the POR138 Valve Box. Additional delays have resulted from mass balance discrepancies, AN-101 pump nitrogen seals, and vapor issues; and 2) delays in C-111

construction due to equipment removal difficulty due to objects blocking tank risers and delays in receipt of procured equipment. In addition, receipt of the two sluicers were delayed due to changing safety classification and additional source inspections being required;

2) **WFD/Treatment Planning/DST Retrieval/Closure, ($1,131k):** 1) *Lithium/Bayer Pretreatment Program* delays due to late receipt of Technology Innovation & Development (EM-30) funding from DOE which prevented work from progressing as originally planned; 2) due to the Blending Strategy Sampling not starting as a result of the unavailability of the core sampling truck. BCR RPP 10-092 is being prepared to adjust resources to align with the core sample truck availability. 3) Received letter of direction from DOE to defer Interim Hanford Storage Facility activities to FY11; and 4) hiring delays for WRF Project Support and key resources working on strategic initiatives.

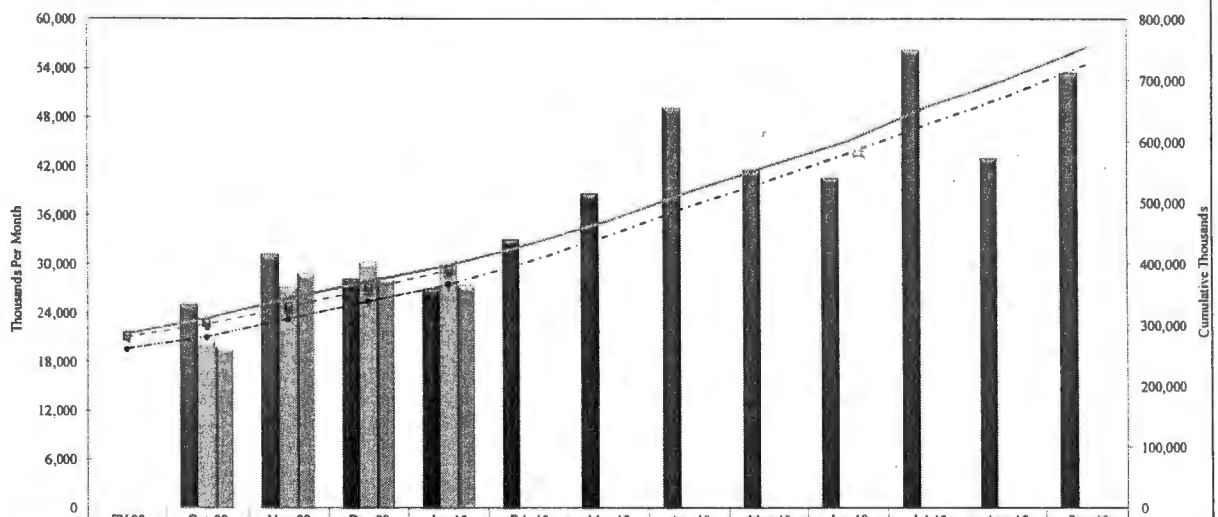
3) **Business Services, ($994k):** *Facility and Property Management*, resulting from the delays in awarding major contracts and delivery of the 2704HV Mobile Office project.

TOC CTD favorable CV of $23,491k is driven by:

1) **Recovery Act, $17,142k:** 1) lower than anticipated allocation of applicable G&A/COP costs than planned; 2) lower labor rates and quantity of Request for Offsite Service (ROS) personnel and subcontractors than initially planned associated with Program Management; 3) efficiencies during the Vent Reliability Study which found the AN exhauster evaluation bounds all the HVAC systems, and efficiently resolving National Electric Code (NEC) issues in SY Farm due to the assignment of a dedicated team; 4) lower field rate than planned and efficiencies gained through tank farm walk downs for drawing reconstitution; 5) less training cost than planned resulting from RA hiring delays; 6) vacant positions in Engineering; 7) savings by using an in-house engineer versus using a contractor for filter replacement removal and final disposal cost of HEPA filters was less than planned.

2) **Business Services, $7,868.3k:** 1) vacant positions in carpenters and janitors and the cost related to the delayed 2704 HV Mobile Office Project; 2) elimination of Business & Operating (B&O) tax related to the high tech tax credit; 3) lower than planned computer requirements for RA.

FY10 WRPS Cumulative-to-Date Performance ($k)



	FY 09	Oct-09	Nov-09	Dec-09	Jan-10	Feb-10	Mar-10	Apr-10	May-10	Jun-10	Jul-10	Aug-10	Sep-10
CM Plan (BCWS)		24,992	31,267	28,227	26,984	32,928	38,731	49,170	41,617	40,561	56,260	42,978	53,537
CM Perf (BCWP)		20,677	27,086	30,260	30,306								
CM Actuals (ACWP)		19,801	28,941	28,292	27,436								
CTD Plan (BCWS)	286,740	311,732	342,999	371,226	398,210	431,138	469,869	519,038	560,655	601,216	657,476	700,454	753,991
CTD Perf (BCWP)	281,299	301,976	329,062	359,322	389,628								
CTD Actuals (ACWP)	261,668	281,468	310,409	338,701	366,137								
CTD Actuals/FY ETC	261,668	281,469	310,410	338,702	366,137	403,223	445,034	493,906	536,611	581,529	630,144	673,717	727,064

BY WORK BREAKDOWN STRUCTURE
Dollars in Thousands

Cumulative Contract-To-Date

WBS	TITLE	Budgeted Cost Work Scheduled	Budgeted Cost Work Performed	Actual Cost Work Performed	Variance Schedule	Variance SV%	Variance Cost	Variance CV%	Budget at Completion (BAC)
5.1	BASE OPERATIONS								
5.1.1	Base Operations	97,060.0	96,743.0	97,311.1	(317.0)	-0.3%	-568.1	-0.6%	390,875.6
5.1.2	DST Space Management	8,165.9	8,017.9	10,269.3	(148.0)	-1.8%	-2,251.4	-28.1%	41,411.4
5.1.3	TOC Facility Operations	31,624.9	31,348.5	28,964.6	(276.4)	-0.9%	2,383.9	7.6%	148,849.1
5.1.4	Tank Farm Upgrades	17,024.8	16,395.0	11,334.1	(629.8)	-3.7%	5,060.9	30.9%	122,924.9
5.1.5	Project Support	132,590.1	131,176.4	116,947.3	(1,413.7)	-1.1%	14,229.1	10.8%	521,038.0
	TOTAL	286,465.7	283,680.8	264,826.4	(2,784.9)	-1.0%	18,854.4	6.6%	1,224,998.0
5.2	RETRIEVE AND CLOSE SSTs								
5.2.1	Retrieval/Closure Program	41,102.8	40,536.9	37,068.0	(565.9)	-1.4%	3,468.9	8.6%	162,557.6
5.2.2	SST Retrieval East Area	32,270.1	26,894.9	34,991.8	(5,275.2)	-16.7%	-8,096.9	-30.1%	203,620.3
5.2.3	SST Retrieval West Area	879.6	1,198.5	844.3	318.9	36.3%	354.2	29.6%	3,644.0
5.2.4	Closure Program	1,874.0	1,850.0	1,497.8	(24.0)	-1.3%	352.2	19.0%	8,964.9
5.2.5	SST Closure	1,147.3	1,022.8	470.0	(124.5)	-10.9%	552.8	54.0%	23,181.9
	TOTAL	77,273.8	71,503.1	74,871.9	(5,770.7)	-7.5%	-3,368.8	-4.7%	401,868.7
5.3	WFD/TREATMENT PLNG/DST RETRIEVAL/CLOSURE								
5.3.1	WTP Feed Delivery Program	16,170.0	16,313.2	12,068.8	143.2	0.9%	4,244.4	26.0%	86,632.5
5.3.2	Construct DST Retrieval Systems	4,622.9	4,517.0	4,221.4	(105.9)	-2.3%	295.6	6.5%	102,852.1
5.3.3	RA - Transfer System Mod Project	965.7	1,843.4	1,433.4	877.7	90.9%	410.0	22.2%	20,732.2
5.3.6	Immobilization Program	2,785.1	2,572.9	1,625.8	(212.2)	-7.6%	947.1	36.8%	54,822.3
5.3.7	WTP Operational Readiness	2,707.6	2,660.8	2,283.3	(46.8)	-1.7%	377.5	14.2%	16,019.4
5.3.8	East Area Waste Receiving Facility	490.8	349.8	114.5	(141.0)	-28.7%	235.3	67.3%	490.8
5.3.9	Tank Waste Pretreatment Project	1,129.9	742.0	646.4	(387.9)	-34.3%	95.6	12.9%	30,836.3
5.3.10	Secondary Waste Treatment/ETF	2,741.2	2,764.8	2,328.5	23.6	0.9%	436.3	15.8%	37,291.1
5.3.11	Next Generation Projects	2,234.6	2,311.4	1,452.5	86.8	3.9%	858.9	37.2%	51,784.5
	TOTAL	33,937.8	34,075.3	26,174.6	237.5	0.7%	7,900.7	23.2%	401,461.2
5.4	SUPPLEMENTAL TREATMENT								
5.4.1	Supplemental Treatment	632.4	368.5	263.9	(263.8)	-41.7%	104.7	28.4%	23,500.7
5.5									
5.5.2	Waste Treatment Facility	0.0	0.0	0.0	0.0	0.0%	0.0	0.0%	13,452.20
TFC TOTAL		398,209.8	389,627.8	366,136.7	(8,581.9)	-2.2%	23,491.1	6.0%	2,065,281.80

EARNED VALUE PERFORMANCE AT WBS LEVEL 3 AND 4

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

I. Near-Term Deliverables:

- **M45-55, Submit to Ecology for Review and Approval as an Agreement primary document a Phase 1 RFI Report**
  Due: 1/31/08
  Status: Complete. RFI in primary document revision process. DOE revised RFI, based on Ecology comments and resubmitted to Ecology on 10/07/09. Additional revisions have been identified and agreed upon. Additional changes to Chapter 1, Chapter 25, Chapter 27, Chapter 29, Appendix A and Appendix B have been made, and the revised document released. An update to Appendix G is underway to incorporate new data. All revisions will be provided to Ecology by April 30, 2010.

- **M-45-56E, 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 and future FY2009 anticipated activities. July 2009, meeting minutes drafted and jointly reviewed with signature obtained at January 2010 PMM. Consistent with FY2009 identified efforts, Ecology's TY Interim Barrier Public comment period closed January 22, 2010 Ecology provided approval of the TY barrier and monitoring system design in the January 2010 PMM, and a formal letter was provided. The construction contract has been placed. The annual barrier monitoring report PNNL-19123, "T Tank Farm Interim Surface Barrier Demonstration - Vadose Zone Monitoring FY09 Report", has been released. Met with Ecology on submitted 2009 Well Decommissioning plan, identified in the 2009 M45-56 meeting deliverables. Meeting minutes developed and notes Ecology approval of approach. Meeting minutes to be signed during the March 2010 PMM.

- **M-45-56F, Complete Implementation of Agreed to Interim Measures**
  Due: 07/31/10
  Status:

- **M45-58, Submit to Ecology for Review and Approval as an Agreement primary document, a phase 2 CMS Master Work Plan**
  Due: 12/31/08
  Status: Complete. Master Work Plan is in the Primary document revision process. DOE provided comment resolutions to Ecology on 10/13/09. Ecology provided clarification to comments by letter on December 10, 2009. ORP and Ecology have met to discuss and plan additional revisions to address the

clarifications. An informal copy of Revision 2 has been provided to Ecology and revision deliverable in concurrence.

- **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. ORP updated RFI/CMS Workplan and Sampling and Analysis Plan based on Ecology comments and resubmitted to Ecology, with approved Ecology RCRs on November 2, 2009 (letter 09-TPD-118). ORP expects a formal approval letter from Ecology.

- **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. Proposed milestone M-045-61 (HFFACO Change Control Form M-45-09-01) will revise the due date for this document to 12-31-2014.

- **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. Proposed milestone M-045-62 (HFFACO Change Control Form M-45-09-01) will revise the due date for this document to 6-30-2015.

II. Significant Accomplishments:

- T-Farm interim barrier monitoring continues; annual monitoring report issued.
- Continued direct push characterization in C Farm per the Phase 2 RFI/CMS work plan and SAP for WMA C.
- Due to schedule and spatial conflicts in C farm, moved direct push rig to TY Farm to place monitoring equipment for barrier.
- Conducted GPR survey of evapotranspiration pond adjacent to TY farm.
- Initiated re-baseline of soil moisture and gamma logging at TY farm.
- Initiated Direct Push in support of interim barrier development in S-SX.
- 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 data collection of well-to-well SGE Survey of A and AX Farms.
- Initiated set-up of electrode array at C farm over 200-UPR-E-86 for 3-D SGE survey of that site.

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.
- Complete analysis of well-to-well SGE survey of A and AX Farms to support evaluation of a potential future barrier site.
- Complete direct push sampling in S Farm based on findings of SGE analysis of SX data, to support evaluation of a potential future barrier site.Initiate construction of an interim surface barrier at TY farm.
- Initiate remedial technology assessments in support of a Corrective Measures Study for WMA C.

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
  Status: To Be Missed

- **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: Missed

- **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

- Retrieved C-104 to ~50% complete.
- Continued C-108 heel sample analysis at 222S laboratory.
- Initiated stack extension planning for POR008 and POR003 in C-Farm.
- Initiated design activities for C-112 sluicing system.
-
-
- Continued design for C-108 Hard Heel Retrieval System.
- Continued C-111 procurement and construction activities

III. Significant Planned Activities in the Next Six Months

- 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.
- Complete design for C-108 Hard Heel Retrieval system, and initiate procurement and construction activities.
- Complete C-111 construction and initiate retrieval.
- Complete C-112 design and initiate procurement.
- Initiate C-110 Heel sampling

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 Ecology and DOE complete their disposition of public comments on the newly proposed Consent Decree.

