

Office of River Protection  
Tri-Party Agreement  
Project Summary Report  
January 24, 2011



Office of River Protection  
Tri-Party Agreement  
Milestone Review Meeting  
January 24/25, 2011

Page	Topic	Leads	Time
<b>Monday, January 24, 2011, 12:30 p.m. – 2:00 p.m.</b>			
1	M-45, -50, -60 Single-Shell Tank Corrective Action	Bob Lober / Joe Caggiano	12:30
4	M-45-00, Complete Closure of All Single-Shell Tank Farms - Tank in Appendix H Status - 242-A Evaporator Status	Chris Kemp / Jeff Lyon	12:45
11	M-45-91, SST Integrity Assurance	Jeremy Johnson/ Michelle Hendrickson	1:00
14	Interim Stabilization Consent Decree	Jeremy Johnson/ Nancy Uziemblo	1:10
15	In Tank Characterization and Summary	Jeremy Johnson / Michael Barnes	1:15
16	M-62-40, System Plan	Ron Koll / Dan McDonald	1:20
17	Tank Farm Project EVMS Status (Cost & Schedule Performance)	Kathy Higgins / Dan McDonald / Jeff Lyon	1:25
23	Complete Acquisition of New Facilities and Submit Part B Permit Applications - M-90-00 - M-47-00 - M-62-40	Glyn Trenchard / Dan McDonald	1:40
25	Statistics / Status	Woody Russell / Dan McDonald / Jeff Lyon	1:50
30	WTP TPA Milestone Information	Woody Russell / Dan McDonald / Jeff Lyon	1:55
<b>Tuesday, January 25, 2011, 10:30 p.m. – 12:00 p.m.</b>			
	SST Retrieval and Closure - D-00B-01, -02, -03, -04 - TWRWP Status	Chris Kemp / Jeff Lyon	10:30
	Statistics / Status	Woody Russell / Dan McDonald / Jeff Lyon	
30	WTP - Immobilization Plant Project M-62-20 - M-62-01U, -01V, M-062-49	Wahed Abdul / Jeff Trent / Gary Olsen/ Dan McDonald	10:50
32	WTP Pretreatment (PT) Facility	Wahed Abdul / Dan McDonald	11:00
34	High-Level Waste (HLW) Facility	Jeff Trent / Dan McDonald	11:15
35	Low-Activity Waste (LAW) Facility	Gary Olsen / Dan McDonald	11:30
36	Analytical Laboratory (LAB)		11:30
37	Balance of Facilities (BOF)		11:45

## **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. Last meeting was November 17, 2010. (The December meeting was not held due to the holidays. The next meeting is planned for January 27, 2011.) Meeting minutes for the November 17 session have been mutually signed by the parties and are being documented via approved meeting minutes entered into TPA administrative record and applicable change requests.

**M-045-92A, DOE and Ecology will establish, no later than March 31, 2010, selection criteria for installation of additional interim barriers at additional WMAs (beyond the T-106 and TY barriers), Due: 3/31/2010, Status: Complete**

**M-045-92B, DOE shall submit to Ecology for approval, a final design and monitoring plan for TY farm interim barrier, Due: 3/31/2010, Status: Complete**

**M-045-92C, Complete Installation of TY farm interim barrier, Due: 9/30/2010, Status: Complete**

**M-045-90, Complete interim barrier demonstration report for the T-106 interim barrier, which report shall include a recommendation and commitment on whether to proceed with additional interim barriers and an evaluation of the barrier's ability to reduce water infiltration that drives migration of subsurface contamination to groundwater, Due: 9/30/2010, Status: Complete**

**M-045-92D, Complete negotiations to schedule the remaining 4 additional barriers, unless DOE and Ecology agree that monitoring data does not support continued installation of interim barriers. Due: 12/31/2010, Status: Complete (12/7/10).**

“If negotiated, complete installation of 4 additional interim barriers at a rate of one per year, with the first being completed by June 30, 2012. Prior to beginning construction and at least one year before construction is to be complete (06/30/2011), DOE will submit to Ecology a final design and monitoring plan for each interim barrier.”

In the 12/7/10 meeting, Ecology and ORP agreed to develop a change package moving the due date for the third barrier from June 30, 2012 to October 30, 2012, with the final design and monitoring plan to be completed by June 30, 2011 (16 months prior). The rationale for moving the due date back is to take full advantage of the construction season.

**M-045-92E, 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: 12/31/2010, Status: Complete (12/7/10).

**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 completed. 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 of western 241-BY farm, using depth electrodes placed by direct push; analysis is underway.
- Continued design activities for a surface barrier in 241-SX farm.

- Initiated direct push campaign in eastern BY farm, supporting Interim Barrier.
- Initiated the Data Quality Objective process for the Phase 2 RFI-CMS work plan for WMA A/AX.

