

Office of River Protection  
Tri-Party Agreement  
Project Summary Report  
March 22, 2011



Office of River Protection  
Tri-Party Agreement  
Milestone Review Meeting  
March 22, 2011

<b>Page</b>	<b>Topic</b>	<b>Leads</b>	<b>Time</b>
TPA 1	Statistics / Status	Woody Russell / Dan McDonald / Jeff Lyon	8:30
7	M-45, -50, -60 Single-Shell Tank Corrective Action	Bob Lober / Joe Caggiano	8:35
9	M-45-00, Complete Closure of All Single-Shell Tank Farms - Tank in Appendix H Status - 242-A Evaporator Status	Chris Kemp / Jeff Lyon	8:40
19	M-45-91, SST Integrity Assurance	Jeremy Johnson/ Michelle Hendrickson	8:55
22	Interim Stabilization Consent Decree	Jeremy Johnson/ Nancy Uziemblo	9:05
23	In Tank Characterization and Summary	Jeremy Johnson / Michael Barnes	9:10
24	M-62-40, System Plan	Ron Koll / Dan McDonald	9:20
25	Tank Operations Contract (TOC) Overview	Kathy Higgins / Dan McDonald / Jeff Lyon	9:30
40	Complete Acquisition of New Facilities and Submit Part B Permit Applications - M-90-00 - M-47-00 - M-62-40	Janet Diediker / Steve Pfaff / Dan McDonald	9:40
42	WTP TPA Milestone Information	Wahed Abdul / Dan McDonald / Jeff Lyon	9:55
<b>CD 1</b>	<b>Statistics / Status</b>	<b>Woody Russell / Dan McDonald / Jeff Lyon</b>	<b>10:15</b>
4	SST Retrieval and Closure - D-00B-01, -02, -03, -04 - TWRWP Status	Chris Kemp / Jeff Lyon	10:05
7	WTP - Immobilization Plant Project M-62-20 - M-62-01U, -01V, M-062-49	Wahed Abdul / Jeff Trent / Gary Olsen/ Dan McDonald	10:20
11	WTP Pretreatment (PT) Facility	Wahed Abdul / Dan McDonald	10:30
14	High-Level Waste (HLW) Facility	Jeff Trent / Dan McDonald	10:40
17	Low-Activity Waste (LAW) Facility	Gary Olsen / Dan McDonald	10:45
20	Analytical Laboratory (LAB)		10:50
22	Balance of Facilities (BOF)		10:55

Fiscal Year 2011 Tri-Party Agreement Milestone Status													
Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
M-062-40A	Select a Minimum of 3 scenarios	10/31/10	10/27/10										
D-001-00-R46	Quarterly Report	10/31/10	10/28/10										
M-045-100	Submit to Ecology an Agreement Primary Document a Catch Tank "Assumed Leak" Response Plan.	12/28/10	12/28/10										
M-045-101	Submit to Ecology as an Agreement Primary Document a Report on all Catch Tanks and Pipelines Used for SST Operations	12/28/10	12/28/10										
M-045-91A	Submit an Agreement Change Package with Interim Milestones to Implement the Panel's Recommendations M-045-91	12/29/10	09/27/10										
M-045-92D	Complete Negotiations to Schedule Remaining 4 Additional Barriers	12/31/10	12/07/10										
M-045-92E	Meet Yearly on Performance of Barrier	12/31/10	12/07/10										

Fiscal Year 2011 Tri-Party Agreement Milestone Status													
Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
M-062-20	Complete All 28 Issues in Independent WTP Flowsheet & Throughput Assessment	12/31/10	08/20/10										
M-045-80	Complete those Portions of C-200 Closure Demonstration Plan Necessary to Complete Closure Plan Development for SST System	01/31/11	12/28/10										
M-062-01V	Submit Semi-Annual Project Compliance Report	01/31/11	01/27/11										
D-001-00-R47	Quarterly Report	01/31/11	01/28/11										
M-045-91G-T05	Provide Report of the Visual Inspections of 12 SSTs in Table 3.3	03/31/11	3/11/11										
D-001-00-R48	Quarterly Report	04/30/11		X									
M-045-92K	Barrier 1 Design/Monitoring Approval from Ecology	06/30/11											
M-045-15	Interim Completion of Tank S-102 SST Waste Retrieval and Closure Demonstration Project.	06/30/11			X								

Fiscal Year 2011 Tri-Party Agreement Milestone Status													
Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
M-045-15A	Submit a Retrieval Data Report Pursuant to Agreement Appendix I	06/30/11			X								
M-045-15B	Remaining Wastes Adequately Characterized; Risk Assessment Completed for Residuals Remaining in the Tank	06/30/11			X								
M-045-15C	Update S-102 Component Closure Activity Plan	06/30/11			X								
M-045-15D	Exception to Waste Retrieval Criteria Pursuant to Agreement Appendix H	06/30/11			X								
M-036-01A	Submit to EPA & Ecology Lifecycle, Scope, Schedule & Cost for Hanford Site (RL is DOE Lead)	07/25/11		X									
D-001-00-R49	Quarterly Report	07/31/11		X									
M-045-56G	Ecology and DOE Agree to Meet, at a Minimum, Yearly (by July)	07/31/11		X									
M-062-01W	Submit Semi-Annual Project Compliance Report	07/31/11		X									

Fiscal Year 2011 Tri-Party Agreement Milestone Status													
Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
M-045-91C	Implement DQO Process, Test Plan to Evaluate the Chemistries	09/30/11		X									
M-045-91G-T01	Provide AOR Final Doc. For SSTs on 530,000 Gallon Tanks	09/30/11		X									
M-045-13	Interim Completion of Tank S-112 SST Waste Retrieval and Closure	TBD [In accordance with M-045-84 or -85]		X									
M-045-13E	Complete Negotiations for Interim Milestones for Closure of S-112	TBD [In accordance with M-045-84 or -85]		X									

Fiscal Year 2012 Tri-Party Agreement Milestone Status													
Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
M-062-30	Complete Negotiations Establishing Milestones for Near-Term Actions	10/25/11											
M-062-40B	Submit System Plan	10/31/11											
M-062-49	Submit Report to Ecology Demonstrating WTP Design Meets Vit. Criteria	10/31/11											
M-045-91B	Submit a Sampling and Analysis Plan to Ecology	12/30/11											
M-045-92F	Meet Yearly on Performance of Barrier	12/31/11											
M-045-91F-T02	Provide Report of Liner Failures for SSTs	01/31/12											
M-045-91G-T02	Provide AOR Final Doc. For SSTs on 750,000 Gallon Tanks	01/31/12											
M-045-91F-T01	Provide Report of the Liquid Leak Rate Assessments	01/31/12											
M-045-91D	Submit Analytical Test Plan for Cores Removed from C-107 Plug	03/31/12											
M-045-91G-T06	Provide Report of the Visual Inspection of 12 SSTs per criteria in M-045-91G-T05	03/31/12											

Fiscal Year 2012 Tri-Party Agreement Milestone Status													
Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
M-045-92L	Barrier 1 Construction Complete	06/30/12											
M-045-92M	Barrier 2 Design/Monitoring Approval from Ecology	06/30/12											
M-047-06	Complete Negotiation of No More Than 2 Interim Milestones	06/30/12											
M-045-91G-T03	Provide AOR Final Doc for SSTs on 1,000,000 Gallon Tanks	09/30/12											

## **WBS 5.2 Retrieve and Close Single Shell Tanks**

**M-045-58, 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. ORP transmitted its response to Ecology on August 18, 2010. Ecology extended review of comment responses to October 29, 2010. Ecology requested at the October PMM a two week extension from October 27, 2010. ORP acknowledged that Ecology's comment response will be considered in abeyance until DOE-ORP, Ecology, and EPA complete their negotiation of the AIP applicable to Appendix I. Ecology assumed that negotiations would be done December 24, 2010. They have been extended.

**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, Due: 12/31/08, Status: Complete.**

ORP and Ecology continue to meet monthly to identify and manage changes in the workplan. Meetings were held January 27 and February 25, 2011. Meeting minutes for the November 17 session have been signed by the parties and have been entered into the TPA administrative record and applicable change requests.

**M-045-56G, Complete Implementation of Agreed to Interim Measures, Due: 07/31/11, Status: On Schedule**

**M-045-92F, DOE and Ecology will meet yearly to review the monitoring data, agree to changes in monitoring (if needed) and assess the performance of the demonstration barrier, Due: 12/31/2011, Status: On Schedule**

**M-045-61, Submit to Ecology for review and approval as an Agreement primary document a Phase 2 RFI/CMS Report for WMA C, Due: 12/31/14, Status: On Schedule**

**M-045-62, Submit to Ecology for review and approval as an Agreement primary document a Phase 2 Corrective Measures Study Report for WMA C, Due: 06/30/2015, Status: On Schedule**

**M-045-92, DOE and Ecology will establish selection criteria for installation of additional interim barriers at additional WMAs (beyond the T-106 and TY barriers), Due: 9/30/2016, Status: On Schedule**

**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 (pending the CMS report, milestone M-45-58, and implementation of other interim corrective measures), Due: TBD, Status: On Schedule**

### **Significant Past Accomplishments:**

- T-Farm interim barrier monitoring continues.
- TY Interim Barrier Construction monitoring continues.

- Continued direct push characterization in C Farm at various planned locations
- 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.
- Continued remediation technology assessments in support of a Corrective Measures Study for WMA C.
- Completed 3-D SGE data collection from western 241-BY farm, including depth electrodes placed by direct push.
- Continued design activities for a surface barrier in 241-SX farm.
- Continued direct push campaign in eastern BY farm, supporting Interim Barrier.
- Developed work plan for conducting 3-D SGE in eastern BY farm, supporting Interim Barrier.
- Continued the Data Quality Objective process for the Phase 2 RFI-CMS work plan for WMA A/AX.
- Continued reanalysis of well-to-well resistivity data from C Farm using recent advancements in codes and hardware.
- Completed 3-D SGE data collection over UPR-200-E-82 in C farm; 2-D lines remain to be collected; initiated analysis of 3-D data set.