C-FARM RETRIEVAL SUMMARY SCHEDULE FORECASTS [a]

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	Complete	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	7/7/10	3/31/11	4/24/11	5/24/11	1/7/13	12/7/12	8/29/13
C-108[c]	Complete	Complete	Complete	Complete	12/3/10	10/15/10	7/8/11
C-109[cd]	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	Complete	6/18/10	7/29/10	8/17/10	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 statused February month-end Integrated Mission Execution Schedule (IMES) as of 2/25/10 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: In Abeyance per AIP .

- **M-45-02O-A, 3 Parties Shall Meet To Establish New Milestones Within 60 Days**
  Due: 04/30/10
  Status: In Abeyance per AIP

- **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: In negotiation. See discussion below under "Issues".

- **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: In negotiation. See discussion below under "Issues".

- **M-45-02Q, Submit Biennial Update to SST Retrieval Sequence Document**
  Due: 03/01/14
  Status: In negotiation. See discussion below under "Issues".

- **M-45-02Q-A, 3 Parties Shall Meet to Establish New Milestones Within 60 Days**
  Due: 04/30/14
  Status: In negotiation. See discussion below under "Issues".
- **M-045-02R, Submit Biennial Update to SST Retrieval Sequence Document**
  Due: 03/01/16
  Status: In negotiation. See discussion below under "Issues".

- **M-045-02R-A, 3 Parties Shall Meet to Establish New Milestones Within 60 Days**
  Due: 04/30/16
  Status: In negotiation. See discussion below under "Issues".

- **M-45-02S, Submit Biennial Update to SST Retrieval Sequence Document**
  Due: 03/01/18
  Status: In negotiation. See discussion below under "Issues".

- **M-45-02S-A, 3 Parties Shall Meet to Establish New Milestones Within 60 Days**
  Due: 04/30/18
  Status: In negotiation. See discussion below under "Issues".

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 the Fall of 2011.

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: At Risk. See discussion below under "Issues". 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: At risk. See discussion below under "Issues".

- **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: At risk. See discussion below under "Issues".

- **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: At risk. See discussion below under "Issues".

- **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: At risk.

II. Significant Accomplishments

- Continued to operate the S-102 exhauster to reduce the volume of supernatant liquid in the tank. A review of the January 25, 2010, video of the tank has shown approximately 2,000 gallons of supernatant liquid remaining. This is below the criteria for interim stabilization of less than 5000 gallons supernatant liquid.

III. Significant Planned Activities in the Next Six Months

- None.

IV. Issues

- Retrieval of Tank 241-S-102 was not completed by TPA milestone date of March 31, 2007, due to pump failure. It is technically imprudent to attempt to accelerate retrieval of S-102, at this time, because of the rheological nature of the waste.

- In a letter dated August 15, 2006, Ecology stated that submittal of Component Closure Activity Plans, for retrieved tanks, should continue to be suspended until June 30, 2009, or within 120 days after the Final Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS) Record Of Decision (ROD) is issued, whichever is earlier. In a letter dated November 12, 2009, Ecology extended its suspension until180 days after the issuance of the final TC&WM EIS. It is anticipated that the final TC&WM EIS will not be issued until the Spring or Summer of 2011. Submittal of the Closure Plan could not occur, then, until several months after the M-45-15 milestone is due.

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: At risk. See discussion below under "Issues". 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: At risk. See discussion below under "Issues".

- **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: At risk. See discussion below under "Issues".

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

In a letter dated August 15, 2006, Ecology stated that submittal of Component Closure Activity Plans, for retrieved tanks, should continue to be suspended until June 30, 2009, or within 120 days after the Final Tank Closure and Waste Management Environmental Impact Statement (TC&WM EIS) Record Of Decision (ROD) is issued, whichever is earlier. In a letter dated November 12, 2009, Ecology extended its suspension until180 days after the issuance of the final TC&WM EIS. It is anticipated that the final TC&WM EIS will not be issued until the Spring or Summer of 2011. Submittal of the Closure Plan could not occur, then, until several months after the M-45-15 milestone is due.

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 review of the January 25, 2010, video of the tank has shown approximately 2,000 gallons of supernatant liquid remaining. This is below the criteria for interim stabilization of less than 5000 gallons supernatant liquid.

II. Significant Accomplishments:

Continued to operate the S-102 exhauster to reduce the volume of supernatant liquid in the tank.

III. Significant Planned Actions in the Next 6 Months:

None.

IV. Issues

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

In Tank Characterization and Summary

For the period from February 1 – February 28, 2010:

I. Accomplishments:

- Completed liquid grab sampling of tank 241-AN-101 on February 28, 2010.
- Completed revision 0 of RPP-44225, *Tank 241-C-107 Data Assessment Report*, on February 2, 2010.
- Completed revision 0 of RPP-44630, *Derivation of Best-Basis Inventory for Tank 241-AY-102*, on February 3, 2010.
- Completed revision 0 of RPP-44637, *Derivation of Best-Basis Inventory for Tank 241-AZ-101*, on February 8, 2010.
- Completed revision 0 of RPP-44643, *Derivation of Best-Basis Inventory for Tank 241-SY-102*, on February 3, 2010
- Completed revision 0 of RPP-44814, *Derivation of Best-Basis Inventory for Tank 241-AN-101*, on February 10, 2010

II. Planned Action within the next Six Months:

- Tank Sampling
  - Tank 241-AP-107 evaporator grab samples scheduled for April 2009.
  - Tank 241-AN-101 post C-104 retrieval scheduled for May 2010.
  - Tank 241-AZ-101 corrosion mitigation liquid grabs scheduled for March 2010.
  - Tank 241-AN-103 corrosion mitigation liquid grabs scheduled for June 2010.
  - Tank 241-AN-104 corrosion mitigation liquid grabs scheduled for July 2010.
  - Tank 241-AN-107 corrosion mitigation liquid grabs scheduled for April 2010.
  - Tank 241-C-110 off riser sampling scheduled for July 2010.
  - Tank 241-C-108 off riser sampling scheduled for June 2010.

- BBI Updates
  - Twelve tank updates are planned for the first second quarter of fiscal year 2010.
    - Four tank updates are complete and the eight others have been started.

- Data Quality Objectives (DQO)
  - Complete revision 11 of the Chemistry Control DQO in April 2010.
  - Complete revision 16 of the Compatibility DQO in March 2010.
  - Complete revision 0 of the Mission Analysis/Strategic Planning DQO in April 2010.
  - Complete revision 0 of C-301 retrieval, transfer, and component closure DQO in June 2010.

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)

242-A Campaign strategy:

- FY10. 1 campaign using AW-106 as the feed and slurry tank. This waste requires 2 passes to achieve forecast waste volume reduction.
- FY11. 2 campaigns with feed from AP-107 and AZ-102. Slurry tanks will be AP-104/AP-107.
- FY12. 1 campaign with feed from AY-101 and slurry to AP-107. This campaign replaces a Cold Run in the baseline.

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 6/25/09. 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	AW-106	AW-106	Planned waste processing start April2010.
FY11	11-01	AP-107	AP-104	Planned start March 2011. Campaigns 11-01 and 11-02 to be performed back-to-back
FY11	11-02	AZ-102	AP-104/ AP-107	
FY12	12-01	AY-101	AP-017	Planned start March 2012.

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: 12/31/2009
  Status: Complete.

- **M-62-01S, Submit Semi-Annual Project Compliance Report**
  Due: 07/31/2009
  Status: Complete.

- **M-62-01T, Submit Semi-Annual Project Compliance Report**
  Due: 12/31/2010
  Status: Complete.

- **M-62-01U, Submit Semi-Annual Project Compliance Report**
  Due: 07/31/2010
  Status:

- **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 3,100 FTE equivalent contractor [Bechtel National Inc. (BNI)] and subcontractor personnel working on the WTP Project, with about 915 craft, 400 non-manual, and about 285 subcontractor personnel FTE equivalents working at the WTP construction site (all facilities). Overall project percent complete through January 2010 is 53%, design and engineering is 78% complete, and construction is 49% complete.

The overall WTP Project schedule variance (SV) was negative in January at ($6.0M), as well as was the cost variance (CV) at a negative ($1.2M). The negative monthly SV performance came mostly from Engineering, Plant Equipment, and Construction. The negative CV came mostly from Plant Material.

Following is the status through the end of February for current project issues:

Material at Risk (MAR)

The MAR/HPAV Integrated Change Package (ICP) Safety Evaluation Report (SER) was approved by the ORP Manager on October 31, 2009, with four Conditions of Acceptance (COA). The four COAs address the following subject areas: (1) Hydrogen in Piping and Ancillary Vessels (HPAV) piping design criteria (Closed in February 2010); (2) BNI to develop a plan and schedule for resolving technical comments on six primary reports referenced in the SER (Completed in December 2009); (3) Develop a plan and schedule for resolving the uncertainties identified in PDSA Addendum Section 2.7 (This COA will not be closed until the uncertainties are adequately resolved and approved by ORP; and (4) BNI will recommend application of seismic criteria for piping performing a safety significant confinement function (Closed in March 2010). The COAs are closed as work is completed, with a completion of all COAs estimated in June 2010. The ICP approval enables elimination of many active process controls located outside of the hot cell and reclassification of several Safety Class controls to Safety Significant, while retaining a core set of Safety Class controls sufficient to ensure safety for the public and the workers. ORP considers these changes essential to ensuring a more reliable Pretreatment Facility that is critical to fulfilling the tank waste treatment mission, the cornerstone to the cleanup of tank waste at Hanford. The schedule for completion of the COAs

aligns with critical design and procurement need dates, so overall construction schedules are not affected.

Hydrogen in Piping and Ancillary Vessels (HPAV)

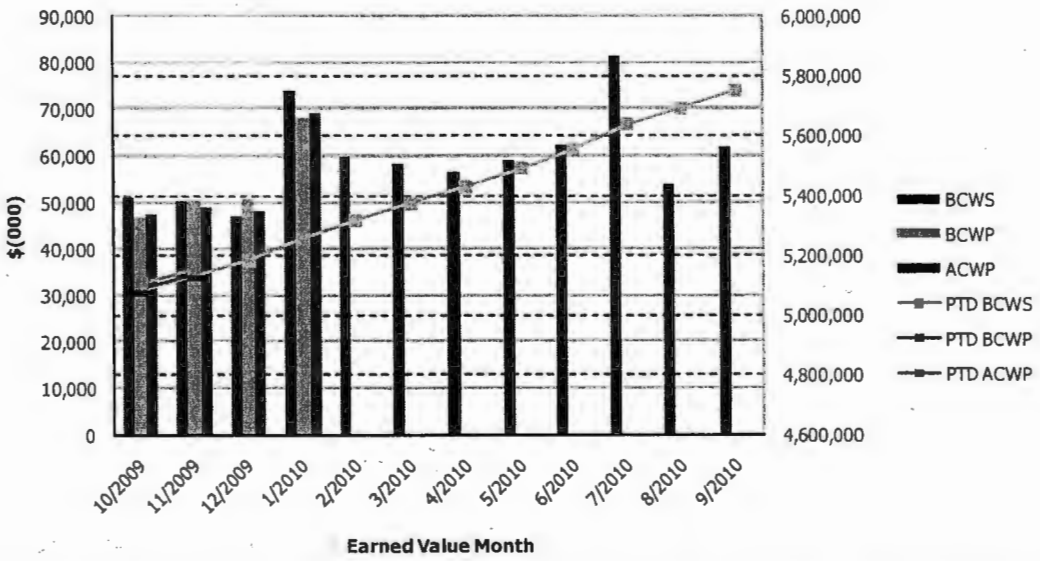
Based on recommendations by the HPAV team chartered in February 2009, ORP and BNI have evaluated team recommendations that could result in removing unnecessary complexity in the control strategy, while still maintaining safety commensurate to the risk. Follow-on testing at CalTech continues, and is to be completed in March 2010. In addition, BNI had contracted with Dominion Engineering, who subcontracted to the Southwest Research Institute, to perform HPAV testing which was completed in January 2009. Subsequently, BNI again contracted with Dominion Engineering for an additional scope of testing at the Southwest Research Institute which completed in December 2009. Results from all testing programs are used to evaluate any impacts (e.g., reduction in classification of systems, structures, or components) on the safety analysis and design.

The ORP Manager approved revised design criteria, prepared by BNI, for protecting against hydrogen hazards while minimizing design complexity and maintaining adequate public, worker, and environment safety protection in February 2010. The approval of the revised design criteria addressing hydrogen hazards for the Pretreatment Facility was required to support critical piping engineering design and procurement to move forward without impacting the overall construction schedule. The revised design criteria and strategy were reviewed by three renowned experts in the field of piping design, code application, and hydrogen hazard phenomenology and deemed reasonable and consistent with American Society of Mechanical Engineers code B31.3, Standards of Pressure Piping, Process Piping.

WTP – Fiscal Year To-Date Performance

River Protection
01-D-416 - Waste Treatment Plant (WTP) Project

Monthly EVMS Monthly and Project-to-Date (PTD) Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	PTD BCWS	PTD BCWP	PTD ACWP	PTD SPI	PTD CPI
Oct 2009	$51,264	$46,742	$47,659	0.91	0.98	$5,085,500	$5,087,620	$5,107,437	1.00	1.00
Nov 2009	$50,479	$50,256	$48,883	1.00	1.03	$5,135,980	$5,137,877	$5,156,320	1.00	1.00
Dec 2009	$47,078	$50,905	$48,202	1.08	1.06	$5,183,058	$5,188,782	$5,204,522	1.00	1.00
Jan 2010	$74,085	$68,098	$69,303	0.92	0.98	$5,257,143	$5,256,880	$5,273,825	1.00	1.00
Feb 2010	$59,932					$5,317,075				
Mar 2010	$58,223					$5,375,298				
Apr 2010	$56,649					$5,431,947				
May 2010	$58,954					$5,490,901				
Jun 2010	$62,517					$5,553,418				
Jul 2010	$81,609					$5,635,027				
Aug 2010	$53,895					$5,688,922				
Sep 2010	$62,109					$5,751,031				
FY - To-Date	$222,906	$216,001	$214,047	0.97	1.01					

Pretreatment (PT) Facility – Feb 2010 Accomplishments (Jan 10 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 49%, engineering/design is 77% complete, and construction is 29% complete.