**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 one additional area in support of a future interim barrier.
- Complete resistivity data analysis for western BY Farm, supporting interim barrier design.
- Perform 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.
- Continue design of interim surface barrier for SX farm.
- Continue the Data Quality Objective process for the Phase 2 RFI/CMS work plan for waste management area A/AX.

**Issues:**

Due to the extension of the AIP negotiations, Ecology would like to continue to resolve the ORP response to Ecology's request for additional RFI/CMS milestones.

## SST Retrieval and Closure Program

**M-045-100, Submit as a primary document a Catch Tank "assumed leak response plan,**  
Due: 12/27/10, Status: Complete (12/28/10).

**M-045-101, Submit to Ecology as a primary document a report on all catch tanks and associated pipelines in the SST System Part A,** Due: 12/27/10, Status: Complete (12/28/10).

**M-045-80, Complete those portions of C-200 Closure Demonstration Plan,** Due: 1/31/2011  
Status: On Schedule. The four deliverables required under M-045-80 have been completed and were formally transmitted from ORP to Ecology via 10-TPD-166 on December 26, 2010.

**M-045-81, Implement & complete all remaining activities in C-200 Closure Plan and provide a report of the results of those activities,** Due: 9/30/2014, Status: On Schedule. The first deliverable specified in the closure demonstration plan, a Pipeline Feasibility Study, has been completed and was formally transmitted from ORP to Ecology via 10-TPD-166 on December 26, 2010.

**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:**

- Completed installation of AMS for the restart of the C-104 retrieval.
- Prepared the technical sampling and analysis plan for 241-C-109, RPP-PLAN-47927.
- Started receiving sample analysis draft results of the hard heel material removed from C-110.
- Continued testing of a MARS sluice educator system at Columbia Energy in Pasco and continued testing of the Columbia Test Center for testing of the MARS sluicing system.
- Continued design activities for C-112 sluicing system.
- Completed installation of C-107 large riser in preparation for the Mobile Arm Retrieval system vacuum end-effector.

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

- Obtain C-109 heel samples
- Complete construction of MARs with a sluicing end-effector for C-107 retrieval.
- Initiate construction of C-108 hard heel retrieval system, and start up of retrieval activities.
- Complete C-111 retrieval.
- Complete C-112 design and initiate procurement.
- Operate hydraulic arm Articulating Mast System (AMS) into C-104 to aid removal of obstruction underneath slurry pump and resume and complete C-104 retrieval.
- Finish testing of the MARS with the vacuum educator.

**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 Winter of 2011.
- Ecology would like to get a critical path from USDOE for WMA-C Closure including EIS deliverables by the February Quarterly Meeting. This request was put on the Action Log.
- 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.

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

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

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

None

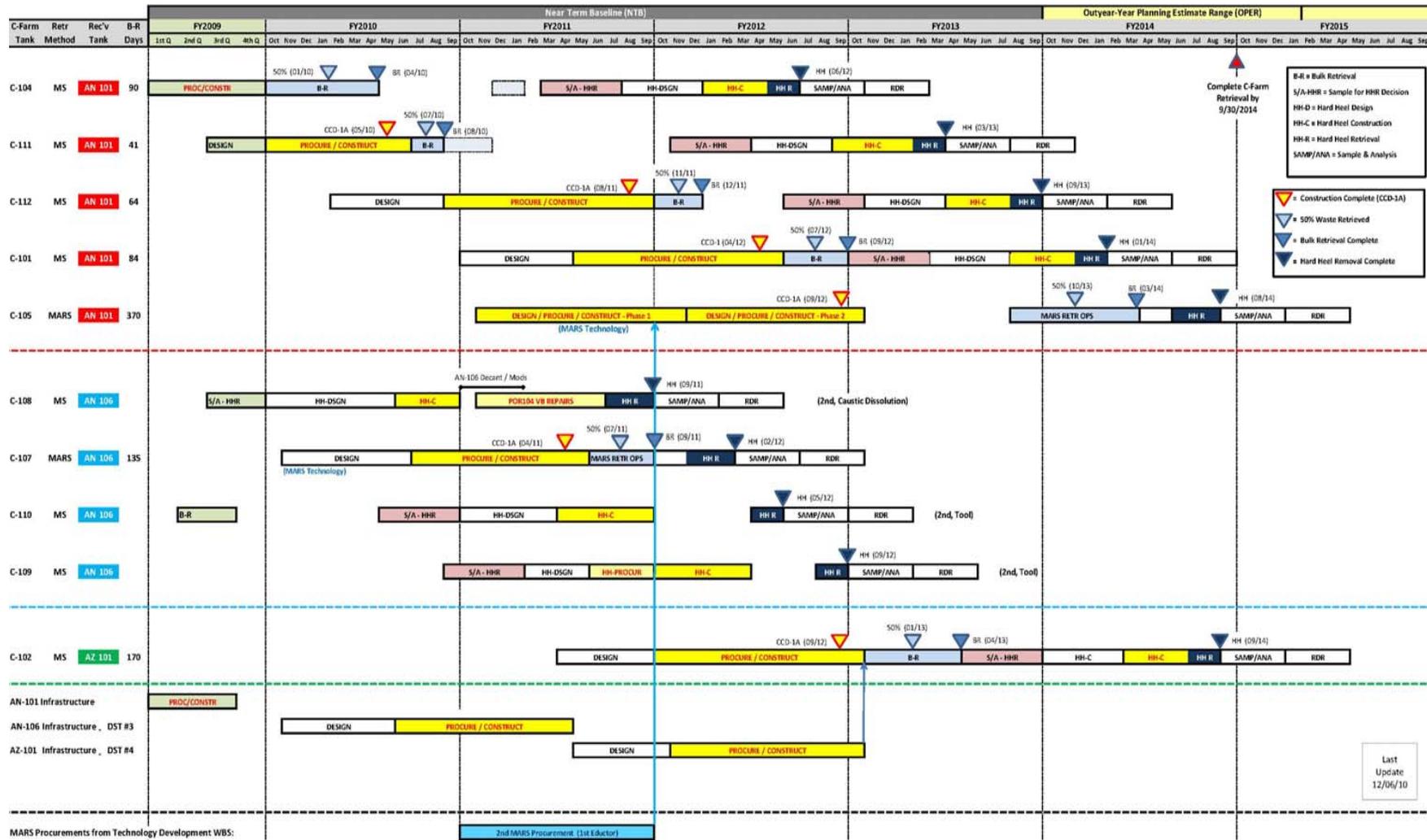
#### **Significant Planned Activities in the Next Six Months:**