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

- Continue direct push campaign in C Farm.
- Complete direct push campaign in Eastern BY Farm, supporting Interim Barrier Design and Placement.
- Initiate direct push campaign in S-Farm in support of a future interim barrier.
- Complete resistivity data analysis for western BY Farm, supporting interim barrier design.
- Initiate 3-D SGE data collection in eastern BY farm.
- Complete resistivity data collection for 3-D SGE characterization of UPR-82 in C Farm.
- Continue remediation technology assessments in support of a Corrective Measures Study for WMA C.
- Process the TPA change with the updates to the WMA C work plan.
- Perform additional updates to WMA C RFI/CMS workplan based on requested changes from Ecology.
- Complete design of interim surface barrier for SX farm.
- Complete the Data Quality Objective process for the Phase 2 RFI/CMS work plan for waste management area A/AX.

#### **Issues:**

ORP would like to address Ecology's request for additional RFI/CMS milestones as part of the next tank farm closure discussions underway.

## SST Retrieval and Closure Program

**M-045-82, Submit complete permit mod requests for Tiers 1, 2, & 3 of the SST, Due:** 9/30/2015 Status: On Schedule

**M-045-84, Complete negotiations of TPA interim MS for closure of second WMA, Due:** 1/31/2017, Status: On Schedule

**M-045-83, Complete the closure of WMA C, Due:** 6/30/2019, Status: On Schedule

**M-045-85, Complete negotiations of TPA interim MS for closure of remaining WMAs, Due:** 1/31/2022, Status: On Schedule

**M-045-70, Complete waste retrieval from all remaining SSTs, Due:** 12/31/2040, Status: On Schedule

**M-045-00, Complete Closure of all Single Shell Tank Farms, Due:** 1/31/2043, Status: On Schedule

**M-045-86, Submit retrieval data report to Ecology for 19 tanks retrieved, Due:** TBD (12 months after retrieval certification), Status: On Schedule

### Significant Past Accomplishments:

None

### Significant Planned Activities in the Next Six Months:

See discussions above and related discussions in Consent Decree report.

### 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 is in the Winter of 2011.
- The Richland Office of USDOE has proposed an IS-1 alternate to the planned deliverable, as we understand the “IS-1 Common Vision” discussion on 1-18-11. IS-1 requires the delivery of an RFI/CMS that would include Tank Farm Pipelines. Ecology remains unclear on the objective of the USDOE Plans for IS-1 but must have this work plan to ensure that we can complete the SST Closure plan on schedule for the TPA milestones. This should be included in the critical path as well.

- USDOE is delaying the final numeric modeling supporting the WMA C performance assessment to align the timing with completion of the Tank Closure and Waste Management EIS. Impacts of this delay are being incorporated into the critical path schedules.

## **Tank in Appendix H. Status - Single Shell Waste Retrieval Criteria**

### **Tank 241-C-106**

#### **Significant Past Accomplishments:**

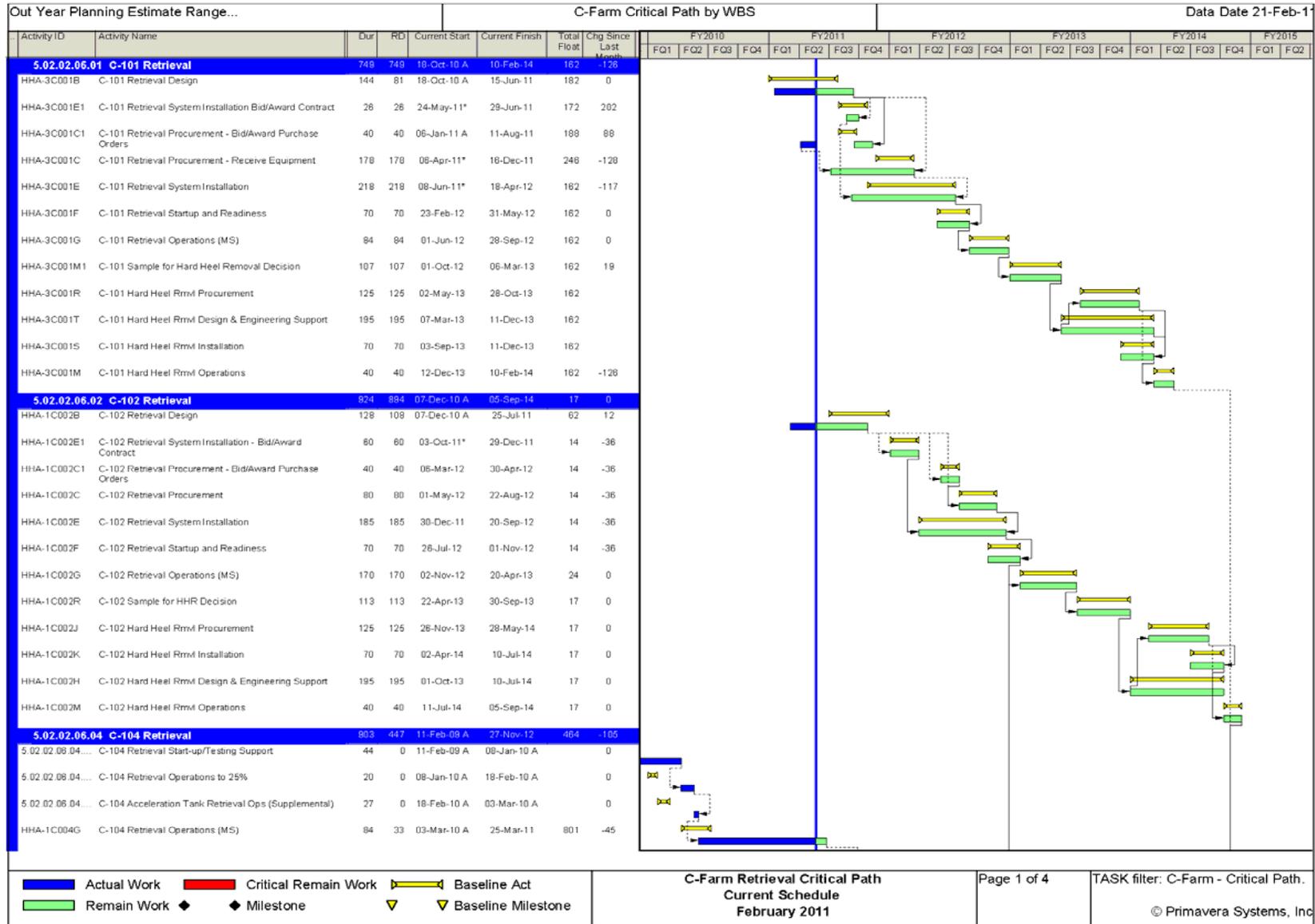
None

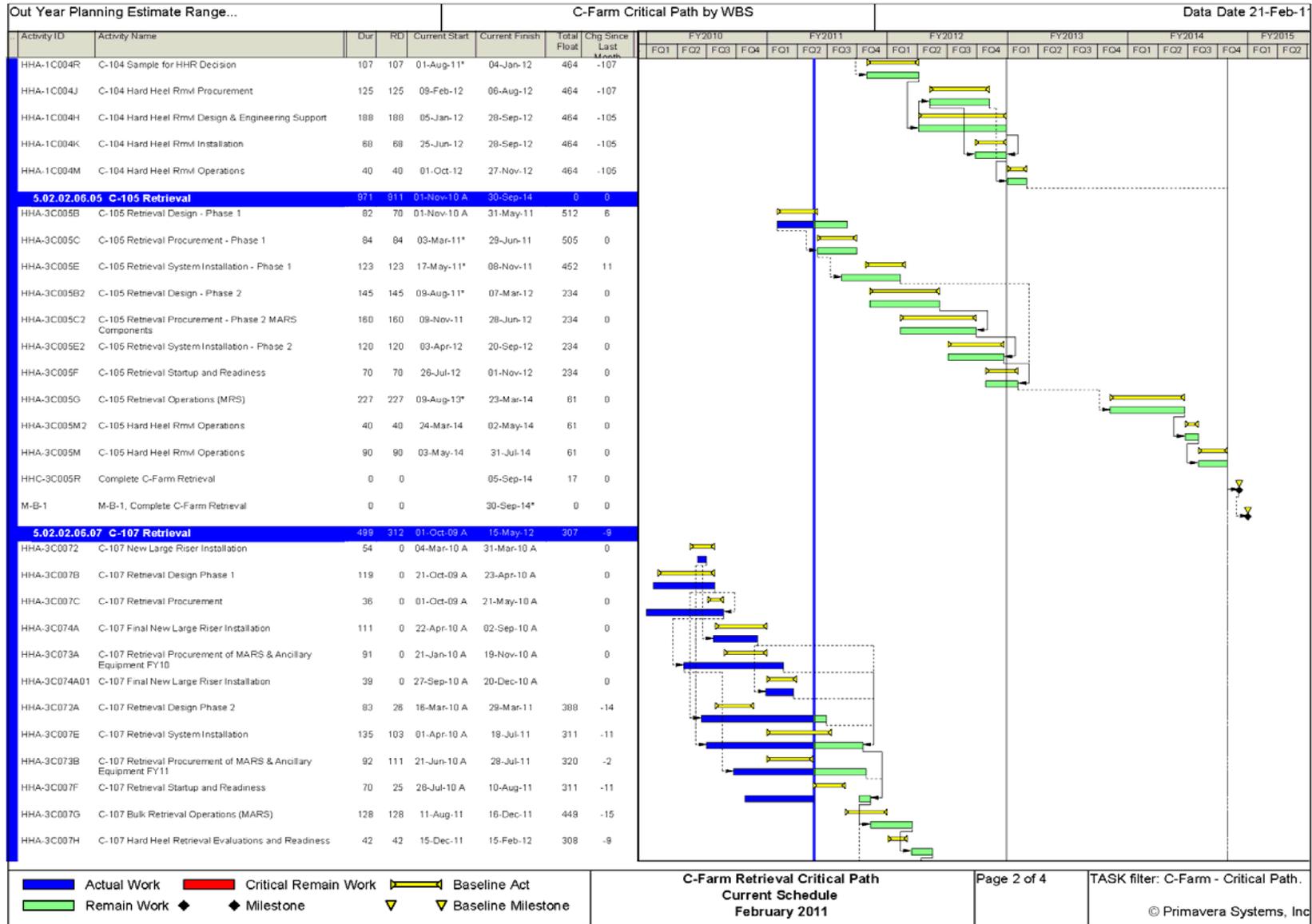
#### **Significant Planned Activities in the Next Six Months:**