Overall construction has been performing well, especially in the area of concrete and steel installation. Construction installations for the month of January include: 841 cubic yards (CY) of concrete, 106 tons of rebar, 29,000 lbs of embeds and 167 tons of structural steel. There were seven concrete placements – five walls and two slabs – during the month. Installation of ductwork by the HVAC subcontractor is behind schedule; however, BNI and the subcontractor have developed a plan to significantly increase production. Ductwork fabrication and installation by the subcontractor is forecasted to recover by the spring of 2011. Rebar installation continues to support additional slab placements at the 77-ft elevation. Structural steel installations continue on the south side of the facility. Installation of piping and liner plates, welding of vessels in Black Cells; Installation of HVAC ductwork, fabrication of rebar curtains, application of Special Protective coatings, and installation of waste transfer dock crane rail girder are on-going.

PT engineering issued 3,086 ft of piping isometric drawings during the month, with the issued linear footage of piping continuing to exceed the cumulative baseline. Engineering performance continues to benefit from the process improvement in the method of data sheets development.

Two alternative options for the mitigation of solids formation in the Cesium Ion Exchange Process (CXP) system are under evaluation by ORP for a decision by March 2010.

Development of key requirement and planning documents to underpin the mixing issue (M3) identified by the External Flowsheet Review Team is complete. The response effort including analysis and associated testing continue as part of the resolution to resolve the M3 issue. The response effort is on track to close the issue prior to the proposed consent decree milestone of June 2010. Additionally, alternate PJM arrays have been fabricated, installed, and commissioned for potential modifications to the HLP-22 and UFP-1 vessels. BNI is working closely with ORP in the development of documentation and test plans to facilitate timely closure of this issue. Testing has been initiated for the FEP and UFP vessels. An alternate back-up

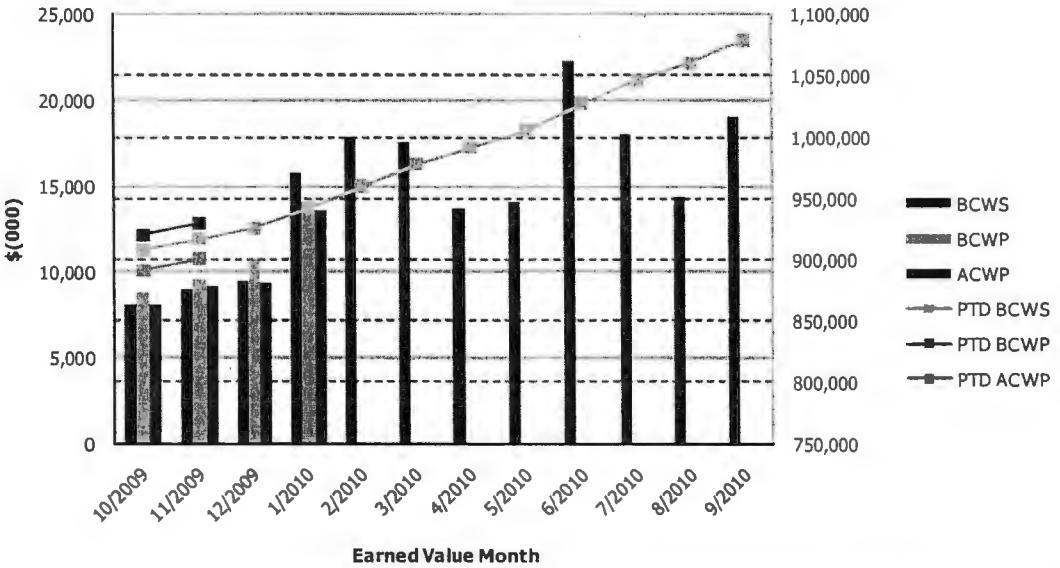
plan has been developed, in case the testing and planned modifications of the PJMs do not result in adequate mixing.

Resolution of MAR/HPAV, CXP precipitation issue and the vessel mixing are inter-related, hence the full impact of the implementation of these resolutions will not be known until the integrated implementation plans are developed in July 2010.

Re-analysis and fabrication modifications of various numbers of vessels due to seismic and other dynamic load increases are ongoing. Design and fabrication of vessels UFP-1A and 1B and HLP-27A and 27B are the current critical path activities for PT. Evaluations of the vendor's schedules are being performed to identify areas where schedule improvements can be achieved. Furthermore, some of the vessel analyses are being contracted out to mitigate the contractor resource constraints and expedite fabrication. A number of complex jumper and frame designs have been completed; vendor bids for the first jumper frame have been received and the quotes are significantly higher than budget. BNI is evaluating the procurement solicitation to determine ways to reduce vendor quotes.

River Protection
01-D-16E - Pretreatment Facility

Facility Specific (unallocated) Monthly and Project-to-Date (PTD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	PTD BCWS	PTD BCWP	PTD ACWP	PTD SPI	PTD CPI
Oct 2009	$8,121	$8,762	$8,153	1.08	1.07	$907,724	$920,488	$891,343	1.01	1.03
Nov 2009	$8,991	$9,625	$9,213	1.07	1.04	$916,715	$930,112	$900,556	1.01	1.03
Dec 2009	$9,493	$10,767	$9,366	1.13	1.15	$926,208	$940,879	$909,922	1.02	1.03
Jan 2010	$15,776	$13,724	$13,599	0.87	1.01	$941,984	$954,603	$923,521	1.01	1.03
Feb 2010	$17,881					$959,865				
Mar 2010	$17,608					$977,474				
Apr 2010	$13,729					$991,202				
May 2010	$14,156					$1,005,358				
Jun 2010	$22,274					$1,027,632				
Jul 2010	$18,113					$1,045,744				
Aug 2010	$14,380					$1,060,124				
Sep 2010	$19,064					$1,079,188				
FY - To-Date	$42,381	$42,878	$40,331	1.01	1.06					

High-Level Waste (HLW) Facility – Feb 2010 Accomplishments (Jan 10 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 required production rates. 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 83% complete and construction is 25% complete. The overall facility is 50% complete.

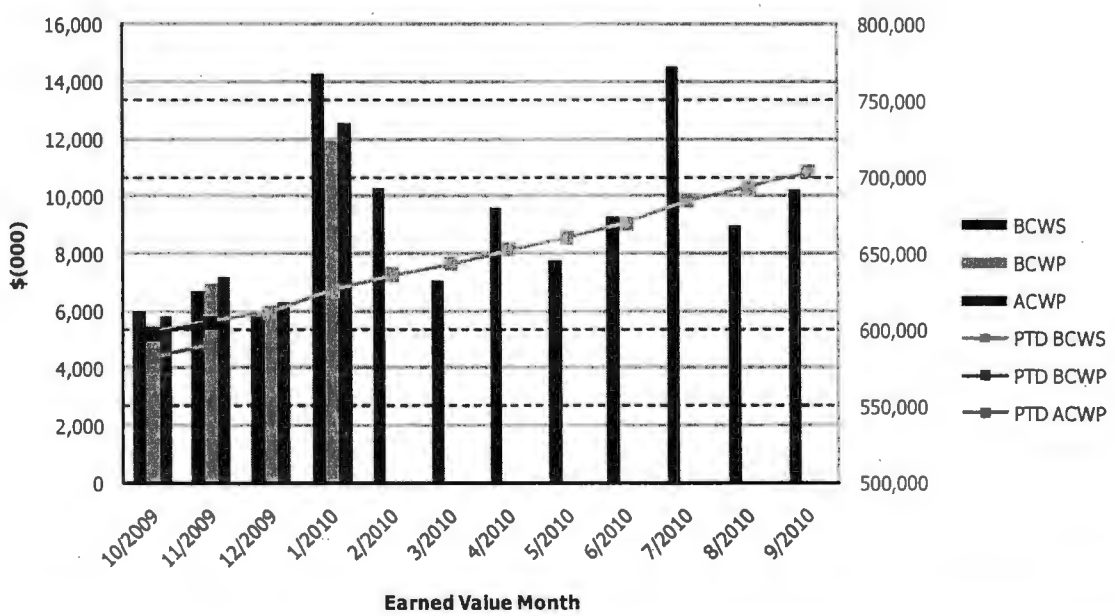
Late in January 2010, the WTP contractor completed a critical path elevation +14' concrete slab placement (slab 2014) approximately two months ahead of schedule. This construction acceleration resulted in a new critical path for the HLW Facility. The updated critical path includes the build-out of the Filter Cave which contains the facility's primary ventilation (C5V), pulse jet vent, and melter off-gas HEPA filtration units. Completing the Filter Cave involves finalizing the design of ducting, support steel, and equipment; procurement, fabrication, and qualification of the various components; and coordination of the installation activities. For optimum efficiency, the Filter Cave's sizable offgas components, support steel, and large-bore ducting will be placed via crane "over the top" of the surrounding Filter Cave walls before the structural steel and decking installation activities for the slab overhead (slab 3027 at the +40' elevation) start in May 2012. Engineering is continuing to support the critical path and is completing the design and procurement activities per schedule. In order to trace the multiple, concurrent design engineering and procurement activities and monitor the sequencing, a detailed Level-5 schedule is used, reviewed on a daily basis, and briefed to Senior Management weekly.

Construction placed five slabs and one wall at elevation +14' for a total of 359 cubic yards (CY) of concrete placements in February. The six placements exceeded the February goal of four placements. The acceleration of construction, by the addition of 44 additional craft since April 2009, continues to meet or exceed the monthly recovery plan goals. Construction remains on pace to fully recover to the replan by July 2010. In March, construction plans to complete six more concrete placements (four slabs and two walls) for a total of 669 CY. Completing the four slabs in March will complete all of the concrete slabs on elevation +14'.

- At the +37' elevation at the northwest corner of the facility (annex), crews continued the installation of embeds and pour stops, edge forms, and hand rails. In addition, preparations were made for erection of more structural steel.
- At the +14' elevation, iron workers continued to install rebar for walls and slabs for walls and slabs at various locations as well as decking, anchor bolts, and embeds. Carpenter crews continued to work on wall and slab forms and shoring while electricians and pipefitters continued installing embeds and joggles.
- At the +0' elevation, iron workers are installing steel and rebar at the east end (canister export truck bay), painters were sandblasting and applying coatings, pipefitters continued to install piping over the 904 vessel, cement masons worked on truing grillage, and millwrights were installing shield door rails.
- At the -21' elevation, millwrights worked shield doors, pipefitters continued installing off-gas piping and supports, and painters worked on coating pipe supports. Subcontractors worked on installing liner plate in the Wet Cell and Rinse Tunnel.

River Protection
01-D-16D - High-Level Waste Facility

Facility Specific (unallocated) Monthly and Project-to-Date (PTD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	PTD BCWS	PTD BCWP	PTD ACWP	PTD SPI	PTD CPI
Oct 2009	$6,029	$5,415	$5,799	0.90	0.93	$599,008	$597,499	$583,042	1.00	1.02
Nov 2009	$6,675	$6,939	$7,190	1.04	0.97	$605,682	$604,438	$590,232	1.00	1.02
Dec 2009	$5,810	$5,887	$6,316	1.01	0.93	$611,492	$610,325	$596,548	1.00	1.02
Jan 2010	$14,300	$11,915	$12,602	0.83	0.95	$625,792	$622,240	$609,150	0.99	1.02
Feb 2010	$10,304					$636,097				
Mar 2010	$7,093					$643,189				
Apr 2010	$9,587					$652,776				
May 2010	$7,769					$660,545				
Jun 2010	$9,268					$669,813				
Jul 2010	$14,529					$684,342				
Aug 2010	$8,963					$693,304				
Sep 2010	$10,214					$703,518				
FY - To-Date	$32,814	$30,156	$31,907	0.92	0.95					

Low-Activity Waste (LAW) Facility – Feb 2010 Accomplishments (Jan 10 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 68%, design is 90%, and construction is 58%.

BNI Engineering continued to confirm calculations and issue drawings for completion of design and in support of construction. Material Requisitions are being finalized for the Thermo-Catalytic Oxidizer (TCO) and Exhausters (critical path for LAW construction complete). The engineering specification for the TCO was issued in February.

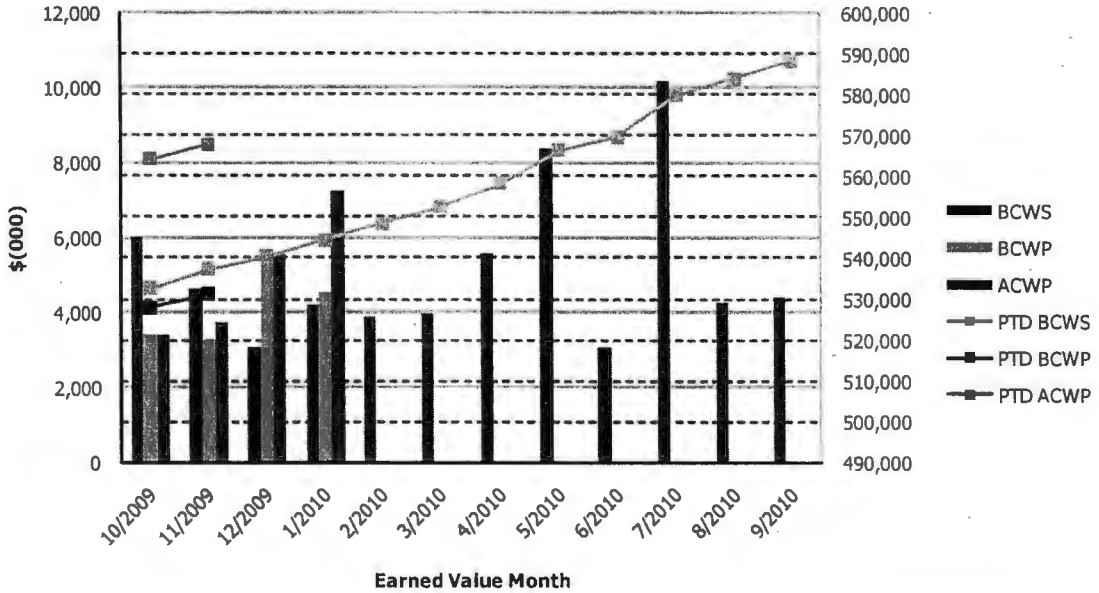
Construction continued: installing, piping and hangers, conduit, cable tray, gypsum wallboard, perimeter sealants, panels and transformers and metal-stud framing. ORP is currently working with BNI to resolve the issue for use of combustible insulation in the LAW Annex roof assembly. BNI has responded to the letter issued by ORP in February. The letter details the path forward for resolution of the LAW Annex Roof Assembly. BNI plans to coat the underside of the LAW Annex Roof with thermal barrier. The planned completion date is November 2010.