- 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.

#### **Issues:**

C-Farm Life Cycle Baseline 2014 Compliance Schedule

C-Farm Retrieval 12/7/2010 Reflects Baseline as of 12/3/10 (incorporates BCRs-032 and 033)



## 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. 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 campaigns are anticipated in FY2011 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.

<b>Fiscal Year</b>	<b>Campaign No.</b>	<b>Feed Source</b>	<b>Slurry Tank</b>	<b>Comments</b>
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-045-91, Establish panel and provide report on SST integrity assurance review, Due: 9/30/2010, Status: Completed**

**M-045-91A, Submit an agreement change package with interim milestones to implement the panels recommendations, Due: 12/29/2010, Status: Completed (9/27/10).**

**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: 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-045-91C, 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-045-91F-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**

**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:**

- Change Package M-45-10-01 was signed by ORP on 12/28/10 and Ecology on 1/3/11.

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

- Begin DQO sessions for side wall coring. First meeting scheduled for 2/8/11.
- Begin analytical test plan development for C-107 dome core analyses efforts.
- Begin developing a Test Plan to investigate chemistries as specified in RPP-43116.

**Issues:**

## 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:

- **D-001-00-R46, Quarterly Written Report**, Due: 10/31/10, Status: Completed 10/28/2010
- Formal documentation for completion of S-102 interim stabilization submitted to Ecology 12/9/10

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

- Prepare and submit formal documentation that S-102 is interim stabilized.
- **D-001-00-R47, Quarterly Written Report**, Due: 01/31/2011, Status: On Schedule

### IV. 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 Tank Characterization and Summary

For the period from December 1 – December 31, 2010:

### I. Accomplishments:

- Completed revision 0 of RPP-RPT-48103, *Derivation of Best-Basis Inventory for Tank 241-AP-107*, on December 3, 2010.
- Completed revision 2 of RPP-RPT-46792, *Derivation of Best-Basis Inventory for Tank 241-AW-102*, on December 20, 2010.
- Completed revision 1 of RPP-RPT-46686, *Derivation of Best-Basis Inventory for Tank 241-AW-106*, on December 7, 2010.
- Completed revision 3 of RPP-RPT-44814, *Derivation of Best-Basis Inventory for Tank 241-AN-101*, on December 21, 2010.
- Completed revision 1 of RPP-RPT-46772, *Derivation of Best-Basis Inventory for Tank 241-AN-107*, on December 20, 2010.
- Completed revision 2 of RPP-RPT-44637, *Derivation of Best-Basis Inventory for Tank 241-AZ-101*, on December 20, 2010.
- Completed revision 0 of RPP-RPT-48459, *Derivation of Best-Basis Inventory for Tank 241-C-111*, on December 17, 2010.
- Completed revision 0 of data package RPP-RPT-48405, *Final Report for Liquid and Solid Samples from Catch Tank 241-A-350*, on December 27, 2010.

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

- Tank Sampling
  - HEPA filter sampling scheduled for January 2011.
  - Tank 241-C-109 off riser sampling scheduled for January 2011.
  - Tank 241-AY-101 corrosion mitigation grab samples scheduled for April 2011.
  - Tank 241-AP-105 corrosion mitigation grab samples scheduled for March 2011.
  - Tank 241-C-104 off riser sampling scheduled for June 2011.
- BBI Updates
  - Ten BBI updates were completed for FY11 Quarter 1. The updates were published to TWINS on December 20, 2010.
  - Seven tank updates are planned for FY11 Quarter 2.
- Data Quality Objectives (DQO)
  - Complete revision 18 of the Compatibility DQO in February 2011.
  - Complete revision 3 of the PCB Management DQO in March 2011.
  - Complete revision 0 of the C-108 Hard Heel Dissolution DQO in February 2011.
  - Complete revision 0 of the Tank 241-C-108 Post Retrieval DQO in February 2011.