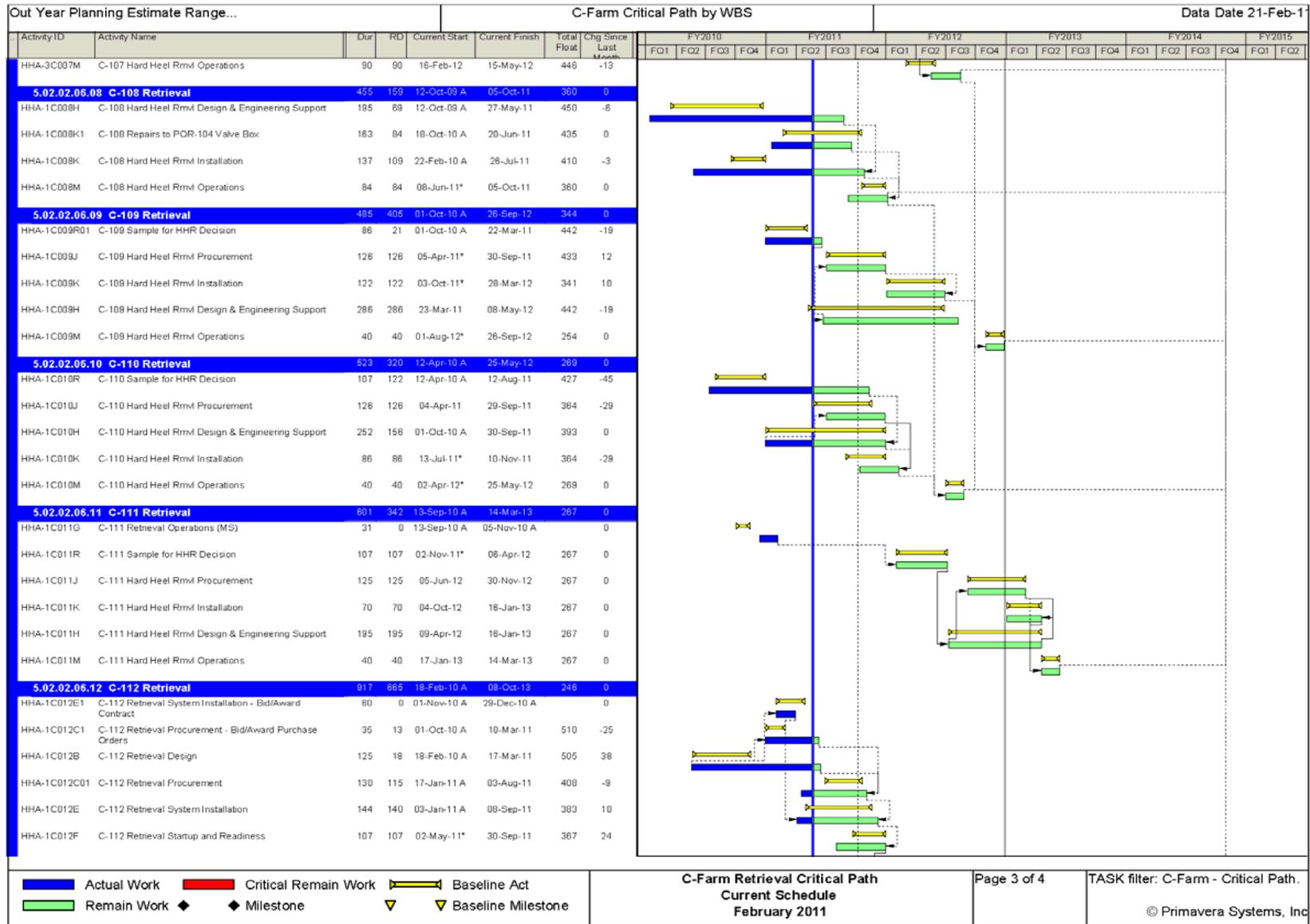
- Continue U.S. Nuclear Regulatory Commission (NRC) review of the C-106 exception request. A Request for Additional Information (RAI) was received from the NRC in February 2009. (It has been discussed with the NRC that much of the additional information requested is dependent upon development of C-Farm 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.
- ORP has requested an alternate milestone of the M-045-15, Tank 241-S-102 retrieval milestone.

#### **Issues:**









Out Year Planning Estimate Range...				C-Farm Critical Path by WBS				Data Date 21-Feb-11														
Activity ID	Activity Name	Dur	RD	Current Start	Current Finish	Total Float	Chg Since Last Month	FY2010		FY2011		FY2012		FY2013		FY2014		FY2015				
								FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	FQ3	FQ4	FQ1	FQ2	
HHA-1C012G	C-112 Retrieval Operations (MS)	84	64	01-Oct-11	03-Dec-11	536	34															
HHA-1C012R	C-112 Sample for HHR Decision	107	107	01-Jun-12*	31-Oct-12	246	0															
HHA-1C012J	C-112 Hard Heel Rmvl Procurement	125	125	03-Jan-13	28-Jun-13	246	0															
HHA-1C012K	C-112 Hard Heel Rmvl Installation	70	70	03-May-13	12-Aug-13	246	0															
HHA-1C012H	C-112 Hard Heel Rmvl Design & Engineering Support	195	195	01-Nov-12	12-Aug-13	246	0															
HHA-1C012M	C-112 Hard Heel Rmvl Operations	40	40	13-Aug-13	08-Oct-13	246	0															
<b>5.02.02.06.19 C-Farm Infrastructure DST Receiver Tank 3</b>				488	80	09-Oct-09 A	28-Jun-11	341	3													
HNA-1NFC0C	C-Farm Infrastructure DST Receiver Tank 3 Procurement	140	41	01-Mar-10 A	18-Apr-11	390	-1															
HNA-1NFC0B	C-Farm Infrastructure DST Receiver Tank 3 Design	145	60	09-Oct-09 A	16-May-11	371	-73															
HNA-1NFC0D	C-Farm Infrastructure DST Receiver Tank 3 Construction	105	85	17-May-10 A	23-May-11	366	-8															
HNA-1NFC0E	C-Farm Infrastructure DST Receiver Tank 3 Startup/Readiness	37	88	26-Oct-10 A	28-Jun-11	341	3															
<b>5.02.02.06.20 C-Farm Infrastructure DST Receiver Tank 4</b>				375	431	07-Dec-10 A	01-Nov-12	14	0													
HNA-2NFC0B	C-Farm Infrastructure DST Receiver Tank 4 Design	120	176	07-Dec-10 A	28-Oct-11	14	0															
HNA-2NFC0D1	C-Farm Infrastructure DST Receiver Tank 4 Construction	80	80	31-Oct-11	27-Jan-12	14	0															
HNA-2NFC0D	C-Farm Infrastructure DST Receiver Tank 4 Construction	165	165	30-Jan-12	20-Sep-12	14	0															
HNA-2NFC0E	C-Farm Infrastructure DST Receiver Tank 4 Startup/Readiness	70	70	26-Jul-12	01-Nov-12	14	0															

Actual Work Remain Work	Critical Remain Work Milestone	Baseline Act Baseline Milestone	<b>C-Farm Retrieval Critical Path Current Schedule February 2011</b>	Page 4 of 4	TASK filter: C-Farm - Critical Path. © Primavera Systems, Inc
----------------------------	-----------------------------------	------------------------------------	--	-------------	--

## Tank Retrievals with Individual Milestones

### Tank 241-S-102

**M-045-15, 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-045-15A, 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-045-15B, 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-045-15C, 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-045-15D, 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.

### **Significant Past Accomplishments:**

None

### **Significant Planned Activities in the Next Six Months:**

None

### **Issues:**

- Tank S-102 retrieval by June 30, 2011 is at risk. 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 until 180 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 winter of 2011-2012. Submittal of the Closure Plan could not occur, then, until several months after the M-45-15 milestone is due.

**Tank 241-S-112**

**M-045-13, Interim Completion of Tank S-112 SST Waste Retrieval and Closure Demonstration Project**, Due: TBD (in accordance with M-045-84 or M-045-85), Status: On Schedule

**M-045-13E, Complete Negotiations for Interim Milestones for Closure of S-112**, Due: TBD Status: On Schedule as part of M-045-84 and M-045-85.

**Significant Past Accomplishments:**

- Ecology letter of January 7, 2008, concurred with ORP that retrieval of Tank S-112 is complete.

**Significant Planned Activities in the Next Six Months:**

None

**Issues:**

None

**Complete Closure of Double Shell Tanks**

**M-042-00A, Complete closure of all double shell tank farms**, Due: TBD, based upon completion of retrieval under M-62-45 plus 5 yrs but no later than 9/30/2052 Status: On Schedule

**Significant Past Accomplishments:**

None

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

None

**Issues:**

None

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

242-A Campaign strategy:

One (1) cold run (utilizing water only) and two (2) waste processing campaigns were completed in FY2010. No additional campaigns are anticipated in CY2011 due to ongoing 242-A and Tank Farm Life Extension and ARRA funded facility upgrades. The 242-A Campaign Strategy for FY2010 through FY2015 depicted below has been updated based on ORP-11242, River Protection Project Plan, Revision 5, and ongoing schedule integration efforts.

Fiscal Year	Campaign No.	Feed Source	Slurry Tank	Comments
FY10	10-01	AW-106	AW-106	Campaigns 10-01/10-02 were performed back-to back starting in late August and completing in early October 2010. Campaign 10-02 was an acceleration of previously planned Campaign 11-01.
FY10	10-02	AW-106	AW-106	
FY11	NA	NA	NA	No campaign planned in FY11 due to ongoing 242-A and Tank Farm facility life extension and ARRA funded upgrades.
FY12	12-01	AP-107 AZ-102	AP-104 AP-107	Estimated start June 2012. Anticipates blending AZ-102 high cesium concentration with AP-107 waste. May require two (2) passes to achieve waste volume reduction.
FY12	12-02	AP-107 AZ-102	AP-107	Estimated start August 2012. Anticipates blending AZ-102 high cesium concentration with AP-107 waste. May require two (2) passes to achieve waste volume reduction.
FY13	13-01	AW-106	AP-107	Estimated start March 2013. Two (2) passes required.
FY13	13-02	AZ-101 AN-101 AW-106	AP-107	Estimated start September 2013. Two (2) passes required.
FY14	14-01	AN-106 AZ-102 AW-106	AP-107	Estimated start March 2014. Two (2) passes required.
FY15	15-01	AY-101 AZ-102	AP-107	Estimated start March 2015. Three (3) passes required.
FY15	15-02	AY-101	AP-107	Estimated start August 2015. Four (4) passes required.