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 subcontractor. Early results indicate modifications to existing equipment will be required. Expected completion date of the analysis has shifted due to early March 2010 due to set backs at the subcontractor level.

In March, BNI construction plans to set the Tepid Water System in place at the +48-ft elevation and to complete installation of roof and wall liner plates in the melter bays (planning areas 3C & D).

River Protection
01-D-16A - Low-Activity Waste Facility

Facility Specific (unallocated) Monthly and Project-to-Date (PTD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	PTD BCWS	PTD BCWP	PTD ACWP	PTD SPI	PTD CPI
Oct 2009	$6,032	$3,420	$3,401	0.57	1.01	$532,553	$527,939	$564,229	0.99	0.94
Nov 2009	$4,657	$3,275	$3,738	0.70	0.88	$537,211	$531,215	$567,968	0.99	0.94
Dec 2009	$3,082	$5,679	$5,588	1.84	1.02	$540,293	$536,893	$573,556	0.99	0.94
Jan 2010	$4,215	$4,555	$7,254	1.08	0.63	$544,508	$541,448	$580,810	0.99	0.93
Feb 2010	$3,895					$548,403				
Mar 2010	$4,005					$552,408				
Apr 2010	$5,609					$558,017				
May 2010	$8,391					$566,408				
Jun 2010	$3,103					$569,511				
Jul 2010	$10,177					$579,688				
Aug 2010	$4,252					$583,940				
Sep 2010	$4,404					$588,344				
FY - To-Date	$17,986	$16,929	$19,981	0.94	0.85					

Analytical Laboratory (LAB) – Feb 2010 Accomplishments (Jan 10 EVM Data)

The LAB will support WTP operations by analyzing feed, vitrified waste, and effluent streams. Overall facility complete for LAB is 49%, design is 79%, and construction is 60%.

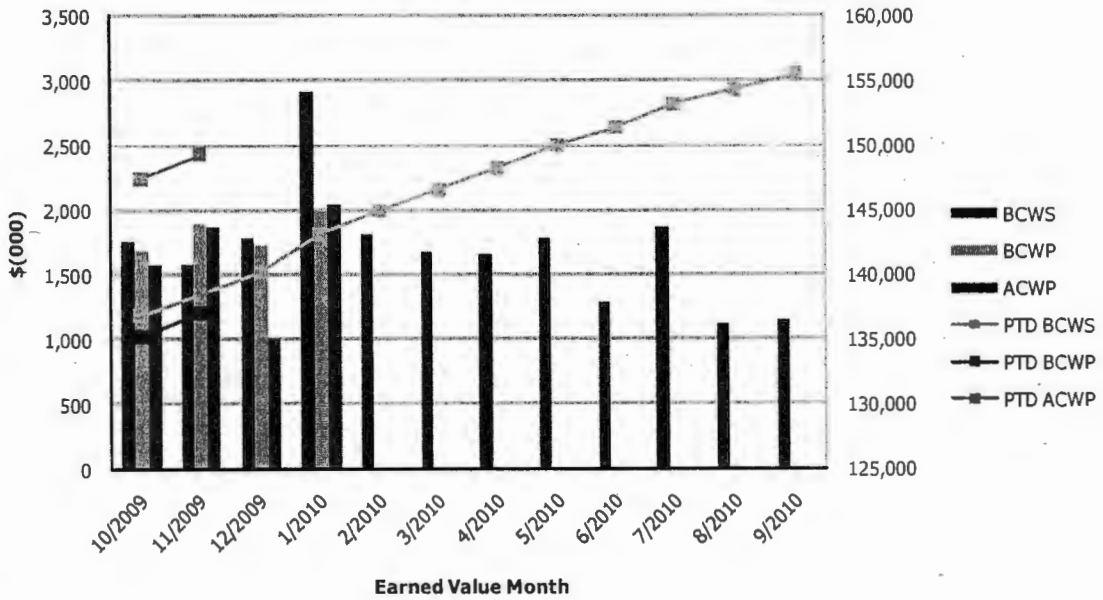
LAB engineering continues to focus on confirmation of design. Confirmation of LAB design is currently on track for November this year. Commencement of LAB Autosampling System (ASX) Equipment factory acceptance testing was delayed to March as BNI continues to improve their factory acceptance testing program.

The major construction accomplishment for February was completion of liner plate installation in the hotcell. ORP is currently working with BNI to resolve the issue for use of combustible insulation in the LAB roof assembly. BNI has responded to the letter issued by ORP in February. The letter details the path forward for resolution of the LAB Roof Assembly. BNI is evaluating the cost and schedule impacts for various technically acceptance paths forward. BNI will present the selected option to ORP in April 2010.

Key Accomplishments planned for the next 30 days are commencement of the LAB ASX equipment factory acceptance testing.

River Protection
01-D-16B - Analytical Laboratory

Facility Specific (unallocated) Monthly and Project-to-Date (PTD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	PTD BCWS	PTD BCWP	PTD ACWP	PTD SPI	PTD CPI
Oct 2009	$1,756	$1,681	$1,579	0.96	1.06	$136,852	$135,189	$147,452	0.99	0.92
Nov 2009	$1,583	$1,896	$1,864	1.20	1.02	$138,435	$137,085	$149,316	0.99	0.92
Dec 2009	$1,779	$1,735	$1,015	0.98	1.71	$140,213	$138,820	$150,331	0.99	0.92
Jan 2010	$2,916	$1,993	$2,040	0.68	0.98	$143,129	$140,813	$152,371	0.98	0.92
Feb 2010	$1,816					$144,945				
Mar 2010	$1,667					$146,612				
Apr 2010	$1,659					$148,271				
May 2010	$1,786					$150,057				
Jun 2010	$1,287					$151,344				
Jul 2010	$1,867					$153,212				
Aug 2010	$1,118					$154,330				
Sep 2010	$1,148					$155,477				
FY - To-Date	$8,034	$7,305	$6,498	0.91	1.12					

Balance of Facilities (BOF) – Feb 2010 Accomplishments (Jan 10 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 53%, design/engineering is 80%, and construction is 56%.

Construction activities for February were mainly focused on trench work, Water Treatment Building (WTB), Glass Former Facility (GFF), and the Chiller Compressor Plant (CCP).

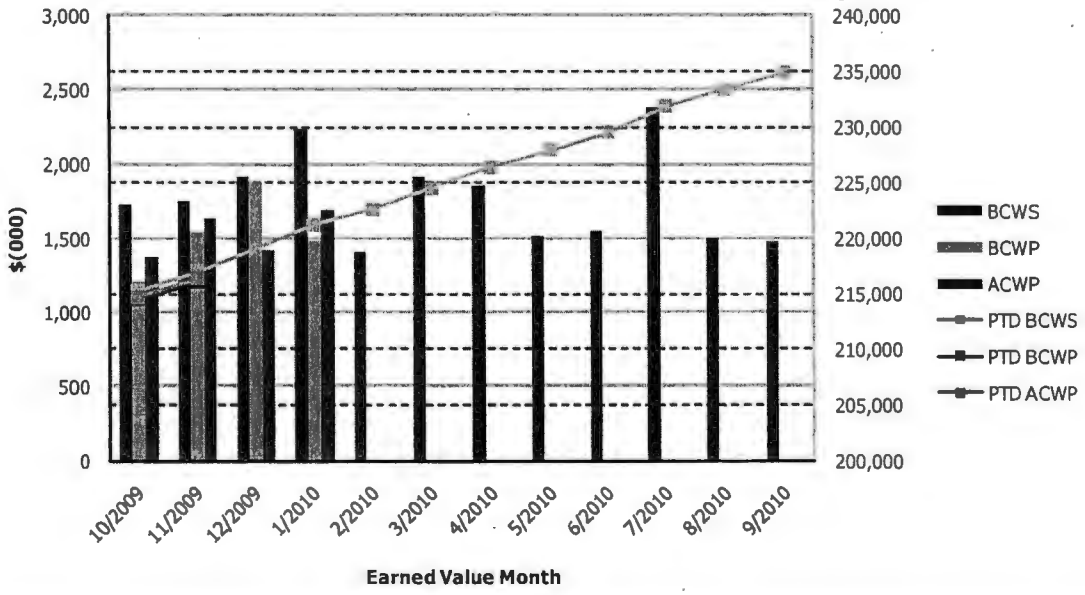
In February the BNI Engineering focus was on Emergency Diesel Generator (EDG) vendor visits and finalizing EDG procurement specifications. Most comments from ORP have been resolved; however the EDG procurement is on hold for up to 90 days to allow any MAR impacts to be better understood.

BNI Engineering continued to focus on activities for confirmation of design and support to construction. BNI is currently performing the non-radioactive liquid waste disposal (NLD) mass balance to determine if an additional holding tank is needed for the NLD system. The NLD mass balance calculation is planned to be completed by the end of April 2010.

Major accomplishments in BOF for the next 30 days are to start the building erection of the Glass Former Facility control room and to complete the final excavation and coating for connection bolts on the Fire Water system.

River Protection
01-D-16C - Balance of Facilities

Facility Specific (unallocated) Monthly and Project-to-Date (PTD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	PTD BCWS	PTD BCWP	PTD ACWP	PTD SPI	PTD CPI
Oct 2009	$1,733	$1,205	$1,374	0.70	0.88	$215,317	$214,523	$214,779	1.00	1.00
Nov 2009	$1,752	$1,537	$1,636	0.88	0.94	$217,069	$216,090	$216,415	1.00	1.00
Dec 2009	$1,921	$1,889	$1,428	0.98	1.32	$218,990	$217,979	$217,843	1.00	1.00
Jan 2010	$2,233	$1,482	$1,700	0.66	0.87	$221,223	$219,461	$219,543	0.99	1.00
Feb 2010	$1,410					$222,633				
Mar 2010	$1,920					$224,553				
Apr 2010	$1,866					$226,419				
May 2010	$1,522					$227,940				
Jun 2010	$1,551					$229,491				
Jul 2010	$2,385					$231,876				
Aug 2010	$1,501					$233,377				
Sep 2010	$1,483					$234,861				
FY - To-Date	$7,639	$6,113	$6,138	0.80	1.00					

Waste Treatment Plant Project - Percent Complete Status

Through January 2010

(Dollars - Millions)	Overall Facility Percent Complete Allocated Dollars			Design/Engineering Unallocated Dollars			Construction Unallocated Dollars		
Facilities	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete
Low-Activity Waste	1,682.7	1,147.6	68%	209.6	189.2	90%	296.7	170.7	58%
Analytical Lab	634.7	310.1	49%	49.3	39.1	79%	85.7	51.7	60%
Balance of Facilities	985.6	520.7	53%	68.4	54.6	80%	218.5	122.5	56%
High-Level Waste	2,582.6	1,284.4	50%	319.4	264.5	83%	508.8	126.6	25%
Pretreatment	4,076.7	1,994.1	49%	594.8	458.0	77%	812.9	239.3	29%
Shared Services	incl. above	incl. above	incl. above	1,059.7	793.0	75%	1,336.3	880.6	66%
Undistributed Budget	5.9	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total WTP	**9,968.2**	**5,256.9**	**53%**	**2,301.2**	**1,798.4**	**78%**	**3,258.9**	**1,591.4**	**49%**

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				
Commodity	Unit of Measure	Current Forecast at Completion Quantity	Installed through January 2010	Percent Complete
Concrete	1000 cy	262.31	194.83	74.3%
Structural Steel	1 ton	39,592	15,134	38.2%
Piping (in buildings)	1000 lf	912.96	172.93	18.9%
Piping (underground)	1000 lf	116.01	95.70	82.5%
HVAC Duct	1000 lbs	4,303.60	1,091.19	25.4%
Cable Tray	1000 lf	97.79	20.73	21.2%
Conduit (in buildings)	1000 lf	1,010.79	110.92	11.0%
Conduit (underground)	1000 lf	191.90	176.22	91.8%
Cable and Wire	1000 lf	4,944.23	261.09	5.3%