### III. Issues:

None

## SYSTEM PLAN

**M-062-40A, Select a minimum of three scenarios that will be analyzed in the system plan,**  
Due: 10/31/2010, Status: Completed 10/27/10

**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:**

A review of System Plan Rev. 6 detailed assumptions was completed on December 20, 2010 by Ecology, ORP and WRPS for all ten scenarios. A detailed work schedule was drafted and modeling of new systems and facilities within many of the scenarios was initiated.

### **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.

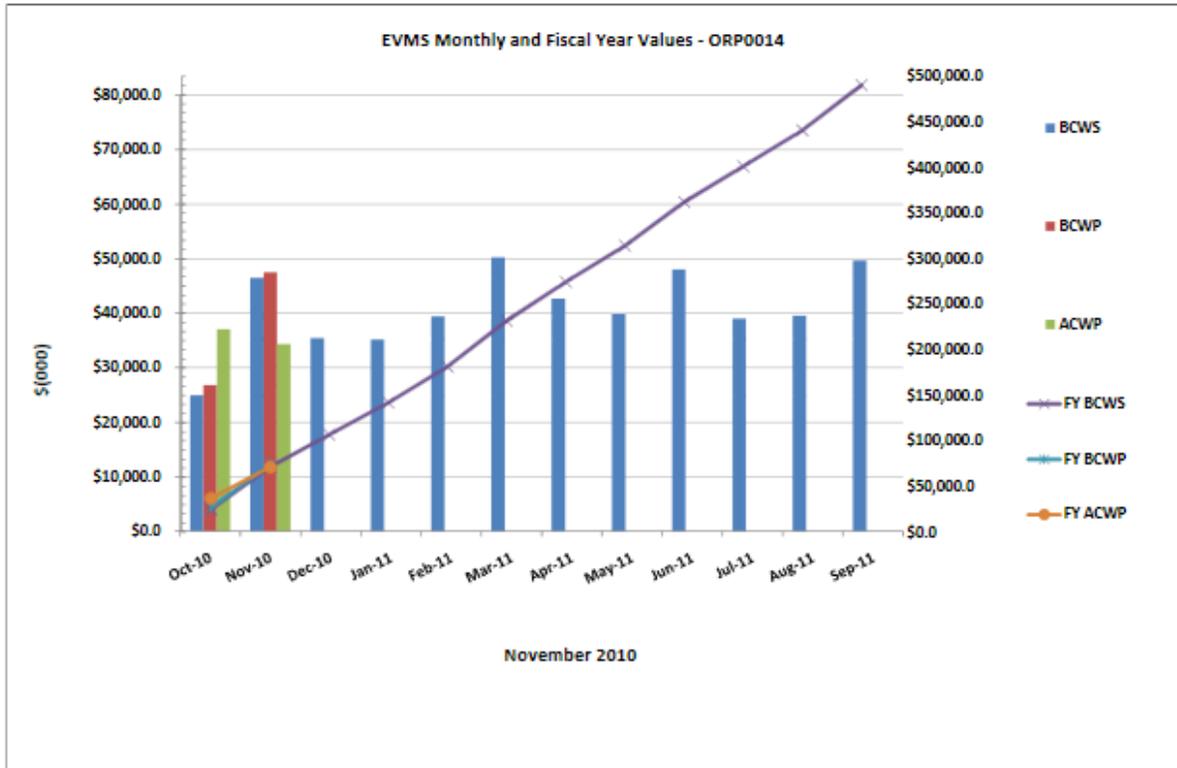
### **Issues:**

None.

**Project Performance**

The earned value analysis is a comparison of cost and schedule contract-to-date performance. 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.

**Tank Farm Project EVMS Status – November 2010**



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					\$106,916.3				
Jan-11	\$35,166.0					\$142,082.3				
Feb-11	\$39,387.5					\$181,469.8				
Mar-11	\$50,242.1					\$231,711.8				
Apr-11	\$42,648.0					\$274,359.8				
May-11	\$39,876.5					\$314,236.3				
Jun-11	\$48,053.5					\$362,289.7				
Jul-11	\$38,979.8					\$401,269.5				
Aug-11	\$39,544.8					\$440,814.3				
Sep-11	\$49,651.9					\$490,466.3				

CTD	\$866,972.0	\$862,084.8	\$798,563.9	0.99	1.08
-----	-------------	-------------	-------------	------	------

The favorable current month (CM) schedule variance (SV) of \$983k reflects:

- Single Shell Tank (SST) Retrieval East Area (\$1,024k) for progress earned on C-111 retrieval operations (to the limits of technology) and C-104 retrieval installation of the Articulating Mast System (AMS)
- Recovery Act (RA) funded Tank Farm Upgrades (\$948k) for progress earned on 242-A Evaporator Upgrades instrument replacements and condenser room ductwork replacement as work was performed concurrently with the facility electrical outage; acceleration of the 702-AZ Micon computer control system installation and startup/testing; and SST Drawing Reconstitution.