## SST Integrity Assurance

**M-045-91G-T05, Provide to Ecology a report documenting and evaluating the visual inspection of 12 SSTs per the criteria listed in Table 3.3 in RPP-PLAN-46847, Rev.0, Due: 3/31/2011, Status: Complete 03/11/11 (11-TF-039)**

**M-045-91C, implement the DQO process to develop and provide Ecology a Test Plan to evaluate the chemistries as specified in RPP-RPT-43 116. Rev 0, Due: 9/30/2011, Status: On Schedule**

**M-045-91G-T01, Provide to Ecology the Structural Analyses of Record final documentation for SSTs for 530, 000 gallon tanks (B, BX. C, T and U Farms), Due: 9/30/2011, Status: On Schedule**

**M-045-91B, Submit a Sampling and Analysis Plan to Ecology for the sampling of sidewall cores from tank 241-A-106 or alternate tank approved by Ecology, Due: 12/30/2011, Status: On Schedule**

**M-045-91F-T01, Provide to Ecology as a HFFACO secondary document a report evaluating the applicability to Hanford SSTs of the liquid leak rate assessments of sludge and salt-cake from the Savannah River Site, Due: 1/31/2012, Status: On Schedule**

**M-045-91F-T02, Provide to Ecology as a HFFACO secondary document a report evaluating the common factors of liner failures for SSTs that have leaked and will provide recommendations as appropriate, such as enhanced Leak Detection, Monitoring, and Mitigation, Due: 1/31/2012, Status: On Schedule**

**M-045-91G-T02, provide to Ecology the Structural Analyses of Record final documentation for SSTs for 750,000 gallon tanks (BY, S, TX and TY Farms), Due: 1/31/2012, Status: On Schedule**

**M-045-91D, Submit to Ecology an analytical test plan for the cores removed from the C-107 plug, Due: 3/31/2012, Status: On Schedule**

**M-045-91G-T06, Provide to Ecology a report documenting and evaluating the visual inspection of 12 SSTs per the criteria in M-045-91G-T05, Due: 3/31/2012, Status: On Schedule**

**M-045-91G-T03, Provide to Ecology the Structural Analyses of Record final documentation for SSTs for 1,000,000 gallon tanks (A, AX and SX Farms), Due: 9/30/2012, Status: On Schedule**

**M-045-91D-T01, Provide Ecology a report containing the results and interpretation of testing, and analysis performed on the concrete dome samples obtained from the Tank C-107 plug, Due: 5/31/2013, Status: On Schedule**

**M-045-91F-T03, Provide to Ecology, as a HFFACO secondary document a report assessing the feasibility of testing for ionic conductivity between the inside and outside of SSTs, Due: 5/31/2013, Status: On Schedule**

**M-045-91F-T04, provide to Ecology, as a HFFACO secondary document, a report on the 100-series single-shell tanks which have been or will be identified as having leaked in RPP-32681, Rev 0, Due: 7/31/2013, Status: On Schedule.** Ecology and ORP are jointly drafting a Class III Change Request, M-45-11-01, aligning the completion dates of this milestone and M-045-91F-T02 (“Common Factors of Liner Failures for SSTs” report) to ensure all of this milestone’s leak evaluations will be available for use in the Common Factors report.

**M-045-91E, Provide to Ecology a compilation of the Single-Shell Tank farms dome deflection surveys every two years, beginning 9/30/2013, Due: 9/30/2013, Status: On Schedule**

**M-045-91G-T04, provide to Ecology the Structural Analyses of Record final documentation for SSTs for 55,000 gallon tanks (B, C, T and U Farms), Due: 10/31/2013, Status: On Schedule**

**M-045-91F, Provide to Ecology a report (Summary Conclusions Report on Leak Integrity) summarizing and evaluating the information submitted under M-045-91F-T01 through -T04, Due: 12/31/2013, Status: On Schedule**

**M-045-91G, Provide a Summary Conclusions Report of Structural Analysis of Record (AOR) for SSTs, Due: 4/30/2014, Status: On Schedule**

**M-045-91B-T01, Provide Ecology a report containing the results and interpretation of testing, and analysis, performed on the concrete core obtained from Tank A- 106 or alternate tank, Due: 9/30/2014, Status: On Schedule**

**M-045-91H, Submit a change package (if deemed necessary by DOE and Ecology) to establish additional milestones based on information obtained from the actions in the preceding M-045-91 series milestones to date, Due: 7/31/2015, Status: On Schedule**

**M-045-91I, Provide to Ecology an IQRPE certification of SSTs structural integrity for the remainder of the mission, or for such time as the IQRPE believes he/she can reasonably certify, Due: 9/30/2018, Status: On Schedule**

**Significant Past Accomplishments:**

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

- M-045-91B: Begin DQO sessions for side-wall coring. First meeting scheduled for 2/08/11.
- M-045-91C: Begin developing a Test Plan to investigate chemistries as specified in RPP-43116.
- M-045-91D: Begin analytical test plan development for Tank C-107 dome core analyses efforts.
- M-045-91G-T05: Submit Visual Inspection Report for 12 SST's completed during FY 2010.

**Issues:**

None

## Interim Stabilization Consent Decree

### I. Near-Term Deliverables:

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

Due: 09/30/04

Status: Completed on March 31, 2004, with discontinuation of pumping in U-108 and subsequent consultation with Ecology staff. Interim stabilization of S-102 and S-112 is held in abeyance by third amendment to the Consent Decree. ORP's obligation to interim stabilize S-112 was satisfied upon completion of retrieval operations. Retrieval of S-102 has been impacted by the spill at this tank. A review of the January 25, 2010, video of the tank has shown approximately 2,400 gallons of supernatant liquid remaining. This is below the criteria for interim stabilization of less than 5000 gallons supernatant liquid.

On October 21, 2010, ORP received a letter from Ecology notifying ORP of Ecology's decision to require ORP to Interim Stabilize tank 241-S-102 within 18 months of receipt of its notification. ORP transmitted the required documentation to Ecology to demonstrate that tank 241-S-102 meets the requirements for interim stabilization, as set forth in Case Number CT-99-5076, Third Amendment on December 9, 2010 via letter 10-TPD-163.

### II. Significant Accomplishments:

- Quarterly report for 1<sup>st</sup> quarter FY11 transmitted to Ecology on 1/31/11 under letter 11-TPD-009.
- Formal documentation for completion of S-102 interim stabilization submitted to Ecology 12/9/10
- Documentation for completion was signed by courts for closure on 03/08/2011. This closes out the D-001-00 milestone series.

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

- None

### IV. Issues

- None

## In Tank Characterization and Summary

For the period from February 1 – February 28, 2011:

- **Accomplishments:**
  - Completed Revision 0 of the TSAP RPP-PLAN-48557, *Sampling and Analysis Plan for Hard Heel Solids in Tank 241-C-104 After Sluicing*, on February 15, 2011.
  - Completed Revision 0 of the TSAP RPP-PLAN-48706, *Tank Sampling and Analysis Plan for 241-AP-105 2011 Grab Samples*, on February 17, 2011.
  - Completed Revision 0 of the DQO RPP-48188, *C-108 Hard Heel Dissolution Data Quality Objectives* on February 9, 2011.
  - Completed Revision 4 of RPP-RPT-44814, *Derivation of Best-Basis Inventory for Tank 241-AN-101*, on February 22, 2011.
  - Completed Revision 0 of RPP-RPT-48639, *Derivation of Best-Basis Inventory for Tank 241-AP-104*, on February 25, 2011.
  - Completed Revision 6 of RPP-RPT-43979, *Derivation of Best-Basis Inventory for Tank 241-AY-101*, on February 16, 2011.
  - Completed Revision 1 of RPP-RPT-44630, *Derivation of Best-Basis Inventory for Tank 241-AY-102*, on February 15, 2011.
  - Completed Revision 0 of RPP-RPT-48774, *Derivation of Best-Basis Inventory for Tank 241-SY-101*, on February 25, 2011.
  
- **Planned Action within the next Six Months:**
  - Tank Sampling
    - Tank 241-C-109 off riser sampling scheduled for March 2011.
    - Tank 241-AY-101 corrosion mitigation grab samples scheduled for March 2011.
    - Tank 241-AP-105 corrosion mitigation grab samples scheduled for March 2011.
    - Tank 241-C-104 off riser sampling scheduled for June 2011.
    - Tank 241-AW-106 evaporator sample scheduled for June 2011.
    - Tank 241-C-108 hard heel dissolution samples scheduled for August 2011.
  
  - BBI Updates
    - Seven tank updates were planned for FY11 Quarter 2. Five updates have been completed and sent to BBI users.
  
  - Data Quality Objectives (DQO)
    - Complete Revision 18 of the Compatibility DQO in March 2011.
    - Complete Revision 3 of the PCB Management DQO in May 2011.
    - Complete Revision 0 of the 244-CR Vault tanks in April 2011.
  
- **Issues:**
  - None

## System Plan

**M-062-40B, Submit a system plan describing the disposition of all tank waste managed by ORP, Due: 10/31/2011, Status: On Schedule**

**M-062-40C, Select a minimum of three scenarios that will be analyzed in the system plan, Due: 10/31/2013, Status: On Schedule**

**M-062-40D, Submit a system plan describing the disposition of all tank waste managed by ORP, Due: 10/31/2014, Status: On Schedule**

**M-062-40ZZ, Submit a one-time Tank Waste Supplemental Treatment Technologies report if a supplemental treatment technology is proposed other than a 2nd LAW, Due: 10/31/2014, Status: On Schedule.**

**M-062-45-T01, Every six years, within six-months after last revision of the System Plan, negotiate tank waste retrieval sequencing, Due: 4/30/2015, Status: On Schedule**

### **Significant Past Accomplishments:**

The Key Assumptions and Success Criteria for RPP System Plan Revision 6 were approved on 2/1/11. The System Plan Annotated Outline was reviewed and comments were incorporated during January. A large amount of HTWOS modeling was completed in January, constructing building blocks for the 10 scenarios.