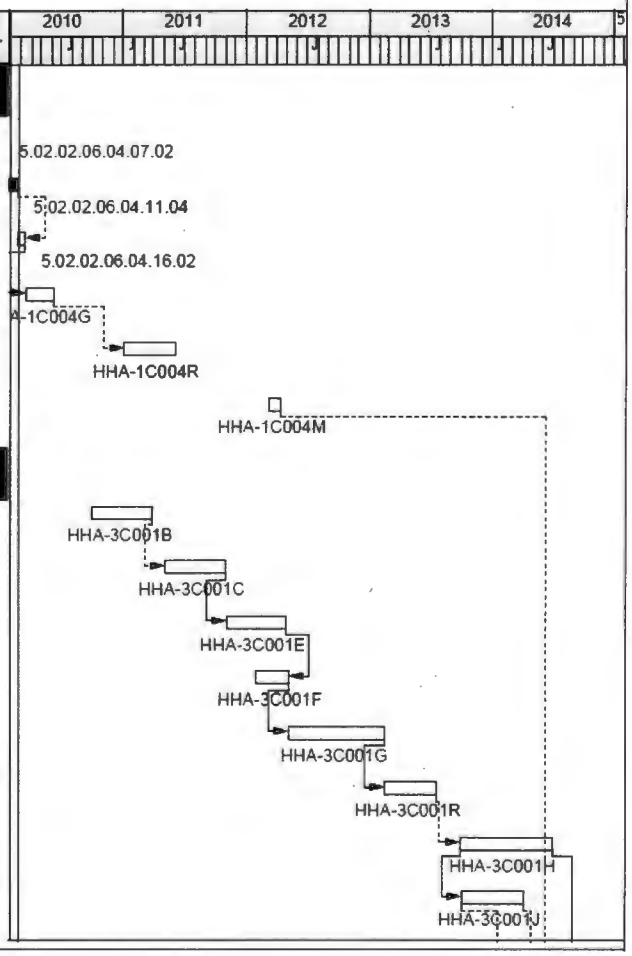
TPA Critical Path Schedule

M-B-1

Complete C Farm Retrieval

M-TPA CP M-B-1 Complete C Farm Retrieval 22-Mar-2010 15:38

Line Number	Activity Name	Forecast Start	Forecast Finish	BL Project Start	BL Project Finish	Days Ahead + or Behind -
104						
	C-104 Retrieval Start-up/Testing Support	11-Feb-2009 A	08-Jan-2010 A	29-Apr-2009	30-Jun-2009	
	C-104 Retrieval Operations to 25%	08-Jan-2010 A	18-Feb-2010 A	27-Jan-2010	24-Feb-2010	
	C-104 Acceleration Tank Retrieval Ops (Supplemental)	18-Feb-2010 A	16-Mar-2010	22-Feb-2010	30-Mar-2010	1107
	C-104 Retrieval Operations (MS)	17-Mar-2010*	08-Jun-2010	17-Mar-2010	08-Jun-2010	1107
	C-104 Sample for HHR Decision	03-Jan-2011*	02-Jun-2011	03-Jan-2011	02-Jun-2011	898
	C-104 Hard Heel Rmvl Operations	07-Mar-2012	15-Apr-2012	07-Mar-2012	15-Apr-2012	898
101						
	C-101 Retrieval Design	01-Oct-2010*	01-Apr-2011	01-Oct-2010	01-Apr-2011	156
	C-101 Retrieval Procurement	06-May-2011	03-Nov-2011	06-May-20...	03-Nov-2011	121
	C-101 Retrieval System Installation	04-Nov-2011	27-Apr-2012	04-Nov-2011	27-Apr-2012	121
	C-101 Retrieval Startup and Readiness	30-Jan-2012	07-May-2012	30-Jan-2012	07-May-2012	121
	C-101 Retrieval Operations (MRS)	08-May-2012	19-Feb-2013	08-May-20...	19-Feb-2013	121
	C-101 Sample for HHR Decision	20-Feb-2013	22-Jul-2013	20-Feb-2013	22-Jul-2013	121
	C-101 Hard Heel Rmvl Design & Engineering Support	01-Oct-2013*	02-Jul-2014	01-Oct-2013	02-Jul-2014	50
	C-101 Hard Heel Rmvl Procurement	09-Oct-2013	10-Apr-2014	09-Oct-2013	10-Apr-2014	123



Status: C-104 began bulk retrieval operations January 12, 2010 and retrieved over 30% of the waste by February month end. (Current status is 75% retrieved.)

Recovery Action: Recovery actions to initiate tank retrieval and complete pre-retrieval DST-DST transfers were completed to allow a January 12th initiation.

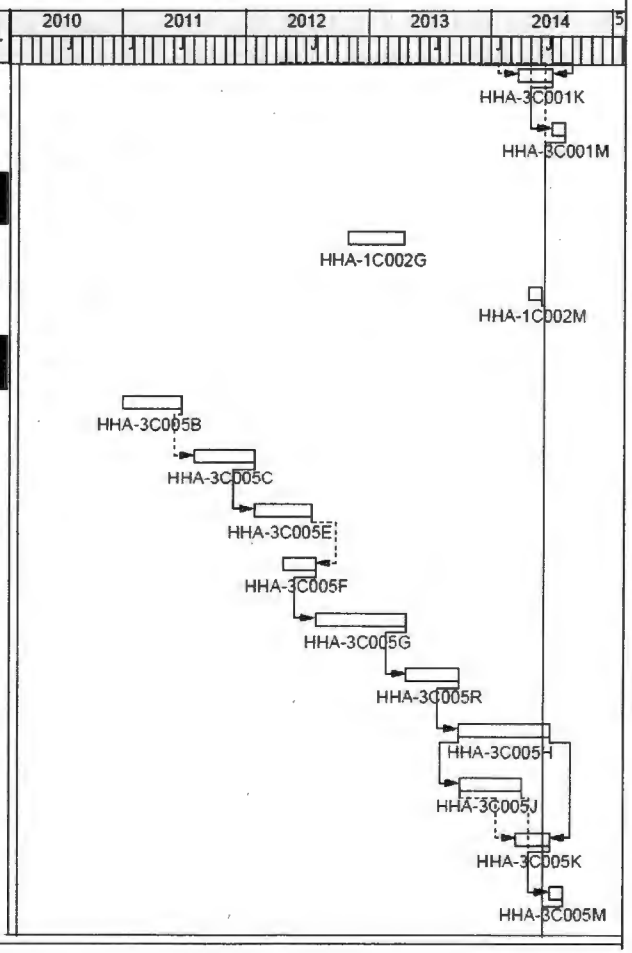
TPA Critical Path Schedule

M-B-1

Complete C Farm Retrieval

M-TPA CP M-B-1 Complete C Farm Retrieval 22-Mar-2010 15:36

Line Number	Activity Name	Forecast Start	Forecast Finish	BL Project Start	BL Project Finish	Days Ahead + or Behind -
	C-101 Hard Heel Rmvl Installation	26-Mar-2014	02-Jul-2014	26-Mar-2014	02-Jul-2014	50
	C-101 Hard Heel Rmvl Operations	03-Jul-2014	11-Aug-2014	03-Jul-2014	11-Aug-2014	50
102						
	C-102 Retrieval Operations (MS)	02-Nov-2012	20-Apr-2013	02-Nov-2012	20-Apr-2013	118
	C-102 Hard Heel Rmvl Operations	25-Apr-2014	04-Jun-2014	25-Apr-2014	04-Jun-2014	118
105						
	C-105 Retrieval Design	03-Jan-2011*	28-Jun-2011	03-Jan-2011	28-Jun-2011	85
	C-105 Retrieval Procurement	02-Aug-2011	31-Jan-2012	02-Aug-2011	31-Jan-2012	50
	C-105 Retrieval System Installation	01-Feb-2012	20-Jul-2012	01-Feb-2012	20-Jul-2012	50
	C-105 Retrieval Startup and Readiness	23-Apr-2012	31-Jul-2012	23-Apr-2012	31-Jul-2012	50
	C-105 Retrieval Operations (MRS)	01-Aug-2012	29-Apr-2013	01-Aug-2012	29-Apr-2013	50
	C-105 Sample for HHR Decision	30-Apr-2013	30-Sep-2013	30-Apr-2013	30-Sep-2013	50
	C-105 Hard Heel Rmvl Design & Engineering Support	01-Oct-2013	02-Jul-2014	01-Oct-2013	02-Jul-2014	50
	C-105 Hard Heel Rmvl Procurement	09-Oct-2013	10-Apr-2014	09-Oct-2013	10-Apr-2014	50
	C-105 Hard Heel Rmvl Installation	26-Mar-2014	02-Jul-2014	26-Mar-2014	02-Jul-2014	50
	C-105 Hard Heel Rmvl Operations	03-Jul-2014	11-Aug-2014	03-Jul-2014	11-Aug-2014	50



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Recovery Action: Recovery actions to initiate tank retrieval and complete pre-retrieval DST-DST transfers were completed to allow a January 12th initiation.

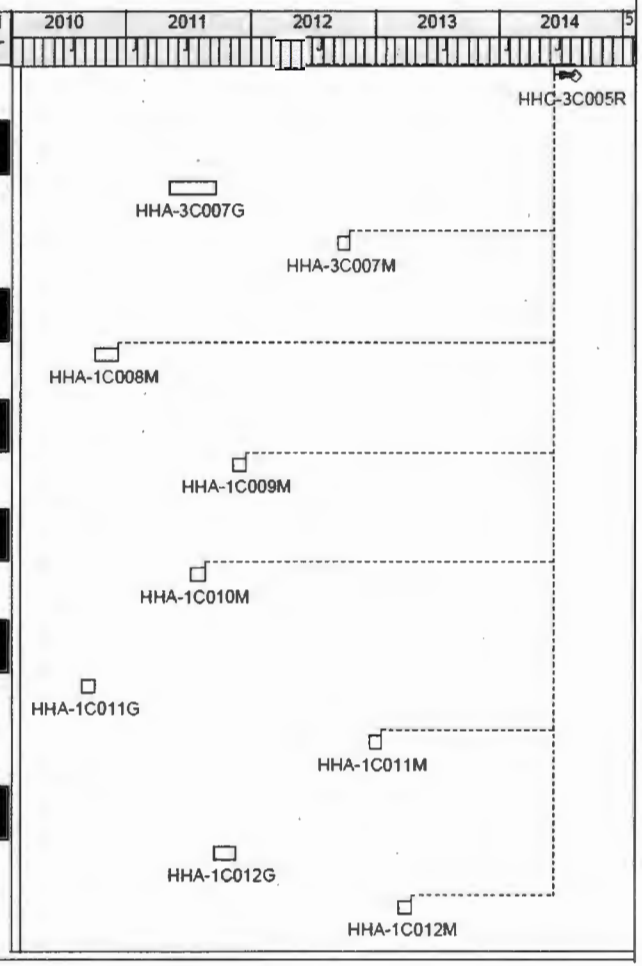
TPA Critical Path Schedule

M-B-1

Complete C Farm Retrieval

M-TPA CP M-B-1 Complete C Farm Retrieval 22-Mar-2010 15:38

Line Number	Activity Name	Forecast Start	Forecast Finish	BL Project Start	BL Project Finish	Days Ahead + or Behind -
	Complete C-Farm Retrieval		11-Aug-2014*		11-Aug-2014	50
107						
	C-107 Retrieval Operations (MRS)	07-May-2011	18-Sep-2011	07-May-20...	18-Sep-2011	710
	C-107 Hard Heel Rmvl Operations	10-Sep-2012	20-Oct-2012	10-Sep-2012	20-Oct-2012	710
108						
	C-108 Hard Heel Rmvl Operations	01-Oct-2010	06-Dec-2010	01-Oct-2010	06-Dec-2010	1394
109						
	C-109 Hard Heel Rmvl Operations	11-Nov-2011	20-Dec-2011	11-Nov-2011	20-Dec-2011	1105
110						
	C-110 Hard Heel Rmvl Operations	13-Jul-2011	21-Aug-2011	13-Jul-2011	21-Aug-2011	1136
111						
	C-111 Retrieval Operations (MS)	23-Aug-2010*	04-Oct-2010	23-Aug-2010	04-Oct-2010	981
	C-111 Hard Heel Rmvl Operations	13-Dec-2012	21-Jan-2013	13-Dec-2012	21-Jan-2013	617
112						
	C-112 Retrieval Operations (MS)	17-Sep-2011	19-Nov-2011	17-Sep-2011	19-Nov-2011	571
	C-112 Hard Heel Rmvl Operations	14-Mar-2013	22-Apr-2013	14-Mar-2013	22-Apr-2013	526



Status: C-104 began bulk retrieval operations January 12, 2010 and retrieved over 30% of the waste by February month end. (Current status is 75% retrieved.)

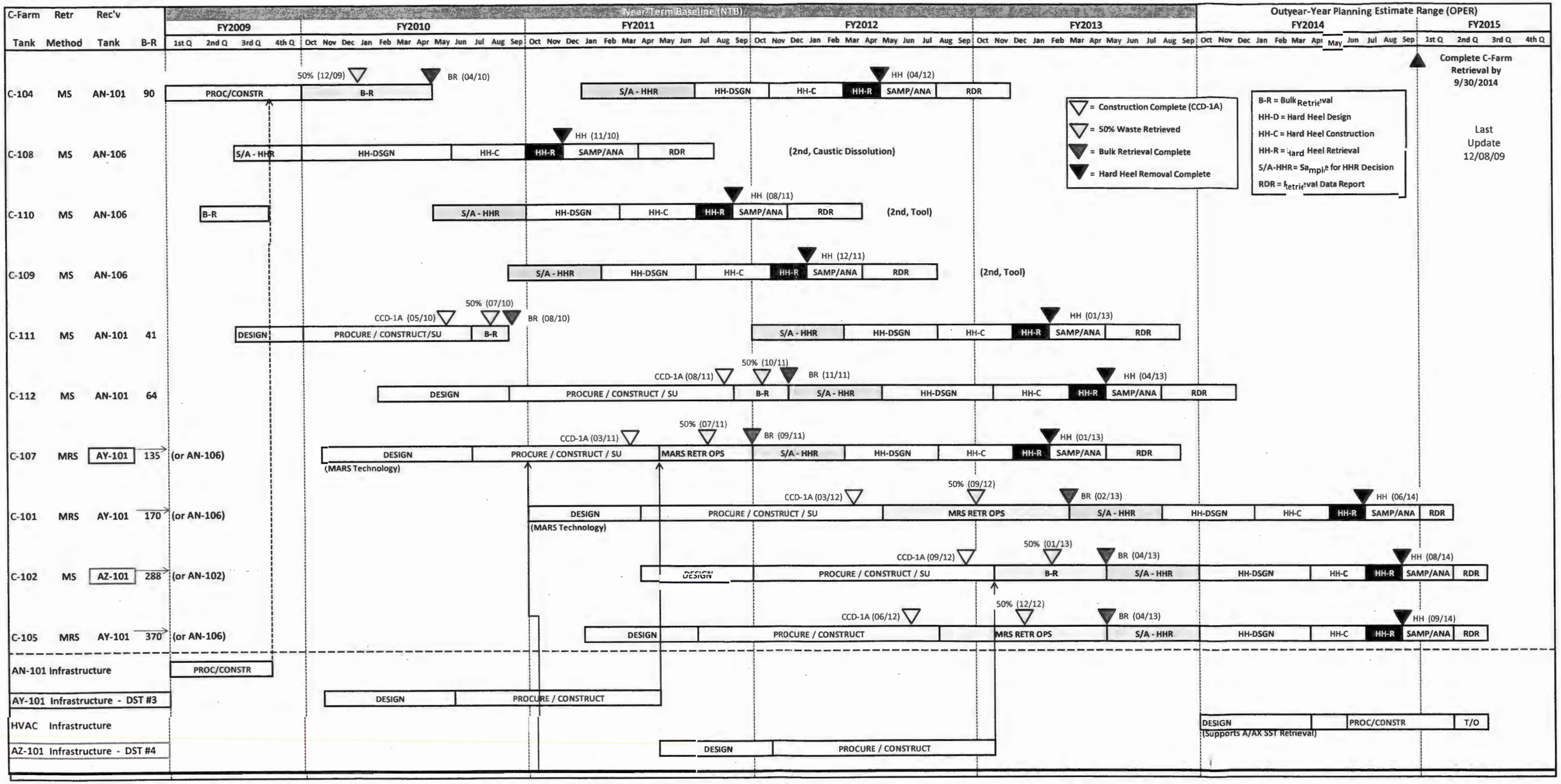
Recovery Action: Recovery actions to initiate tank retrieval and complete pre-retrieval DST-DST transfers were completed to allow a January 12th initiation.