The favorable current month cost variance (CV) of \$13,210k reflects:

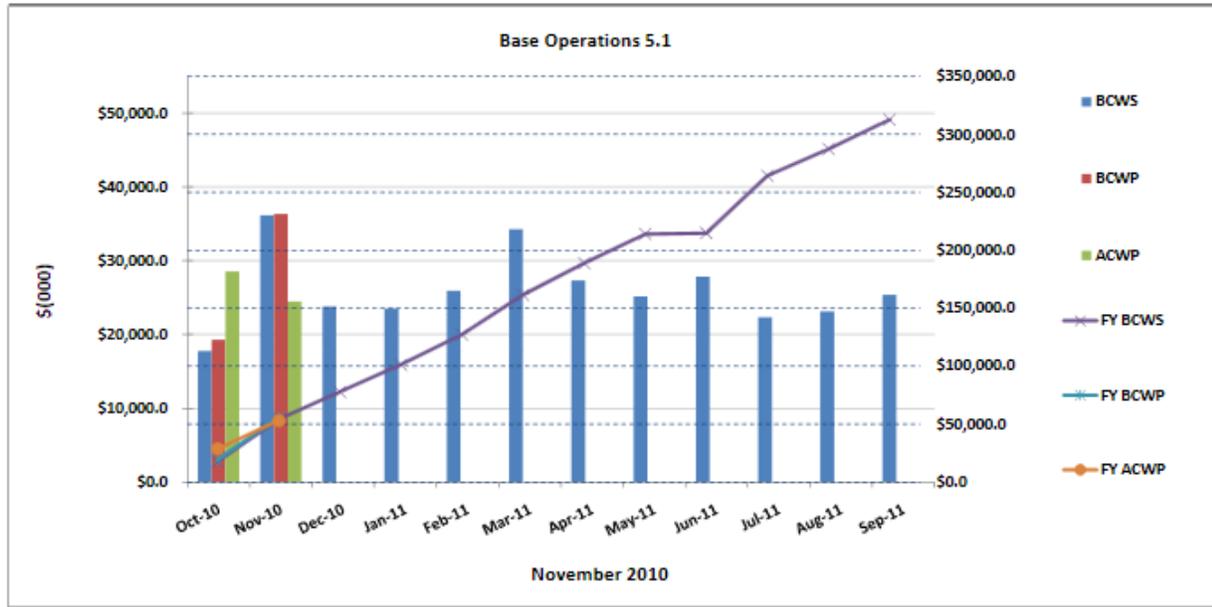
- A point adjustment for implementation of Hanford Pension Alignment. A BCR aligned the budget and performance with an agreed upon payment schedule off-setting an unfavorable CM variance last month

The unfavorable CTD SV of (\$3,976k) is driven by:

- SST retrievals related to C-108 hard heel removal prioritization of resources to other retrievals (\$1,637k); C-104 pumping obstruction resulting in need to develop and install the AMS to conduct retrieval operations and transfer pump replacement (\$1,401k); C Farm Infrastructure DST Receiver Tank #3 progress impacted by change in designation of tank from AY-101 to AN-106 in order to utilize existing infrastructure from C Farm to AN Farm (work re-planned to support C-107 retrieval) (\$781k); and C Farm Infrastructure for delays on procurement of critical spares (\$574k)
- Retrieval/Closure Program related to Mobile Arm Retrieval System (MARS) development due to change to an eductor vacuum system (\$913k); and A-350 Catch Tank pumping (will be accelerated by use of a Polar Tanker) (\$442k)
- Next Generation Projects delay in awarding design contract for the Cold Crucible Induction Melter (CCIM) due to intellectual property (IP) issues and access to WTP design information (partial schedule recovery expected in December) (\$540k)
- The Tank Waste Pretreatment Project work related to sample analysis for the Fluidized Bed Steam Reformer (FBSR) (progress cannot be taken pending baseline change to direct fund the work to Savannah River National Laboratory (SRNL); change implementation and recovery expected in December 2011) (\$411k); and delays in identification of analytical laboratory service provider to support the Li-Bayer Technology Readiness Level 3 assessment (providers now identified and recovery expected in December 2010) (\$123k)