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

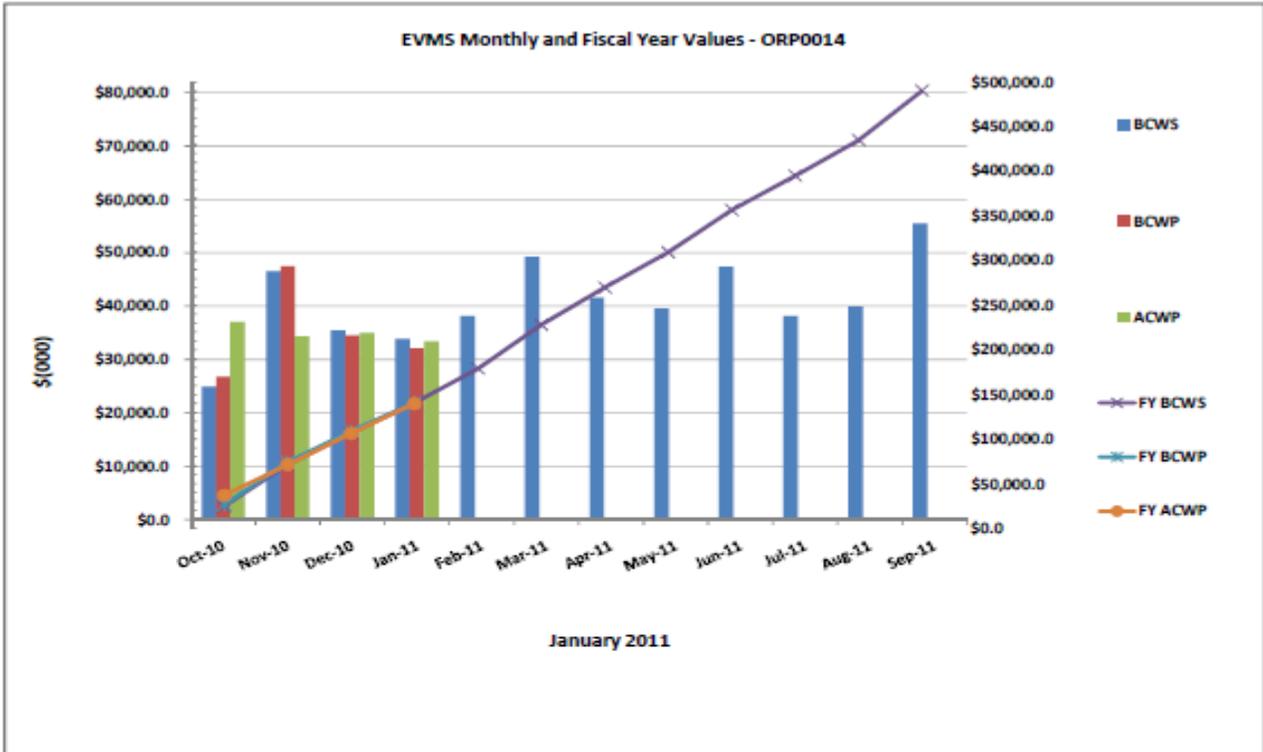
Work on System Plan Rev. 6 supporting M-062-40B during the next six months will include the following activities: Prepare model modification requests, complete HTWOS modeling, V&V and data analysis and perform periodic reviews with ORP and Ecology. The first version of the Baseline Scenario is planned to be completed in February, prior to adjustments for budget constraints.

### **Issues:**

None.

## TANK OPERATIONS CONTRACT (TOC) OVERVIEW

*Office River Protection – Tank Farm – Fiscal Year To-Date Performance*



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct-10	\$24,918.8	\$26,782.0	\$37,083.6	1.07	0.72	\$24,918.8	\$26,782.0	\$37,083.6	1.07	0.72
Nov-10	\$46,528.0	\$47,510.9	\$34,301.0	1.02	1.39	\$71,446.8	\$74,292.9	\$71,384.5	1.04	1.04
Dec-10	\$35,469.5	\$34,558.3	\$35,056.5	0.97	0.99	\$106,916.3	\$108,851.1	\$106,441.0	1.02	1.02
Jan-11	\$33,862.5	\$32,115.2	\$33,376.8	0.95	0.96	\$140,778.8	\$140,966.4	\$139,817.8	1.01	1.00
Feb-11	\$38,205.9					\$178,984.7				
Mar-11	\$49,226.4					\$228,211.1				
Apr-11	\$41,597.9					\$269,809.0				
May-11	\$39,608.3					\$309,417.3				
Jun-11	\$47,399.0					\$356,816.3				
Jul-11	\$38,211.4					\$395,027.7				
Aug-11	\$39,949.9					\$434,977.6				
Sep-11	\$55,491.8					\$490,469.4				

CTD	\$900,834.5	\$894,200.0	\$831,940.8	0.99	1.07
-----	-------------	-------------	-------------	------	------

The unfavorable current month (CM) schedule variance (SV) of **(\$1,747k)** is driven by the following projects:

**CLIN 1 – Base Operation, \$(1,507k)**

- 222-S Lab Reliability Upgrades for room and waste renovations
- 222-S Lab Mobile Office replacement

**CLIN 2 – Retrieval and Closure SSTs, (\$490k)**

- Design delays for the AW Trailer Complex Mobile Office
- Tank AN-107 ultrasonic examination due to resources
- SX Farm Infrastructure Sludge Cooler Removal Project

The unfavorable current month (CM) cost variance (CV) of **(\$1,262k)** is driven by the following projects:

**CLIN 1 - Base Operations**

- 222-S Lab upgrades for hardware/software procurement
- 242-A Evaporator Exhauster Upgrades on skid fabrication and installation design

**CLIN 2 - Retrieval and Closure SST's**

- C-107 Retrieval for the Mobile Are Retrieval System (MARS)
- C-104 Retrieval for the Operational Acceptance Testing and resolution of Slurry Pump issues
- The Articulating Mast System modifications and testing

The unfavorable contract to date (CTD) schedule variance (SV) of **(\$6,634k)** is driven by the following projects:

**CLIN 1 - Base Operations, (\$1,206k)**

- Design delays for the Core Sampling Truck Replacement
- 222-S Facility Reliability deferrals
- Design delays of the AZ Condensate Line Upgrade
- Design delays of jumper fabrication and line installation
- Design delays for the AW Trailer Complex
- Remove Obsolete Equipment delays

**CLIN 2 – Retrieval and Closure SST's, (\$4,783k)**

- C-108 Retrieval due to delays in hard heel removal
- C-104 Retrieval pumping delays due to obstruction
- SX Farm Infrastructure Sludge Cooler Removal

The favorable contract to date (CTD) cost variance (CV) of \$62,259 is due to the following projects:

**CLIN 1 – Base Operations, \$30,068**

- Facility and Property Management FY09 unfilled positions and slow ramp-up
- 222-S Roof Replacement costs less than originally planned
- Information Resource Management costs due to lower material expenditures as the result of receiving items from Yucca Mountain at a savings
- DST Integrity Project due to cost efficiencies on encasement pressure checks and labor efficiencies during AW-101, AW-104, AW-105 and AW-106 UT examinations
- Fabrication of jumpers for AP, AN-1 and AN-B Valve pits savings

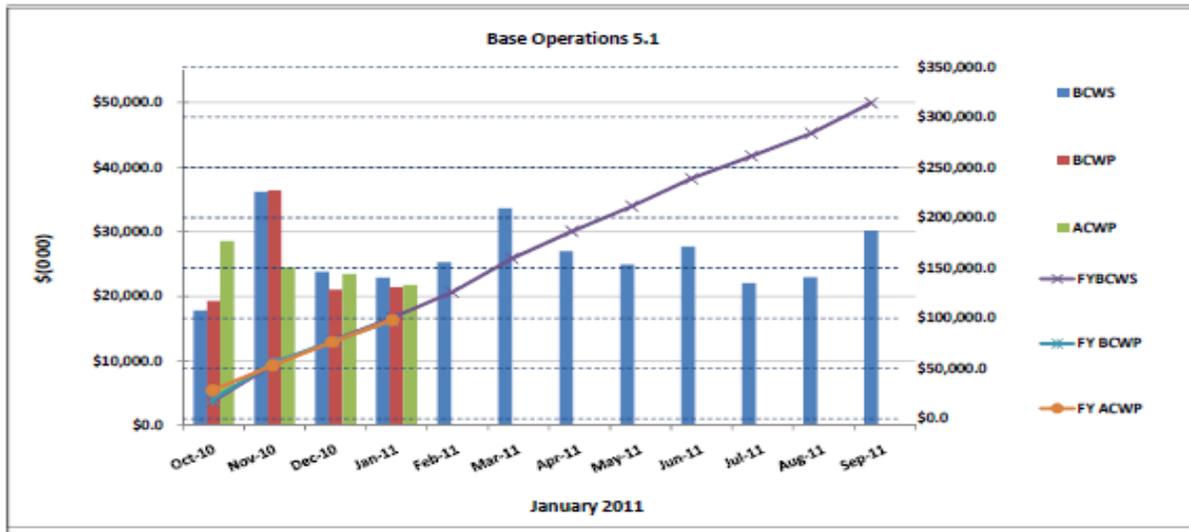
**CLIN 2 – Retrieval and Closure, \$9,698**

- Hose in Hose Transfer Line disposition efficiencies
- C-110 Retrieval and Catch Tank Reporting efficiencies
- Catch Tank & Pipeline Reporting due to efficiencies gained by using direct labor rather than contract labor