C-Farm Retrieval

Life-Cycle Baseline PMB

2014 Compliance Case

12/8/2009



ORP Project Managers Meeting
March 23, 2010
2440 Stevens Ctr.
Richland, Washington

Meeting Minutes Transmittal

Attachment D: Administrative Record Items

(20 pages including this coversheet)

Office of River Protection, State of Washington Department of Ecology
Single-Shell Tank System Leak Detection and Monitoring Functions and Requirements Document Modification Notice
(Per Hanford Federal Facility Agreement and Consent Order Section 9.3)

1. Document Title and Number: RPP-9937 SST Functions and Requirements, Rev 3		
2. Minor Field Change: (Section 12.4 HFFACO Action Plan) ☐ Yes: (WRPS Signature Only – Attach signed form to Primary Document for record purposes) X No: Proceed to Box 3	**3.** Document Issue Date: May 10, 2008 **4.** Document Modification Notice Date: January 14, 2010	**5.** Notice Number: 2010-1
6. Do proposed changes require schedule changes? (Would this extend completion of retrieval beyond 12 months from date of initiation?) ☐ Yes X No	**7.** Do proposed changes include specific additions, deletions, or modification to scope and/or requirements which affect the overall intent of the plan? ☐ Yes X No	**8.** (Check only one box) ☐ Significant Modification (Check if the answer to question in either section 6 or 7 is "yes". Significant modifications require revision of the primary document.) Minor Modification Requires modification of the document X Can be accomplished with Modification Notice.

9. Description and Justification of Change:

Description:
Revise Table B-1of RPP-9937 to address replacement of manual tapes with ENRAFS on tanks BY-101, BY-104, BY-105, BY-106, BY-107, BY-108, BY-112, U-112, U-201, and U-202. Delete MT at the end of the table since it is no longer listed in the table. (Revised Table B-1 attached.)

Explanation:
As part of upgrades to the SSTs the manual tapes are being replaced by ENRAFS. This will provide continuous monitoring of tank levels and be an improvement over the use of manual tapes. Full revision of the document will occur within the next 6 months.

10. Impact of Change:

No impact.

11. Additional Requirements and/or Provisions[1]:

Approvals

Washington River Protection Solutions, LLC.	Office of River Protection	State of Wash., Dept. of Ecology

Office of River Protection, State of Washington Department of Ecology
Single-Shell Tank System Leak Detection and Monitoring Functions and Requirements Document Modification Notice
(Per Hanford Federal Facility Agreement and Consent Order Section 9.3)

☐ Provisional Approval[2] Date	☐ Provisional Approval[2] Date	☐ Provisional Approval[2] Date
☐ Final Approval Date 2/17/2010	☐ Final Approval Date 2/25/10 TWF COK	☐ Final Approval Date 3-3-10

Notes

1 - For use by Ecology to identify any additional information needed to make a decision regarding the request for modifications. In addition, Ecology will identify actions, if any, regarding the modification request that DOE may take pending Ecology's final decision

2 – Provisional approval allows DOE and it's contractors to take specific actions identified in section 10, prior to final approval of this modification.

B3.0 LEAK DETECTION AND LIQUID INTRUSION MONITORING

Single-shell tanks are subject to leak detection and liquid intrusion monitoring as described in this section. The basis for requirements for LDM for SST components is provided in this section.

B3.1 LIQUID INTRUSION MONITORING

Intrusions are detected using the same devices and instruments used for detecting leaks. However, with intrusions the system is set up to detect liquid level increases rather than decreases. The only difference between leak detection and liquid intrusion detection is that the surface level device can always be used for intrusion detection, even on a dry surface. While the dry surface will not decrease in response to a leak, it will register an increase if a large enough intrusion occurs. Once a liquid surface is re-established, the gauge will show a continued increase, and the intrusion will be detected. Table B-1 shows all surface level equipment installed and the comments indicate which gauges are currently used for intrusion detection only.

Table B-1. Surface Level In-Tank Liquid Detection Instrumentation (6 Sheets)

Tank	Surface Level Gauge	LOW Installed?	Comments
A-101	E	Yes	LOW used for intrusion only
A-102	E	--	ENRAF™ used for intrusion only
A-103	E	Yes	LOW used for LDM
A-104	E	--	ENRAF™ used for intrusion only
A-105	E	--	ENRAF™ used for intrusion only
A-106	E	Yes	LOW used for intrusion only
AX-101	E	Yes	LOW used for intrusion only
AX-102	E	--	ENRAF™ used for intrusion only
AX-103	E	Yes	ENRAF™ used for intrusion only
AX-104	E	--	ENRAF™ used for intrusion only
B-101	E	Yes	LOW used for intrusion only
B-102	E	--	ENRAF™ used for intrusion only
B-103	E	--	ENRAF™ used for intrusion only
B-104	E	Yes	LOW used for intrusion only
B-105	E	Yes	LOW used for intrusion only
B-106	E	--	ENRAF™ used for intrusion only
B-107	E	Yes	LOW used for intrusion only
B-108	E	Yes	LOW used for intrusion only
B-109	E	Yes	LOW used for intrusion only

Table B-1. Surface Level In-Tank Liquid Detection Instrumentation (6 Sheets)

Tank	Surface Level Gauge	LOW Installed?	Comments
B-110	E	Yes	LOW used for intrusion only
B-111	E	Yes	LOW used for intrusion only
B-112	E	--	ENRAF™ used for intrusion only
B-201	E	--	ENRAF™ used for intrusion only
B-202	E	--	ENRAF™ used for intrusion only
B-203	E	--	ENRAF™ used for intrusion only
B-204	E	--	ENRAF™ used for intrusion only
BX-101	E	--	ENRAF™ used for intrusion only
BX-102	E	--	ENRAF™ used for intrusion only
BX-103	E	--	ENRAF™ used for LDM
BX-104	E	--	ENRAF™ used for intrusion only
BX-105	E	--	ENRAF™ used for intrusion only
BX-106	E	--	ENRAF™ used for intrusion only
BX-107	E	--	ENRAF™ used for intrusion only
BX-108	E	--	ENRAF™ used for intrusion only
BX-109	E	Yes	LOW used for intrusion only
BX-110	E	Yes	LOW used for intrusion only
BX-111	E	Yes	LOW used for intrusion only
BX-112	E	--	ENRAF™ used for intrusion only
BY-101	E~~MT~~	Yes	ENRAF™~~LOW~~ used for intrusion only
BY-102	E	Yes	LOW used for intrusion only
BY-103	E	Yes	LOW used for LDM
BY-104	E~~MT~~	Yes	ENRAF™~~LOW~~ used for intrusion only
BY-105	E~~MT~~	Yes	ENRAF™~~LOW~~ used for intrusion only
BY-106	E~~—~~	Yes	ENRAF™~~LOW~~ used for intrusion only
BY-107	E~~MT~~	Yes	ENRAF™~~LOW~~ used for intrusion only
BY-108	E~~MT~~	Yes	ENRAF™~~LOW~~ used for intrusion only.
BY-109	E	Yes	LOW used for intrusion only
BY-110	E	Yes	LOW used for intrusion only
BY-111	E	Yes	LOW used for intrusion only
BY-112	E~~MT~~	Yes	ENRAF™~~LOW~~ used for intrusion only
C-101	E	--	ENRAF™ used for intrusion only
C-102	--	--	ENRAF™ used for intrusion only
C-103	E	--	Waste retrieval has been completed. ENRAF™ used for intrusion only

Table B-1. Surface Level In-Tank Liquid Detection Instrumentation (6 Sheets)

Tank	Surface Level Gauge	LOW Installed?	Comments
C-104	E	--	ENRAF™ used for intrusion only
C-105	E	--	ENRAF™ used for intrusion only
C-106	E	--	ENRAF™ used for intrusion only. Waste retrieval has been completed
C-107	E	--	ENRAF™ used for intrusion only
C-108	E	--	ENRAF™ used for intrusion only
C-109	E	--	ENRAF™ used for intrusion only
C-110	E	--	ENRAF™ used for intrusion only
C-111	E	--	ENRAF used for intrusion only
C-112	E	--	ENRAF™ used for intrusion only
C-201	E	--	Waste retrieval has been completed. ENRAF used for intrusion only
C-202	E	--	Waste retrieval has been completed. ENRAF™ used for intrusion only
C-203	E	--	Waste retrieval has been completed. ENRAF™ used for intrusion only
C-204	E	--	Waste retrieval has been completed. ENRAF used for intrusion only
S-101	E	Yes	LOW used for intrusion only
S-102	E	Yes	LOW is not accessible due to retrieval activity. ENRAF installed in stilling well for monitoring.
S-103	E	Yes	LOW used for intrusion only
S-104	E	Yes	LOW used for intrusion only
S-105	E	Yes	LOW used for intrusion only
S-106	E	Yes	LOW used for intrusion only
S-107	E	Yes	LOW used for intrusion only
S-108	E	Yes	LOW used for intrusion only
S-109	E	Yes	LOW used for intrusion only
S-110	E	Yes	LOW used for intrusion only
S-111	E	Yes	LOW used for intrusion only
S-112	E	--	Waste retrieval in progress
SX-101	E	Yes	LOW used for intrusion only
SX-102	E	Yes	LOW used for intrusion only.
SX-103	E	Yes	LOW used for intrusion only
SX-104	E	Yes	LOW used for intrusion only
SX-105	E	Yes	LOW used for intrusion only

Table B-1. Surface Level In-Tank Liquid Detection Instrumentation (6 Sheets)

Tank	Surface Level Gauge	LOW Installed?	Comments
SX-106	E	Yes	LOW used for intrusion only
SX-107	E	--	ENRAF™ used for intrusion only
SX-108	E	--	ENRAF™ used for intrusion only
SX-109	E	--	ENRAF™ used for intrusion only
SX-110	E	--	ENRAF™ used for intrusion only
SX-111	E	Yes	LOW used for intrusion only
SX-112	E	Yes	LOW used for intrusion only
SX-113	E	--	ENRAF™ used for intrusion only
SX-114	E	--	ENRAF™ used for intrusion only
SX-115	E	--	ENRAF™ used for intrusion only
T-101	E	Yes	LOW used for intrusion only
T-102	E	--	ENRAF™ used for LDM
T-103	E	--	ENRAF™ used for intrusion only
T-104	E	Yes	LOW used for intrusion only
T-105	E	--	ENRAF™ used for intrusion only
T-106	E	--	ENRAF™ used for intrusion only
T-107	E	--	ENRAF™ used for intrusion only
T-108	E	--	ENRAF™ used for intrusion only
T-109	E	Yes	LOW used for intrusion only
T-110	E	Yes	LOW used for intrusion only
T-111	E	Yes	LOW used for intrusion only
T-112	E	--	ENRAF™ used for LDM
T-201	E	--	ENRAF™ used for intrusion only
T-202	E	--	ENRAF™ used for intrusion only
T-203	E	--	ENRAF™ used for intrusion only
T-204	E	--	ENRAF™ used for intrusion only
TX-101	E	--	ENRAF™ used for intrusion only
TX-102	E	Yes	LOW used for intrusion only
TX-103	E	Yes	LOW used for intrusion only
TX-104	E	Yes	LOW used for intrusion only
TX-105	E	Yes	LOW used for intrusion only
TX-106	E	Yes	LOW used for intrusion only
TX-107	E	--	ENRAF™ used for intrusion only
TX-108	E	Yes	Interstitial Liquid Level (ILL) to low for LOW use, ENRAF™ used for intrusion only

Table B-1. Surface Level In-Tank Liquid Detection Instrumentation (6 Sheets)

Tank	Surface Level Gauge	LOW Installed?	Comments
TX-109	E	Yes	LOW used for intrusion only
TX-110	E	Yes	LOW used for intrusion only
TX-111	E	Yes	LOW used for intrusion only
TX-112	E	Yes	LOW used for intrusion only
TX-113	E	Yes	LOW used for intrusion only
TX-114	E	Yes	LOW used for intrusion only
TX-115	E	Yes	LOW used for intrusion only
TX-116	E	Yes	LOW used for intrusion only
TX-117	E	Yes	LOW used for intrusion only
TX-118	E	Yes	LOW used for intrusion only
TY-101	E	--	ENRAF™ used for intrusion only
TY-102	E	--	ENRAF™ used for intrusion only
TY-103	E	Yes	LOW used for intrusion only
TY-104	E	--	ENRAF™ used for intrusion only
TY-105	E	Yes	LOW used for intrusion only
TY-106	E	--	ENRAF™ used for intrusion only
U-101	E	--	ENRAF™ used for intrusion only
U-102	E	Yes	LOW used for intrusion only
U-103	E	Yes	LOW used for intrusion only
U-104	E	--	ENRAF™~~MT~~ used for intrusion only
U-105	E	Yes	LOW used for intrusion only
U-106	E	Yes	LOW used for intrusion only
U-107	E	Yes	LOW used for intrusion only
U-108	E	Yes	LOW used for intrusion only
U-109	E	Yes	LOW used for intrusion only
U-110	E	Yes	LOW used for intrusion only
U-111	E	Yes	LOW used for intrusion only
U-112	~~EMT~~	--	ENRAF™ ~~MT~~ used for intrusion only
U-201	~~EMT~~	--	ENRAF™~~MT~~ used for intrusion only
U-202	~~EMT~~	--	ENRAF™~~MT~~ used for intrusion only
U-203	E	--	ENRAF™ used for intrusion only
U-204	E	--	ENRAF™ used for intrusion only

Table B-1. Surface Level In-Tank Liquid Detection Instrumentation (6 Sheets)

Tank	Surface Level Gauge	LOW Installed?	Comments

Adapted from RPP-9645, Rev. 0.