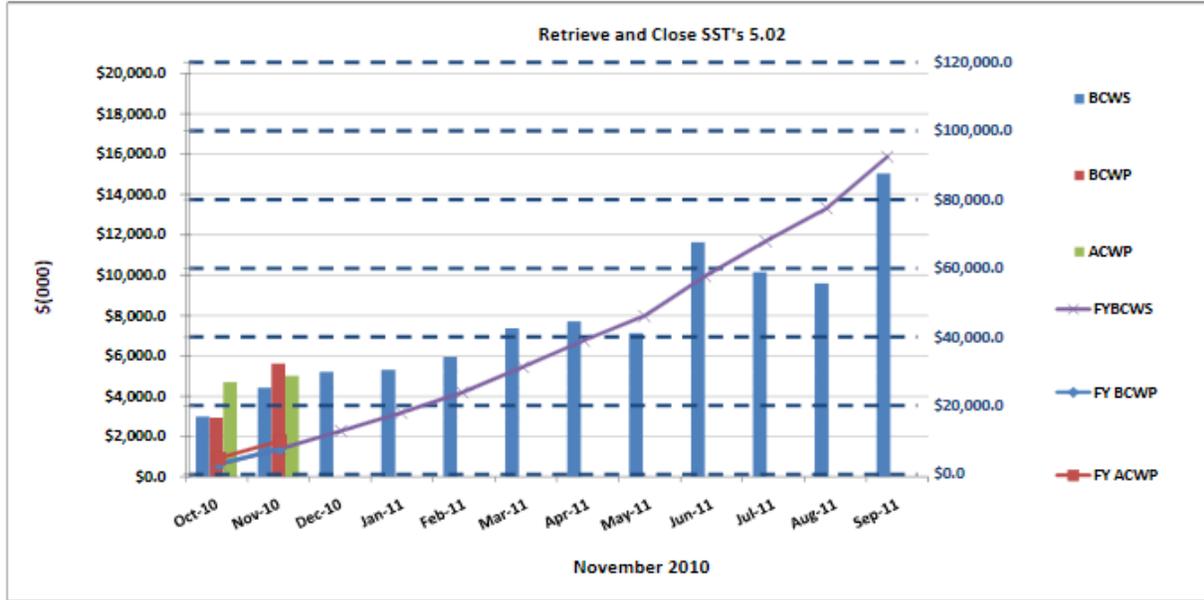
The favorable CTD CV of \$64,019k represents significant cost savings and efficiencies in the areas of

- Project Support (\$21,238k); Tank Farm Upgrades (\$12,281k), Retrieval/Closure Program (\$9,562k); WTP Feed Delivery Program (\$5,465k); Next Generation Projects (\$5,403k); and TOC Facility Operations (\$4,275k).



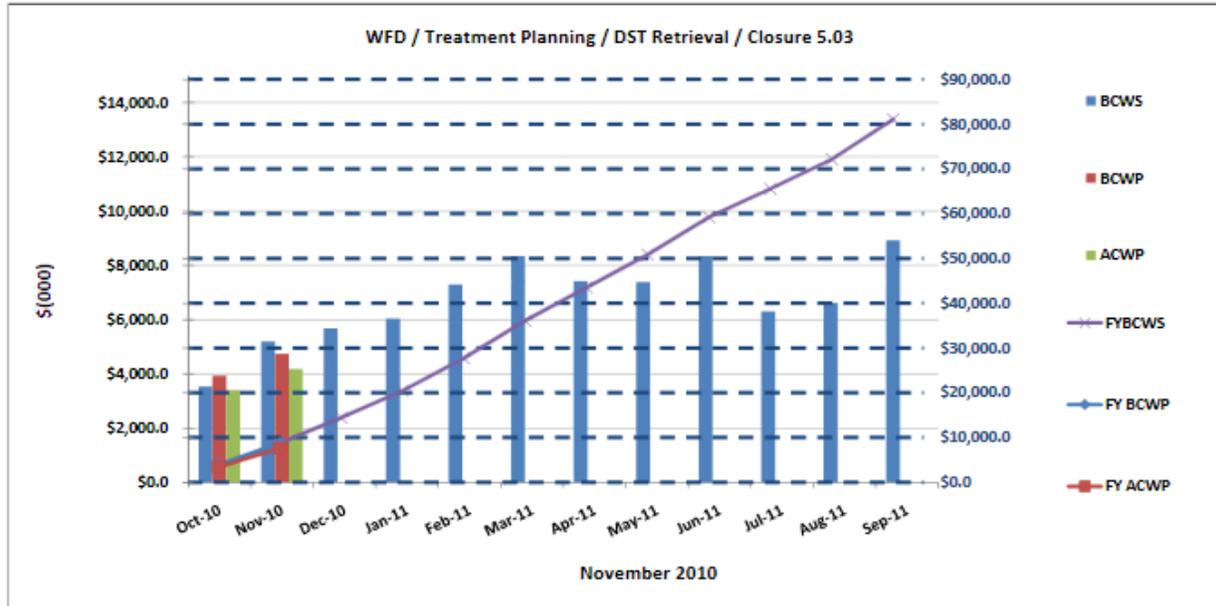
Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct-10	\$17,777.2	\$19,285.1	\$28,549.6	1.08	0.68	\$17,777.2	\$19,285.1	\$28,549.6	1.08	0.68
Nov-10	\$36,143.1	\$36,366.3	\$24,452.2	1.01	1.49	\$53,920.2	\$55,651.4	\$53,001.8	1.03	1.05
Dec-10	\$23,775.7					\$77,695.9				
Jan-11	\$23,510.7					\$101,206.6				
Feb-11	\$25,943.2					\$127,149.7				
Mar-11	\$34,261.8					\$161,411.6				
Apr-11	\$27,311.4					\$188,723.0				
May-11	\$25,162.2					\$213,885.1				
Jun-11	\$27,822.0					\$214,707.1				
Jul-11	\$22,329.7					\$264,036.8				
Aug-11	\$23,116.7					\$287,153.6				
Sep-11	\$25,382.9					\$312,536.5				