**WFD/Treatment PLNG/DST Retrieval/Closure, \$21,964k**

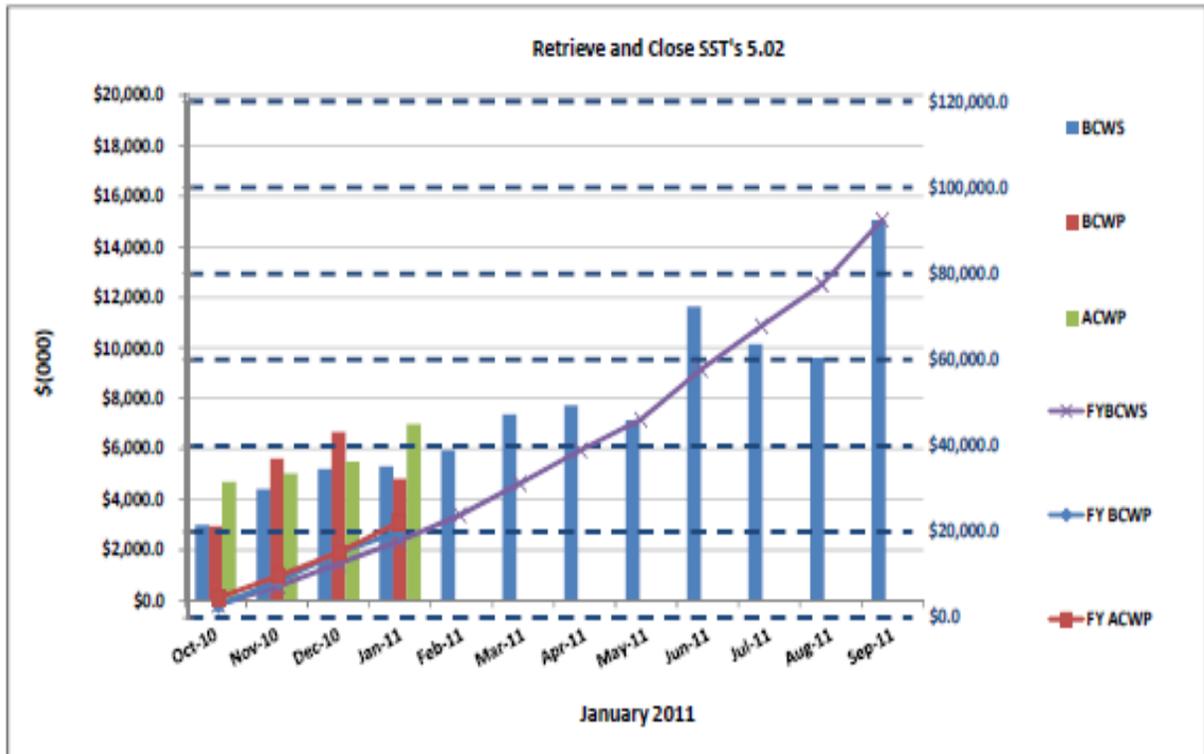
- Wiped Film Evaporator decreased procurement cost savings
- Waste Feed Delivery flow sheet due to lack of contract support and hiring delays
- AW Cob Isolation efficiencies gained by awarding to an experienced contractor and requiring fewer resources than planned

Office of River Protection (ORP-0014) Fiscal Year 2011 - Monthly EVMS



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FYBCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct-10	\$17,777.2	\$19,285.1	\$28,549.6	1.08	0.68	\$17,777.2	\$19,285.1	\$28,549.6	1.08	0.68
Nov-10	\$36,143.1	\$36,366.3	\$24,452.2	1.01	1.49	\$53,920.3	\$55,651.4	\$53,001.8	1.03	1.05
Dec-10	\$23,775.6	\$20,995.7	\$23,448.8	0.88	0.90	\$77,695.9	\$76,647.1	\$76,450.6	0.99	1.00
Jan-11	\$22,876.6	\$21,370.0	\$21,705.1	0.93	0.98	\$100,572.5	\$98,017.1	\$98,155.7	0.97	1.00
Feb-11	\$25,286.0					\$125,858.5				
Mar-11	\$33,598.6					\$159,457.1				
Apr-11	\$26,943.0					\$186,400.1				
May-11	\$24,939.1					\$211,339.2				
Jun-11	\$27,677.6					\$239,016.8				
Jul-11	\$22,034.5					\$261,051.3				
Aug-11	\$22,915.8					\$283,967.1				
Sep-11	\$30,161.4					\$314,128.5				
<b>CTD</b>	<b>\$613,556.4</b>	<b>\$612,350.4</b>	<b>\$582,282.2</b>	<b>1.00</b>	<b>1.05</b>					

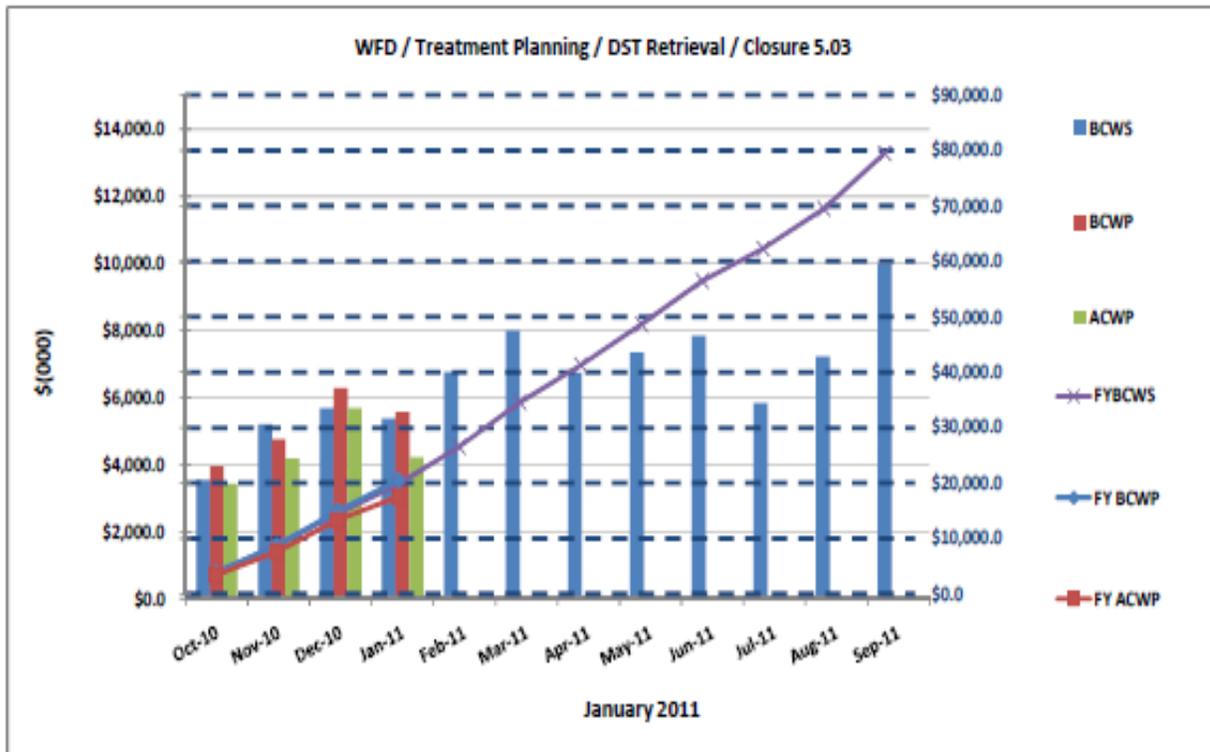
Office of River Protection (ORP-0014) Fiscal Year 2011 - Monthly EVMS



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FYBCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct-10	\$2,991.6	\$2,932.6	\$4,707.6	0.98	0.62	\$2,991.6	\$2,932.6	\$4,707.6	0.98	0.62
Nov-10	\$4,412.7	\$5,622.7	\$5,006.7	1.27	1.12	\$7,404.3	\$8,555.3	\$9,714.3	1.16	0.88
Dec-10	\$5,209.7	\$6,682.7	\$5,494.0	1.28	1.22	\$12,614.0	\$15,238.0	\$15,208.3	1.21	1.00
Jan-11	\$5,310.0	\$4,820.2	\$6,975.6	0.91	0.69	\$17,924.0	\$20,058.2	\$22,183.9	1.12	0.90
Feb-11	\$5,945.4					\$23,869.4				
Mar-11	\$7,380.0					\$31,249.4				
Apr-11	\$7,707.4					\$38,956.8				
May-11	\$7,118.9					\$46,075.7				
Jun-11	\$11,634.4					\$57,710.1				
Jul-11	\$10,142.4					\$67,852.5				
Aug-11	\$9,598.5					\$77,451.0				
Sep-11	\$15,039.3					\$92,490.3				

CTD	\$179,194.0	\$174,411.4	\$164,713.1	0.97	1.06
-----	-------------	-------------	-------------	------	------

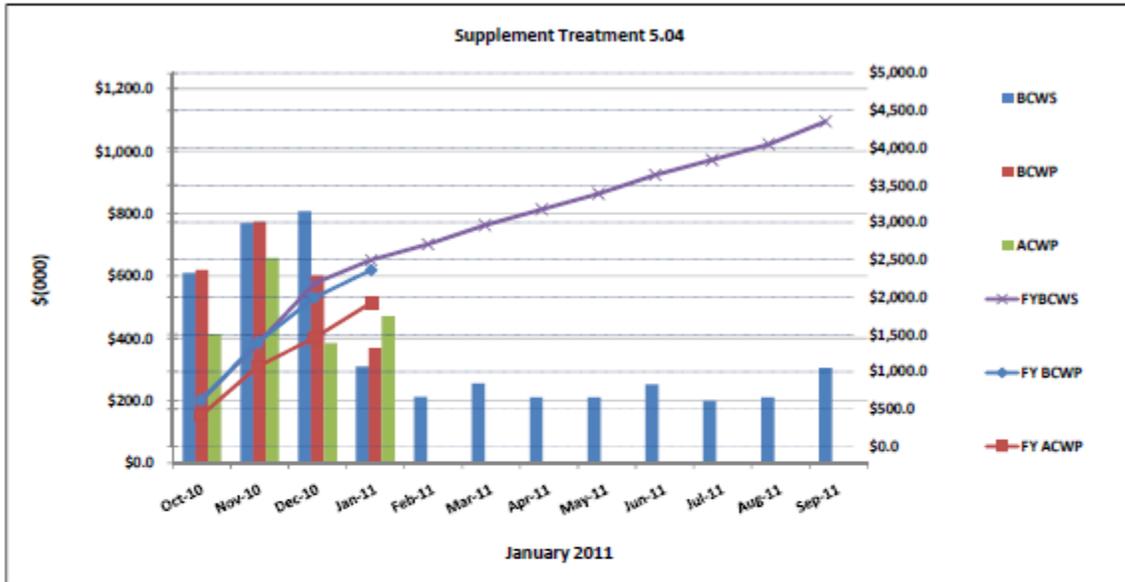
Office of River Protection (ORP-0014) Fiscal Year 2011 - Monthly EVMS



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FYBCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct-10	\$3,540.0	\$3,944.3	\$3,413.8	1.11	1.16	\$3,540.0	\$3,944.3	\$3,413.8	1.11	1.16
Nov-10	\$5,203.6	\$4,748.8	\$4,184.7	0.91	1.13	\$8,743.6	\$8,693.1	\$7,598.5	0.99	1.14
Dec-10	\$5,677.1	\$6,277.7	\$5,689.4	1.11	1.10	\$14,420.7	\$14,970.8	\$13,287.9	1.04	1.13
Jan-11	\$5,366.1	\$5,557.1	\$4,225.6	1.04	1.32	\$19,786.8	\$20,527.9	\$17,513.5	1.04	1.17
Feb-11	\$6,762.3					\$26,549.1				
Mar-11	\$7,991.8					\$34,540.9				
Apr-11	\$6,736.5					\$41,277.4				
May-11	\$7,339.8					\$48,617.2				
Jun-11	\$7,834.4					\$56,451.6				
Jul-11	\$5,834.4					\$62,286.0				
Aug-11	\$7,225.0					\$69,511.0				
Sep-11	\$9,985.9					\$79,496.9				