Level Gauge

E = ENRAF™ Gauge[1]

~~MT = Manual Tape~~

LOW = liquid observation well

[1]ENRAF is a trademark of the ENRAF Corporation, Houston, Texas.

Office of River Protection, State of Washington Department of Ecology
Tank Waste Retrieval Work Plan/Functions and Requirements Modification Notice
(Per Hanford Federal Facility Agreement and Consent Order Section 9.3)

1. Document Title and Number: RPP-22393, Rev. 4B, 241-C-102, 241-C-104, 241-C-107, 241-C-108 and 241-C-112 Tanks Waste Retrieval Work plan		
2. Minor Field Change: (Section 12.4 HFFACO Action Plan) ☐ Yes: (WRPS Hanford Signature Only – Attach signed form to Primary Document for record purposes) X No: Proceed to Box 3	3. Document Issue Date: 9/25/09 4. Document Modification Notice Date: 02/24/10	5. Notice Number: 2009-6
6. Do proposed changes require schedule changes? (Would this extend completion of retrieval beyond 12 months from date of initiation?) ☐ Yes X No	7. Do proposed changes include specific additions, deletions, or modification to scope and/or requirements which affect the overall intent of the plan? ☐ Yes X No	8. (Check only one box) ☐ Significant Modification (Check if the answer to question in either section 6 or 7 is "yes". Significant modifications require revision of the primary document.) Minor Modification X Requires modification of the document Can be accomplished with Modification Notice.

9. Description and Justification of Change:
Description: Add following to Section 3.2

Prior to the heel waster flush, a caustic solution may also be added to the tank heel. The caustic would be used to improve retrieval of waste from the tank by breaking down certain hydrated aluminum hydroxide solids to enable their removal.

Justification: A concentrated caustic soak may be used for tank heels to break down much of the larger residual waste solid chunks to improve tank waste retrieval.

10. Impact of Change: TWRWP changes are approved and to improve current retrieval technology performance, the application of caustic additions is approved.

The Proposed Consent Decree and Tri-Party Agreement Modifications for the Hanford Tank Waste Treatment, Part 1, and Appendix C (public comment period October 1, 2009, to December 11, 2009) establish that two or three technologies may be required for the purpose of completing tank retrievals for the Consent Decree. The technologies, and the criteria that would be used to identify the technologies, have not been defined or agreed to by either the State or the USDOE. This change notice is not associated with the process or approval of the Proposed Consent Decree retrieval technologies, and does not constitute an agreement on the use of caustic as a second technology.

11. Additional Requirements and/or Provisions[1]:
If the decision to add caustic is made, Ecology is to be informed of:

1. the approximate amount of caustic to be added,
2. the approximate soaking time to support maximum waste removal,
3. the frequency of caustic additions,
4. if the added sodium will be within the acceptable range for WTP waste feed

Ecology must be informed within 24 hours if the caustic added amounts and/or soak times are exceeded.

Office of River Protection, State of Washington Department of Ecology
Tank Waste Retrieval Work Plan/Functions and Requirements Modification Notice
(Per Hanford Federal Facility Agreement and Consent Order Section 9.3)

Approvals		
Washington River Protection *Solutions*, Inc.	Office of River Protection	State of Wash., Dept. of Ecology
☐ Provisional Approval[2] Date	☐ Provisional Approval[2] Date	☐ Provisional Approval[2] Date
☐ Final Approval Date	☐ Final Approval Date	☐ Final Approval Date 3-22-10

Notes

1 - For use by Ecology to identify any additional information needed to make a decision regarding the request for modifications. In addition, Ecology will identify actions, if any, regarding the modification request that DOE may take pending Ecology's final decision

2 – Provisional approval allows DOE and it's contractors to take specific actions identified in section 10, prior to final approval of this modification.

Interim Measures Meeting

(Ecology's Offices, 2/16/10)

Jeff Lyon, Bob Lober, Susan Eberlein, and Jeff Luke met and discussed the following:

1. It was agreed this meeting summary would be signed at the next TPA Project Managers' Meeting.
2. Drywell Decommissioning:
   - It was agreed there was to be no decommissioning of drywells in tank farms this Fiscal Year. This agreement is based on the understanding that no drywells met the criteria established and agreed to in FY09. The criteria (Attachment 1) were evaluated in FY2009, and an email provided to Ecology indicating that no dry wells met these criteria.
   - It was agreed that future decommissioning of C-Farm drywells (when no longer needed for retrieval monitoring) could be a potential topic for a future annual M-45-56 meeting.
3. Barriers:
   - The technical merit of interim surface barriers was discussed – they appear to have some benefit and no negative association. Questions to consider include:
     - Are there alternative interim actions instead of barriers?
     - What is a barrier's influence on the deep vadose zone?
   - A decision is needed on whether the body of data collected for SX farm supports the design and construction of an interim surface barrier. Susan Eberlein took an action to set up a meeting to review the body of available information for SX farm.
   - We need additional characterization data in order to determine whether future barriers should be placed.
     - The current characterization priority for potential future barriers is provided in Attachment 2. This information was provided by email to Ecology in FY 2009, and was handed out again at today's meeting.
     - We need to develop a standard series of questions to help us make decisions regarding barriers and barrier placement in the future.
     - Susan Eberlein took an action to set up a meeting to discuss plans for potential barrier site characterization and criteria for evaluating the data.

3-12-10

Jeff Lyon, Ecology

3-12-10

Bob Lober, ORP

1 of 6 pages

Criteria for Prioritizing Tank Farm Waste Management Area Wells for Decommissioning

Introduction

Wells which are unusable, abandoned, or whose use has been permanently discontinued, or which are in such disrepair that their continued use is impractical or is an environmental, safety or public health hazard are required to be decommissioned (WAC-173-160-381). This action is done in accordance with specific requirements of the Washington Department of Ecology. The requirements are found in the Washington Administrative Code (WAC), WAC-173-160-381 and WAC-173-160-460. Under those regulations, decommissioning is defined as "..to fill or plug a well so that it will not produce water, serve as a channel for movement of water or pollution, or allow the entry of pollutants into the well or aquifer(s)."

A number of well-structures, both drywells and groundwater wells, exist within tank farm Waste Management Areas (WMAs). Most of these wells are not constructed to present-day (WAC-173-160) standards and are candidates for environmentally protective decommissioning. A few of these wells extend to or near groundwater. Most range in depth from 50 to 125 feet below ground surface, and are constructed of a single string of six or eight-inch diameter casing. Some of these structures were drilled in the 1940's following construction of the tank farms, but most were placed during the 1970's. The common mode of advancing the wells was the cable-tool, or percussion, drilling method. Drilling, using the cable-tool method often results in an annular space remaining between the drill casing and the surrounding formation, this space may provide direct path for contaminants to migrate closer to and even into the underlying groundwater and thence to a publicly available point.

Uses of Existing Well Structures

Wells that reach groundwater have historically been used to obtain samples of groundwater for laboratory analyses. In CY2009, only four wells residing inside the tank farm WMA fences have been used. Two of those wells (299-W23-19, in SX farm and 299-33-205, in BX farm) meet current construction standards, one of the wells (299-E33-9, in BY farm) is regularly sampled as part of the RCRA monitoring program, and the fourth well (299-W15-2 in TY farm) was sampled once. Other wells exist, that either do, or did, reach groundwater, that are not sampled or otherwise used.

Wells that extend only 50 to 125 feet are used solely for monitoring or characterizing the tank farm WMA vadose zone. Monitoring is accomplished by either 1) lowering geophysical sondes and measuring gamma radiation or moisture content or, 2) using the well casings as electrodes as part of a tank retrieval leak detection monitoring (LDM), resistivity system. Characterization using these structures is conducted using adaptations of the same tools only using all wells within a WMA rather than concentrating on those structures that are adjacent to a tank being retrieved.

Wells drilled to groundwater exist outside the tank farm WMA fences; those wells are under the purview of the Plateau Remediation Contractor, and are not considered further. Wells drilled to current WAC standards are not considered further.

2 of 6 1/1/01

Pros and Cons of Decommissioning

An assumption has been made that decommissioning consists of perforating the well casing and then progressively (upward) pressure grouting the perforated casing with a neat cement grout. The intent is to create a sheath of cement around the casing, thus precluding contaminants from following the casing as a path of least resistance deeper into the subsurface.

Pros

1. The process is readily accomplished.

Creating a cement seal around a casing is a relatively straight forward process. The regulations found in WAC-173-160-460 specifically call for the following:

(1) For resource protection wells and geotechnical soil borings that were not constructed in accordance with these regulations, or for which a drilling report required under this section is missing, remove all debris, accumulated sediment, equipment and obstructions from the well casing, except well screens and packers, and decommission in one of the following ways:

(a) Perforate the casing from the bottom to land surface and pressure grout the casing.

(i) Perforations shall be at least four equidistant cuts per row, and one row per foot. Each cut shall be at least one and one-half inches long.

(ii) Apply enough pressure to force the sealing material through the perforations, filling any voids on the outside of the casing.

(iii) The remainder of the casing shall be filled with neat cement grout, neat cement, or bentonite slurry; or

(b) Withdraw the casing and fill the bore hole with neat cement grout, neat cement, bentonite or bentonite slurry as the casing is being withdrawn.

The casing is first perforated using mechanical or explosive means; sufficient (minimum defined by WAC 173-160-460) openings are created to provide reasonable assurance that the grout can flow outward and surround the casing WAC requires. A casing packer (pressure isolation system) is then installed and expanded. Finally, an approved grout material is injected under pressure to drive the grout through the perforations so that the casing is surrounded and grout fully fills any annular space and incorporates with the surrounding geologic media. This activity is conducted over the entire depth of the borehole or well being decommissioned.

2. A properly decommissioned well is no longer an environmental concern

The nature of the decommissioning process returns the site of the well to at least the same level of concern as an area that has not been disturbed. Short cuts for contaminants to reach deep into the vadose zone and eventually to groundwater are eliminated, even, in the case of a tank farm WMA, should a catastrophic environmental insult occur.

3 of 6

Cons

1. The well is no longer available for geophysical logging

Once the interior of a well is filled with concrete, it can no longer provide access for geophysical logging (gamma or moisture), as access has been blocked.

2. The well is no longer available for use in either Surface Geophysical Exploration (for characterization)or HRR-LDM (leak detection monitoring during retrieval)

The cement sheath around the casing serves as electrical insulation, isolating the metal casing from the surrounding geologic media. This could, in part, be mitigated by leaving a short (5-10 ft) section of the well unperforated and filling that section with sand, thus leaving an isolated "electrode" at depth. A shorter (1 ft) section could be left at the surface for attaching resistivity cables. This would require a variance to WAC-173-160-460.

3. Some wells have been amended to approximate the current regulations. Complete decommissioning of these amended wells will require the use of jet perforation (explosive-based perforation) techniques.

These amended wells have two strings of casing over their upper portions; the exterior casing was perforated, the inner casing was placed and sealed against the outer string, then a thin grout was injected between the inner and outer strings to seal them against the surrounding geologic media. No information is available on the effectiveness of this amendment.

Explosives are presently prohibited from being brought inside the tank farm WMA fences. A Study has been conducted on the potential seismic impacts of jet shot perforating on a nearby single shell tank (SST). This study indicates that a large margin of safety exists before sufficient energy would be available to damage the structure of an adjacent SST. However, the tank farms safety basis would require amendment prior to performing work with explosives. Perforations generated by jet-shot techniques do not generally conform to the dimensions called out in the regulations; a variance will likely be needed, should jet perforation be pursued.

Selection Criteria

1. The well extends to or near groundwater (generally greater than 200 ft below ground surface).
2. The well has only one size of casing.
3. The well shows an indication of contaminant migration along the casing (excludes movement through adjacent vadose zone geologic media.
4. The well is not being used for monitoring of either groundwater or the vadose zone.
5. Nearby tank(s) have been retrieved and certified as empty.
6. The well is outside any interim surface barrier. (Assumes the interim surface barrier precludes water gaining access to the well casing, thus accelerating migration of contaminants.)

Recommendation for FY2010/Early FY2011 Characterization of Potential Sites for Interim Surface Barriers

Purpose:
This white paper provides recommendations for the selection of the next locations to be characterized for purposes of planning future interim surface barriers.

Background:
On July 29, 2009 a meeting was held among the U. S. Department of Energy Office of River Protection (ORP), the Washington State Department of Ecology (Ecology) and the ORP tank operations contractor, Washington River Protection Solutions LLC (WRPS). The discussion considered the top 15 groups of tank farm releases (ranked based on future risk to groundwater), and other factors that may affect the suitability of a site for an interim surface barrier. The group recommended possible approaches for determining the next sites to characterize:

1. Use the priority list directly. This would lead to selection of U farm (priority 3 and 8) and BY farm (priority 4 and 9) as the next areas to address.
2. Consider additional areas where extensive transfer history would make pipeline leaks likely (particularly around the historically operated evaporators).
3. Consider extending the barrier sites already in place (T farm) or in design (TY and SX). This is important in light of the observation that both TY and SX farms show more extensive sub-surface contamination than expected when the pre-barrier characterization began.
4. Consider any of the above, with additional emphasis on areas that have very little characterization and/or areas that are likely to have near-surface contamination (where a barrier could be most effective).

WRPS took the action to consider the discussions in the meeting and make a recommendation for the next locations to perform characterization in support of interim barrier planning.

Recommendation Basis:
The preferred locations for the next characterization campaigns are 241-BY Farm, West (including historic leaks from tanks BY-107 and BY-108 as well as one unplanned release site, UPR-E-105), followed by 241-BY Farm, East (including historic leak from BY-103). Each of these locations has 4 layers of pipelines, and neither has had previous soil characterization. Early characterization of these sites addresses approaches 1, 2 and 4 above.