CTD	\$566,904.2	\$569,984.7	\$537,088.4	1.01	1.06
-----	-------------	-------------	-------------	------	------



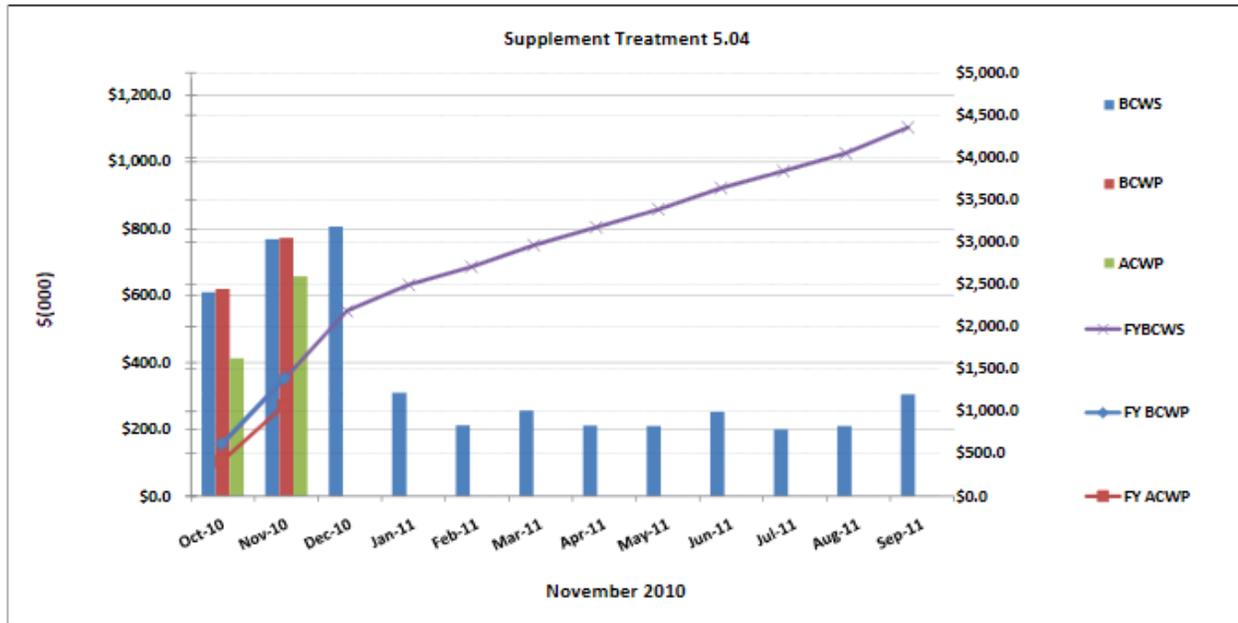
Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FYBCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct-10	\$2,991.6	\$2,932.6	\$4,707.6	0.98	0.62	\$2,991.6	\$2,991.6	\$4,707.6	1.00	0.64
Nov-10	\$4,412.7	\$5,622.7	\$5,006.7	1.27	1.12	\$7,404.3	\$7,404.3	\$9,714.4	1.00	0.76
Dec-10	\$5,209.7					\$12,614.0				
Jan-11	\$5,310.0					\$17,924.0				
Feb-11	\$5,945.5					\$23,869.4				
Mar-11	\$7,380.0					\$31,249.4				
Apr-11	\$7,707.4					\$38,956.7				
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					\$92,490.2				

CTD	\$168,674.4	\$162,908.6	\$152,243.5	0.97	1.07
-----	-------------	-------------	-------------	------	------



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					\$14,420.8				
Jan-11	\$6,035.5					\$20,456.3				
Feb-11	\$7,286.7					\$27,743.0				
Mar-11	\$8,344.2					\$36,087.2				
Apr-11	\$7,418.1					\$43,505.3				
May-11	\$7,384.9					\$50,890.1				
Jun-11	\$8,344.5					\$59,234.6				
Jul-11	\$6,307.6					\$65,542.3				
Aug-11	\$6,619.1					\$72,161.3				
Sep-11	\$8,924.5					\$81,085.9				