CTD	\$102,696.9	\$102,183.4	\$80,219.7	0.99	1.27
-----	-------------	-------------	------------	------	------

Office of River Protection (ORP-0014) Fiscal Year 2011 - Monthly EVMS



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FYBCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct-10	\$610.0	\$619.9	\$412.6	1.02	1.50	\$610.0	\$619.9	\$412.6	1.02	1.50
Nov-10	\$768.6	\$773.1	\$657.3	1.01	1.18	\$1,378.6	\$1,393.0	\$1,069.9	1.01	1.30
Dec-10	\$807.0	\$602.2	\$384.2	0.75	1.57	\$2,185.6	\$1,995.2	\$1,454.1	0.91	1.37
Jan-11	\$309.8	\$368.0	\$470.6	1.19	0.78	\$2,495.4	\$2,363.2	\$1,924.7	0.95	1.23
Feb-11	\$212.2					\$2,707.6				
Mar-11	\$256.1					\$2,963.7				
Apr-11	\$211.1					\$3,174.8				
May-11	\$210.5					\$3,385.3				
Jun-11	\$252.6					\$3,637.9				
Jul-11	\$200.0					\$3,837.9				
Aug-11	\$210.5					\$4,048.4				
Sep-11	\$305.2					\$4,353.6				

CTD	\$5,387.0	\$5,254.7	\$4,725.8	0.98	1.11
-----	-----------	-----------	-----------	------	------

## **Complete Acquisition of New Facilities and Submit Part B Permit Applications**

**M-090-11, Complete the Negotiation of No More Than Two Canister Storage Facility Construction Interim Milestones**, Due: 12/31/12, Status: On Schedule. Negotiations are not yet underway.

**M-090-00, Acquire/modify facilities for storage of IHLW**, Due: 12/31/2019, Status: On Schedule

**M-047-06, Complete negotiation of no more than two interim milestones governing work necessary to support completion of M-045-00**, Due: 06/30/12, Status: Negotiations are not yet underway.

**M-047-00, Complete Work Necessary to provide facilities for management of secondary waste from the WTP**, Due: 12/31/2022, Status: On Schedule

**M-062-30, Complete negotiations establishing milestones for near term actions**, Due: 10/25/11, Status: On schedule. Negotiations are not yet underway.

**M-062-45ZZ, Negotiate a one-time supplemental treatment selection**, Due: 4/30/2015, Status: On schedule. Negotiations are not yet underway.

**M-062-45ZZ-A, Convert M-062-31-T01 through M-062-34-T01 to Interim Milestones**, Due: 4/30/2015, Status: On Schedule.

**M-062-31-T01, Complete final design and submit RCRA Part B permit mod request**, Due: 4/30/2016, Status: On schedule

**M-062-32-T01, Start construction of supplemental vitrification treatment facility and/or WTP enhancements**, Due: 4/30/2018, Status: On schedule

**M-062-33-T01, Complete construction of supplemental vitrification treatment facility and/or WTP enhancements**, Due: 4/30/2021, Status: On schedule

**M-062-45XX, No later than 12/31/2021, the DOE and Ecology shall complete negotiations to establish a mechanism that will apply to resolve future disputes regarding the determinations in M-062-45, paragraphs 4 and 5**, due: 12/31/2021, Status: On Schedule

**M-062-34-T01, Complete hot commissioning of supplemental vitrification treatment facility and/or WTP enhancements**, Due: 12/30/2022, Status: On schedule

**M-062-21, Annually, submit data that demonstrates operation of the WTP**, Due: 2/28/2023, Status: On Schedule

**M-062-00, Complete Pretreatment Processing and Vitrification of HLW and LAW Tank Wastes, Due: 12/31/2047, Status: On Schedule**

**Significant Past Accomplishments:**

None

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

Initiate negotiations under M-062-30.

**Issues:**

ORP received Letter 1100295 from Ecology on 1/13/11 stating Ecology has "...formed the opinion that USDOE actions jeopardize completion of HFFACO Milestone M-062-30."

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

**M-062-01W, Submit Semi-Annual Project Compliance Report, Due: 7/31/2011, Status: On Schedule**

**M-062-49, Submit a report to Ecology demonstrating that the WTP is designed to accomplish, pretreat 100% of retrievable waste, vitrify 100% of separated hi level waste, WTP LAW with Supplemental treatment can vitrify 100% of separated low level waste stream, Due: 10/31/2011, Status: On Schedule**

There are about 3,200 FTE equivalent contractor [Bechtel National Inc. (BNI)] and subcontractor personnel working on the WTP Project, including 1,060 craft, 540 non-manual, and about 195 subcontractor personnel FTE equivalents working at the WTP construction site (all facilities). Overall project percent complete through January 2011 is 57%, design and engineering is 79% complete, procurement is 60% complete and construction is 54% complete.

In January 2011, the facility percent complete values for Design/Engineering decreased. This decrease in values was tied to the incorporation of the BNI Forecast Update Four EAC. This resulted in an increase in the facility engineering budget, which has correspondingly reduced the to-date percent complete values.

The overall WTP Project Schedule Variance (SV) in December was a positive \$1.8M, the Cost Variance (CV) was a positive (\$6.4M). Both the positive cost and schedule variances came primarily from the Construction and Plant Equipment control accounts.

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

### **Significant Past Accomplishments:**

- Revised Project Execution Plan sent to HQ first week of March
- BNI & WRPS working to submit and integrated management/technical proposal for a one system approach to meet the “2020 vision for the WTP Project Transition to Operations”
- BNI completed the HLW Civil, Structural, and Architectural Title II Design Complete Contract Milestone on February 17, 2011
- Low Order Accumulation Model (LOAM) benchmarking tests for Non-Newtonian vessel configuration are complete.

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

- There will be a mini Construction Project Review in March 2011
- A full Construction Project Review is scheduled for May 2011
- Complete analytical results from the Low Order Accumulation Model (LOAM) validation testing for the non-Newtonian vessel configuration

- Erection of PT 4<sup>th</sup> tier structural steel (77ft to 98ft elevation)
- Commence Siding and Roofing of HLW Annex
- Complete vendor fabrication of the LAW Carbon Bed Adsorber (CBA)
- Complete the BOF water treatment facility

**Issues:**

No significant issues at this time.

## Pretreatment (PT) Facility

### Significant Past Accomplishments:

The Pretreatment Facility (PT) 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 47%, engineering is 76% complete, procurement is 43% complete, and construction is 34% complete.

Overall construction continues to perform well. Rebar and embed installation and fabrication of rebar wall curtains continues to support additional slab and wall placements at the 77ft and 98ft elevation. Construction completions for the month of February include: placement of two 5<sup>th</sup> lift (77ft to 9-ft elevation) walls (5-25 and 5-31, ~160 CY), prefabrication of rebar curtains for three walls, installation of two Plant Wash and Disposal vessels, and fabrication and delivery of pipe spools in the hot cell.

On-going work includes: erection on the 4<sup>th</sup> tier structural steel on the northwest corner of the 77ft elevation, fireproofing, drain and process piping, cable trays and supports, and HVAC ductwork.

Engineering continues to implement changes from the technical issue resolutions into the P&ID drawings and other design documents. In February, PT engineering issued the Cesium Ion Exchange (CXP) system electrical wiring diagrams for construction, and issued the electrical grounding layout drawings for the 28ft elevation. In addition, one hundred and thirty electrical circuits were designed and eighty four electrical circuits were routed.

Material requisitions for quote on floor penetration offset assembly modules, plant wash and fluidic racks, and two safety flush vessels are issued.

### Significant Planned Actions in the Next Six Months:

- Complete analytical results from the Low Order Accumulation Model (LOAM) validation testing for the non-Newtonian vessel configuration
- Complete planning for the Large Scale testing for the validation of vessel mixing Scale-up
- Issue the revised design option and P&ID's for the Process Vessel Vent System (PVV) and the Pretreatment Vessel Vent Process (PVP) system
- Complete the coupled dynamic analysis for the Waste Feed (FEP) and Treated Law (TLP) evaporators
- Complete fabrication of two major Jumper frames
- Complete placement of 1 slab, 2 basements, and 26 walls, totaling about ~6,200 CY
- Erection of 4<sup>th</sup> tier structural steel (77ft to 98ft elevation)
- Release four Solenoid Valve Utility Racks to Fabrication
- Fabricate and deliver 38 pipe spools, and begin fabrication on an additional 28 pipe spools.

**Issues:**

The PT vessel vent process (PVP) and vessel vent exhaust (PVV) systems are being upgraded from passive to active safety systems to maintain negative pressure during all normal and off-normal conditions (i.e., loss of site power [LOSP] or seismic design basis earthquake [DBE]). As part of the changes from the material-at-risk (MAR) accident analysis, the postulated aerosol loading was increased by order of magnitude. This is affecting PVV/PVPs ability to meet functional requirements during off-normal condition.

WTP is evaluating alternate strategies to resolve this issue that include reliance on current equipment performance, additional in-line filtration equipment, reduction of calculation conservatisms testing for aerosol generation rate, etc. The plan is to have a design decision by September 2011 to support equipment procurement.

Design and fabrication of vessel HLP-22, is the critical path for the PT Facility. Re-analysis and design modifications necessary to mitigate increased stress levels of vessels due to seismic and other dynamic load increases continue. The engineering analysis/drawings are scheduled to be completed by the end of April 2011. Efforts are also ongoing for the analysis of the on-site vessels in order to support the vessel modifications. The permitting strategy for the first group of on-site vessels to be modified has been developed jointly with Ecology. Initial site work and pre-modification preparation work has begun. Schedules for the vessel modifications and permit needs have been provided to Ecology for their resource planning. The current plan is to award the first set of vessels modifications by the end of April 2011. Permitting strategy for the off-site vessel modifications are under discussions with Ecology for finalizing.

The physical benchmark testing of the LOAM for application to the 5 non-Newtonian vessels is complete. The results of the testing are still under evaluation to determine the validity of LOAM for the 5 non-Newtonian vessels.