Two other locations are recommended for near term consideration, A/AX farm and the southwest area of S farm. Well-to-well resistivity exploration is recommended in A/AX farm. This approach provides initial information about a large area with little other characterization data,

 11/18/09

addresses the historic leak(s) from A104/A105, and supports planning for future characterization if appropriate. This area addresses approaches 1 and 4 above. Direct push sampling/logging, followed by resistivity exploration, is recommended in 241-S Farm, southeast (near catch tanks/diversion box northeast of SX). Although not ranked as high priority due to known historic releases, this area may warrant investigation due to the waste transfers associated with the pipelines/diversion boxes. Initial SGE results north of SX suggest that sub-surface contamination is present, but additional characterization is needed. Coordinating this characterization with the planning of a potential barrier in SX farm would be prudent. This area addresses approaches 2, 3, and 4 above.

Although 241-U farm was rated highly based solely on future risk to groundwater, this farm is not considered to be a good candidate for an interim surface barrier. Significant quantities of water were released into the ditch east of 241-U farm. Characterization of 241-U farm soil indicated high moisture content, usually at or near saturation. Placing an interim barrier over this large amount of deep water is unlikely to have a significant effect.

Field Considerations:

Due to current field constraints, the use of supplied air respiratory protection is required in 241-BY farm. It is anticipated that this requirement will be revised early in calendar year 2010, after completion of vapor data analysis. We recommend delaying entry into 241-BY farm until after this requirement has been revised, to avoid worker hazards associated with the use of supplied and to ensure that the work scope is performed cost effectively. In the interim, direct push work should begin in S farm southeast. Well-to-well resistivity characterization can be performed first in A/AX farm, while direct push work is performed in S farm. Resistivity exploration in S farm will follow placement of deep electrodes.

Recommendation:

1. **Begin direct push characterization in the southeast section of 241-S farm.**
2. **Simultaneously begin well-to-well resistivity measurements in A/AX.**
3. **Once the supplied air restriction in 241-BY farm is revised, characterization in 241-BY farm (west, followed by east) will commence.**

The characterization sequence in S farm and both BY locations will involve placement of several direct push probes, logging and soil sampling, and deep electrode placement. This work will be followed by geophysical exploration, including surface and deep electrodes.

PROJECT MANAGER MINUTES: M 045-00 SPECIAL TOPIC:

CONSTRUCTION START: TY BARRIER PLACEMENT

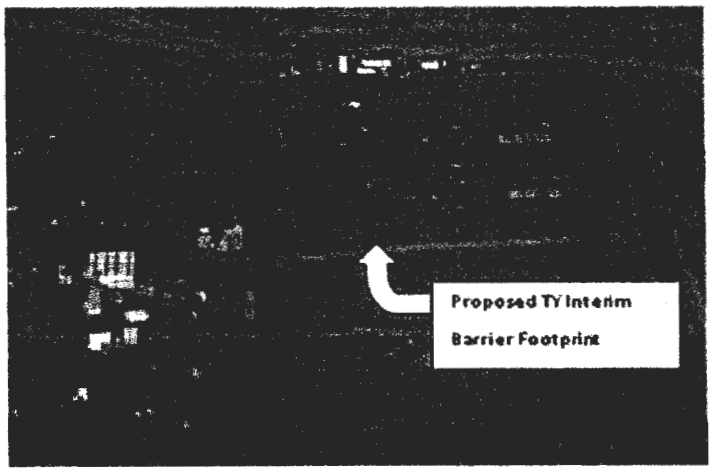
Background and scope of work:

The commitment for cleanup of contaminated soil around the tanks is described by major Milestone M- 045-00, "Complete Closure of all Single-Shell Tank Farms." Consistent with milestones M-045-56 "Complete Implementation of Agreed-to Interim Measures" and M-045-59 "Control Surface Water Infiltration Pathways as Needed to Control or Significantly Reduce the Likelihood of Migration of Subsurface Contamination to Groundwater at the SST WMAS", an interim measure was determined by the parties to be necessary to mitigate the . driving force of precipitation on movement of vadose zone contaminants.

The modified asphalt product proposed for the "TY" Tank Farm interim barrier is designed to be constructed similar to an asphalt road or parking lot. The modified asphalt barrier would be nominally four inches thick and contains a binder to make the material essentially impervious to water. The barrier will be sloped to drain rain and snow melt to an area to the west of the tank farm where it will be discharged to a vegetated evaporation basin.

The proposed barrier is a demonstration to determine the efficacy of an asphalt barrier. This activity is an interim measure under the RCRA Corrective Action process and does not rule out or restrict any final remedy.

The barrier will be about 80,000 square feet. As designed, the barrier will be large enough to cover the portion of TY Tank Farm indicated in the figure below. This barrier technology is flexible and can be expanded, repaired, or removed as needed.



Design Documents: Project design documents for barrier placement and monitoring have been submitted, reviewed and approved by Ecology.

References:

1) *Hanford Federal Facility Agreement and Consent Order* (Ecology, et al. 1989)

2) TRANSMITTAL OF THE TY FARM INTERIM BARRIER DESIGN AND MONITORING PLAN TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY (ECOLOGY) FOR APPROVAL, 09-TPD-1 16, United States Department of Energy Office of River Protection, October 22, 2009, attachment: TY Barrier Final Design and the *241 -TY Tank Farm Interim Surface Barrier Monitoring Plan,* RPP-PLAN-3 6705,

The TY Farm Interim Surface Barrier is being proposed by the U.S. Department of Energy (DOE), Office of River Protection (ORP) as an interim measure in accordance with Action Plan Section 7.2.4 of the Hanford Federal Facility Agreement and Consent Order (Ecology, et al. 1989) (Reference 1). Section 7.2.4 of the Action Plan requires that DOE receive approval from the lead regulatory agency (i.e., Ecology) prior to the initiation of field work on a proposed interim measure.

HFACCO Section 4.1 and authorization to proceed with construction:

The public review and comment period for the TY Barrier project was completed on January 22, 2010. However, it is possible that additional comments sent via the U.S. Mail may be received up until January 29, 2010. Public comments received to date from the review of the TY barrier design and monitoring plan have been reviewed and no comments which would affect Ecology's decision to approve these submittals have been received. Ecology therefore approves the design and monitoring plan as submitted in the reference letter, with the caveat that any comments received through the end of the week may affect Ecology's approval. If comments, postmarked by January 22, are received which would affect Ecology's approval of the barrier design and monitoring plan, Ecology will inform ORP by COB January 29 and a path forward to address these comments will be developed.

This interim measure proposal has been reviewed and discussed with Ecology staff, some of whom were involved in characterization efforts to locate a barrier at TY Farm, the selection of the barrier footprint, and the barrier material selection process.

Therefore, in accordance with HFFACO section 4.1, which authorizes the project managers representing the parties to enter into agreements and commitments, the parties agree that construction of the TY barrier and associated monitoring system may proceed on February 1, 2010.

ROBERT LOBER, DOE **Date:** 1-26-10 **JEFF LYON, WDOE** **Date:** 1-26-10

Distribution:

Administrative Record
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MSA TPA Department Accomplishments 4/20/2010

M-91 TPA Negotiations

M-91 TPA negotiations have concluded after seven months with the April 20, 2010 approval of the Tentative Agreement by the RL Manager, Ecology Director and the EPA Region 10 Administrator. DOE reduced the amount of enforceable milestones, averted near term potential TPA fines and penalty's, aligned milestone scope to coincide with out year funding and removed the complex and confusing legal text imbedded within the M-91 series milestones making them more efficient to administer. MSA TPA provided direct support to the RL M-91 Program staff including the Office of Chief Counsel guiding DOE, contractor and regulator staff through the TPA negotiation process. Support has been provided in developing the DOE headquarters M-91 TPA negotiation strategy, TPA change package revisions, TPA change package M-91-45 milestone extensions, Tentative Agreement, RL transmittal letter, negotiation schedules, and development of presentations and briefings for submittal to senior RL, HQ, regulator management and the public. MSA TPA developed and maintained configuration control of the negotiation team products and was requested to actively participate in the negotiations and pre negotiation planning including issue resolution.

The M-091 series milestones have been revised to make them easier to read and understand. Milestones have been negotiated that require the completion of the:

- Conceptual and definitive designs for necessary facilities and capabilities
- Retrieval and designation of CH and RH waste
- Treatment of CH and RH MLLW
- Treatment of large container CH TRUM waste and RH TRUM waste
- Certification and shipment of small container CH TRUM waste

Central Plateau Strategy Negotiations

Central Plateau Strategy negotiations have concluded after 18 months with the March 26 approval of the Tentative Agreement by the RL Manager, Ecology Director and the EPA Region 10 Administrator. MSA TPA has provided support to RL and ORP during the development of the strategy document and the corresponding TPA change packages that will ultimately implement the strategy. The Central Plateau Strategy includes eleven TPA change packages, a Class 3 Permit modification and an Agreement In Principle to continue negotiations addressing soil contamination from single shell tanks. The Central Plateau Strategy scope includes the overall clean-up of the Central Plateau including non-tank farm waste site operable units, excess facilities including the Canyons and groundwater remediation. The changes to the Tri-Party Agreement align the scope of milestones for cleanup of the Central Plateau with geographic based operable units and encompass work not previously included in Tri-Party Agreement milestones. MSA TPA supported the development and was in several instances the lead of several of the eleven Central Plateau Strategy TPA change packages, a tentative agreement,

negotiation milestone extension change packages and a change package that will transfer resources and provide liability protection potentially resulting in a TPA dispute. MSA staff were requested by the DOE project lead to actively participate in the final negotiations providing leadership and guidance to DOE senior management, contractor and regulator staff resolving a battery of last minute issues that were impacting the finalization of negotiations. MSA TPA staff facilitated the development of the final approval package and is placing the change packages into the Hanford Site TPA configuration control system and coordinating with Portfolio Management on both M-91 and CP chg pkgs.

ORP MSA TPA Support

MSA TPA provided a briefing on the Mission Support Contract and the services MSA TPA will provide to ORP Tank Farms Remediation AM Stacy Charboneau, FPD Janet Diediker and ORP legal counsel Scott Stubblebine. ORP staff requested that MSA administer the ORP monthly project manager meeting and quarterly, provide ORP project managers training on TPA established Project Manger roles and responsibilities and how to interface with regulator staff. Legal requested that MSA TPA analyze the consent decree modification process and compare it against the TPA modification and dispute process for ORP project managers. MSA coordinated the March and April monthly update to the ORP Project Summary including both Tank Farms and the Waste Treatment Plant and administered the March ORP project managers meeting. MSA TPA is guiding ORP and contractor staff in the review and comment of the breakout on consent decree actions and TPA milestones that are to be implemented pending approval of the consent decree. ORP has requested that MSA TPA update a draft version of the monthly project summary to include consent decree and TPA milestone changes complying with the consent decree action to provide a monthly report to the regulators and simplify it as much as possible. Guided ORP environmental staff on the most efficient process to place a TPA milestone into abeyance and generated a TPA change package versus an Agreement In Principle. A meeting is scheduled with ORP Waste Treatment Plant AM Delmar Noyes to present MSA TPA contract scope.

Interim Charles Lowey has been tasked to develop a TPA milestone consent/decree cartoon presentation schedule for all of ORPs enforceable commitments per request from ORP staff.

Congress House Appropriations Committee National Defense Authorization Act TPA M/S

Completed a final review and update to the RL TPA milestones that are reported to congress this May in support of Shannon Ortiz.

AMDD

Completed the listing of RL TPA M/S that may trigger an AMDD impact requiring HQ involvement in the modification to the TPA. Matt McCormick met the HQ deadline for submittal.

Admin Record Procedure

The Hanford Site wide administration record procedure draft is being modified to include DOE project manager roles and responsibilities ensuring that "decision" documents are placed into the record and are searchable by parent child relationship. Coordinated a meeting with LMSI Bruce Sullivan and staff to discuss and agree on areas for admin record improvement and the process that DOE and regulator project managers will use to place documents into the admin record via the procedure.

Database Improvements

Evaluated the current reporting process including requests from DOE legal on the establishment of the TPA change package tracking system as OUO. Prioritized seven enhancements and coordinated a meeting with LMSI DATABASE support staff manager Ron Fryer and staff to discuss the enhancements and establish an implementation plant. Updates are ongoing and very promising in realizing the objective to make it more efficient to provide monthly and ad hoc reports.

MSA TPA Site

Completed the enhancement of the MSA TPA Environmental Site to include the following:

MSA SITE WIDE TRI-PARTY AGREEMENT (TPA) SUPPORT

MSA Site Wide TPA Integration will team with DOE and Contractor staff to support the continual tracking, diligent monitoring, issue resolution, change package preparation, negotiations, dispute resolution, quarterly/IAMIT/project manager meeting administrative presentations while maintaining an accurate and accessible configuration control of the Hanford Site TPA activities.

Contacts

Status and Tracking	Change Process
Monthly Status Reports	Change Notices make changes to Primary Documents. Change Notice numbers can be obtained from Judy Vance, (backup - Sonya Moore, or Terry Noland). Please send an email to Judy with the document number, title, and revision of the document you are working. Change Notice Desk Instruction TPA-DI-100 Site Form A-6005-413

TPA Appendix C -- List of Operable Units and Waste Sites TPA Appendix D -- Milestone Details	Change Requests/change control (Packages) make changes to TPA milestones (i.e. text, dates, etc.) New additions to existing milestones will be noted by underline and deletions will be noted by strikethrough. Contact Judy Vance for a new change request number. Change Request Desk Instruction TPA-DI-105 Change Request Form List of Approved Change Requests
Franklin Planner Lists -- Contact Judy Vance	
Misc Links	Procedures / Guidance
Project Managers List	TPA Management Procedure TPA-MP-14
Administrative Record	TPA Desk Instructions
DOE TPA Homepage	Memorandum of Understanding Between EPA and Ecology
Public Involvement Calendar	
WIDS Waste Site Search	