## High-Level Waste (HLW) Facility

### Significant Past Accomplishments:

Since the transition of the Filter Cave from the procurement to the installation phase in January, C5V duct work continues as planned. Following the installation of the 60-inch diameter C5V supply header, a second 60-inch diameter header (for collecting the downstream exhaust of the C5V HEPA filters) was installed along the east wall in early February. Work continued this period on the west wall header with the alignment and installation of the 42-inch C5V duct expansion loop. With the completion of these major C5V components, installation of structural steel, pipe, and other components are available throughout the Filter Cave.

During the period BNI completed Civil, Structural, and Architectural Title II Design Complete Contract Milestone on February 17, 2011. DOE-WTP staff is currently in the process of validating the milestone deliverables and supporting information prior to approval of the milestone package.

In a major step toward the qualification and delivery of the WTP HEPA filter units, seismic qualification testing of the HEPA filter seals was successfully completed on February 22, 2011 and witnessed by Contractor and DOE-WTP staff.

### Significant Planned Actions in the Next Six Months:

- Receive Initial Delivery of C5V HEPA Filter Housings
- Receive Canister Decontamination Vessels and Canister Rinse Vessel
- Set Shielded Personnel Access Door RWH-DOOR-20 in the Waste Drum Swabbing and Monitoring Area
- Complete Fabrication of C5V Dampers
- Commence Siding and Roofing of Annex

### Issues:

Crane availability for Filter Cave component installation has been reduced. Construction Management conducted a "Safety Pause for Crane Awareness" at the WTP site on February 14, 2011. The Field Safety Assurance staff participated in a critique and root cause analysis for two recent crane incidents. Corrective actions included implementation of a series of three training courses for Signalmen, Bellmen, and Flaggers requiring personnel to pass both written and practical examinations. Until the corrective actions have been completed, more stringent restrictions for crane usage and swing paths have been implemented as a precautionary measure.

Delays in deliveries from the commodity vendors have resulted in increased coordination efforts, schedule re-sequencing, and order prioritizations in order to avoid impacting Construction. The Contractor is working to identify process improvements and enhance the interfacing in order to reduce potential future schedule delays.

The fabrication and delivery of HLW vessels is also being monitored closely. Vessel status and progress is reported weekly to ensure completion and delivery prior to the scheduled installation dates.

## Low-Activity Waste (LAW) Facility

### Significant Past Accomplishments:

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 canisters that will be disposed on site in the Integrated Disposal Facility. Overall facility percent complete is 64%, engineering is 89%, procurement is 82%, and construction is 62%.

In December 2010, the facility percent complete values for Design/Engineering and Construction decreased. This decrease in values was tied to the incorporation of the remaining External Flowsheet Review Team (EFRT) Issues. This resulted in an increase in the facility engineering and construction budgets, which has correspondingly reduced the to-date percent complete values.

- Engineering

BNI Engineering issued Controls and Instrumentation (C&I) data sheets for LAW safety radar level detection instruments and completed C&I design verification for the safety system requirements specification. Two confirmed calculations were issued: 1) *Purge Water Flow Rate and Supply Line Sizing*, and 2) *HVAC Heating and Cooling Load Calculations General Design Criteria*. The Component Information System (CIS) list was issued for the LAW concentrate receipt process (LCP) system. Engineering also issued control logic diagrams for the LAW ASX auto-sampling system and the container pour handling (LPH) system, all to support control software development. C&I software was developed for the LAW Carbon Dioxide Gas (CDG) system.

- Procurement

Procurement activities included release for vendor shipment of four melter lid cooling water pumps, two melter lid closed-loop heat exchangers, and several pressure regulators.

- Construction

During February, BNI completed electrical equipment installation in the LAW switchgear building, as well as Thermite welding of rails in the South finishing line. Construction activities were initiated for the installation of two finishing line doors. Thermite welding of rails in the North finishing line continued, as well as installation of the ASX auto-sampling system, fire alarm system, medium voltage electrical buss ductwork, and two pumps for the primary off-gas process (LOP) system. Other normal activities continued, including installation of piping and hangers, cable tray, conduit and wiring, instrument enclosures, lighting fixtures, partition wall framing, gypsum wallboard, and perimeter sealants.

- Commissioning

Process steps associated with transferring waste from the Treated LAW Concentrate Vessel in the Pretreatment facility to the LAW Concentrate Receipt Vessels in the LAW facility were discussed and documentation of this process was prepared for review. Development continued on a draft schedule fragment for LAW operations that includes typical batch transfer from the Pretreatment facility through processing and finishing of Immobilized Low-Activity Waste (ILAW) containers.

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

- Complete installation of LAW personnel elevator
- Complete vendor fabrication of the Carbon Bed Adsorber (CBA)

**Issues:**

No major issues.

## Analytical Laboratory

### Significant Past Accomplishments:

The LAB will support WTP operations by analyzing feed, vitrified waste, and effluent streams. Overall facility complete for LAB is 46%, engineering is 80%, procurement is 74%, and construction is 64%.

In December 2010, the facility percent complete values for Design/Engineering and Construction decreased. This decrease in values was tied to the incorporation of the remaining External Flowsheet Review Team (EFRT) Issues. This resulted in an increase in the facility engineering and construction budgets, which has correspondingly reduced the to-date percent complete values.

- Engineering

BNI engineering completed specifications for the high purity gas system and the architectural drawings for C5V system High-Efficiency Particulate Air (HEPA) filter ceiling.

- Procurement

BNI procurement released three Integrated Control Network enclosure controllers to ship and engineering workstation equipment ASX-SMPLR-00034 to ship for the autosampling (ASX) system.

- Construction

BNI construction began installation of the bogie shield door/waste drum transfer hatch. BNI construction continued installation of piping in the C2V/C3V system pits and shielding for the ASX system.

- Commissioning

An evaluation of potential high noise areas revealed two areas of concern: the HVAC rooms on the 2<sup>nd</sup> floor and rooms in the NW corner of the lab that house the ASX and Process Vacuum Air (PVA) systems, as well as C2, C3, and C5 fans and filters. Additionally, a draft report on data quality requirements for WTP feed acceptance (ICD-19) was distributed.

### Significant Planned Actions in the Next Six Months:

- Install LAB waste drum bogie shield door
- Complete LAB C5 ventilation filter room ceiling design

### Issues:

No major issues.

## Balance of Facilities (BOF)

### Significant Past Accomplishments:

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 46%, engineering is 76%, procurement is 46%, and construction is 60%.

In December 2010, the facility percent complete values for Design/Engineering and Construction decreased. This decrease in values was tied to the incorporation of the remaining External Flowsheet Review Team (EFRT) Issues. This resulted in an increase in the facility engineering and construction budgets, which has correspondingly reduced the to-date percent complete values.

- Engineering

BNI Engineering issued a TCN for material testing/G321E clarifications for the ammonia storage pressure vessels.

- Procurement

The Emergency Diesel Generator (EDG) quote has been received and is being evaluated. The CO<sub>2</sub> vessel has been delivered. Material requisitions quotes were issued for venturi critical-flow piping and to purchase scald protection valves (piping specialty items). BNI issued Component Information System (CIS) equipment lists for the Ammonia Reagent (AMR) system.

- Construction

BNI construction continued installation of the fire alarm detection system in the T-52 Warehouse, performing pressure tests in the Water Treatment Facility (WTF), and working on the punch list of items for turnover of glass former control building. BNI construction completed installation of the reverse-osmosis skid/piping at the WTF.

- Commissioning

A review was performed of the CO<sub>2</sub> pelletizer ductwork from the reject hopper to the C3 ductwork.

### Significant Planned Actions in the Next Six Months:

- Award EDG procurement
- Complete concrete placements for BOF Ammonia Facility
- Receive BOF ammonia vaporizer skid
- Complete water treatment facility

### Issues:

No major issues

<b>Waste Treatment Plant Project - Percent Complete Status</b>												
<b>Through January 2011</b>												
<b>(Dollars - Millions)</b>	<b>Overall Facility Percent Complete Unallocated Dollars</b>			<b>Design/Engineering Unallocated Dollars</b>			<b>Procurement Unallocated Dollars</b>			<b>Construction Unallocated Dollars</b>		
	<b>Performance Measurement Baseline (PMB)</b>	<b>Budgeted Cost of Work Performed (BCWP)</b>	<b>% Complete</b>	<b>Performance Measurement Baseline (PMB)</b>	<b>Budgeted Cost of Work Performed (BCWP)</b>	<b>% Complete</b>	<b>Performance Measurement Baseline (PMB)</b>	<b>Budgeted Cost of Work Performed (BCWP)</b>	<b>% Complete</b>	<b>Performance Measurement Baseline (PMB)</b>	<b>Budgeted Cost of Work Performed (BCWP)</b>	<b>% Complete</b>
<b>Facilities</b>												
Low-Activity Waste	933.6	597.1	64%	221.9	197.9	89%	232.2	189.6	82%	330.2	203.4	62%
Analytical Lab	340.5	156.7	46%	52.2	41.6	80%	55.9	41.3	74%	97.2	62.3	64%
Balance of Facilities	521.5	239.9	46%	77.9	59.0	76%	81.1	37.2	46%	226.4	135.6	60%
High-Level Waste	1,433.4	741.8	52%	333.2	284.2	85%	443.3	279.1	63%	539.2	174.4	32%
Pretreatment	2,429.3	1,118.7	47%	674.4	513.8	76%	701.3	299.4	43%	870.9	300.1	34%
Shared Services	4,791.9	3,116.4	65%	1,104.4	861.0	78%	466.9	334.5	72%	1,414.9	985.9	70%
<b>Total WTP w/o UB</b>	<b>10,450.2</b>	<b>5,970.5</b>	<b>57%</b>	<b>2,464.1</b>	<b>1,957.4</b>	<b>79%</b>	<b>1,980.8</b>	<b>1,181.1</b>	<b>60%</b>	<b>3,478.7</b>	<b>1,861.9</b>	<b>54%</b>
Undistributed Budget	7.2	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>Total WTP</b>	<b>10,457.4</b>	<b>5,970.5</b>	<b>57%</b>	<b>2,464.1</b>	<b>1,957.4</b>	<b>79%</b>	<b>1,980.8</b>	<b>1,181.1</b>	<b>60%</b>	<b>3,478.7</b>	<b>1,861.9</b>	<b>54%</b>

**Source:** WTP Contract Performance Report - Data for January 2011

**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. In July 2010 the allocation of 1.90 to the facilities was removed to show true facility percent complete.