CTD	\$91,653.7	\$90,348.6	\$70,304.7	0.99	1.29
-----	------------	------------	------------	------	------



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	\$1,393.1	\$1,069.9	1.01	1.30
Dec-10	\$807.1					\$2,185.7				
Jan-11	\$309.8					\$2,495.5				
Feb-11	\$212.2					\$2,707.7				
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	\$4,270.2	\$4,284.6	\$3,871.0	1.00	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.**

**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**

**M-062-45ZZ, Following negotiations convert M-062-31-T01 thru M-062-34-T01 to interim milestones per M-062-45.3, 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:**

None

**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-62-30."

**Fiscal Year 2010 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-045-56F	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	06/09/10										
M-045-90	Complete Interim Barrier Demonstration Report for the T-106 Interim Barrier	09/30/10	09/27/10										
M-045-91	Establish a Panel and Report on SST Integrity Assurance Review	09/30/10	09/27/10										
M-045-92A	Establish Selection Criteria for Inst. of Additional Barriers	03/31/10	03/24/10										
M-045-92B	DOE Submit to Ecology a Final Design and Monitoring Plan for TY Farm Interim Barrier	03/31/10	10/22/09										
M-045-92C	Complete Installation of TY Farm Interim Barrier	09/30/10	09/23/10										

**Fiscal Year 2010 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-062-01T	Submit Semi-Annual Project Compliance Report	01/31/10	01/29/10										
*M-062-01U	Submit Semi-Annual Project Compliance Report	07/31/10	07/26/10										
* Submittal pursuant to D-00C-01 series satisfies M-062-01 series reporting.													

**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.	12/27/10	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	12/27/10	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	12/7/10										
M-045-92E	Meet Yearly on Performance of Barrier	12/31/10	12/7/10										

**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		X									
M-062-01V	Submit Semi-Annual Project Compliance Report	01/31/11		X									
D-001-00-R47	Quarterly Report	01/31/11		X									
D-001-00-R48	Quarterly Report	04/30/11		X									
M-036-01A	Submit to EPA & Ecology Lifecycle, Scope, Schedule & Cost for Hanford Site (RL is DOE Lead)	06/25/2011		X									
M-045-15	Interim Completion of Tank S-102 SST Waste Retrieval and Closure Demonstration Project.	06/30/11			X								
M-045-15A	Submit a Retrieval Data Report Pursuant to Agreement Appendix I	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-045-15B	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								
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									
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									

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

**M-062-20, Close all 28 issues in Comprehensive Review of the Hanford Waste Treatment Plant Flowsheet and Throughput Assessment, Due: 12/31/2010, Status: Completed (8/20/10).**

**M-062-01U, Submit Semi-Annual Project Compliance Report, Due: 7/31/2010, Status: Complete**

**M-062-01V, Submit Semi-Annual Project Compliance Report, Due: 1/31/2011, Status: On Schedule**

**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 3,150 FTE equivalent contractor [Bechtel National Inc. (BNI)] and subcontractor personnel working on the WTP Project, including 1,050 craft, 510 non-manual, and about 267 subcontractor personnel FTE equivalents working at the WTP construction site (all facilities). Overall project percent complete through December 2010 is 57%, design and engineering is 81% complete, procurement is 59% complete and construction is 53% complete.

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.

The overall WTP Project Schedule Variance (SV) in December was a positive \$7.3M, the Cost Variance (CV) was a negative (\$1.8M). The negative CV came from the Engineering, Plant Equipment and Construction Subcontract accounts. The positive SV came primarily from the Construction and Plant Equipment control accounts.

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

### **Significant Past Accomplishments:**

A WTP Construction Project review was conducted from November 2-4, 2010. The CPR Team provided an overall positive perspective on the WTP project, and provided 18 preliminary recommendations for sustaining the progress noted in previous CPR reviews. A final report from the CPR Team is expected to be released in early January.

Low Order Accumulation Model (LOAM) benchmarking tests associated with mixing for Non-Newtonian vessel configurations are underway, with all six tests scheduled for completion in December. Analysis of the test results will follow immediately after completion of the tests.

The WTP contractor incorporated BCP (24590-06-05085) into the project baseline. This BCP incorporated the major technical changes associated with vessel mixing, CXP system design, PT secondary steam loop design, Ashfall hazard mitigation, as well as changes to incorporate sequential Operational Readiness Reviews. The incorporation of this BCP has reduced the facility percent complete values for Design/Engineering and Construction due to the increase in the facility budgets.

### **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 fabrication of UFP-1A and UFP-1B vessels in the PT  
Complete installation of hot cell crane rails in the PT  
Begin installation of duct, pipe, and support steel in the Filter Cave in the HLW  
Receive Canister Decontamination Vessels in the HLW  
Receive LAW autosampling (ASX) equipment  
Begin installation of LAB autosampling (ASX) equipment  
Award Emergency Diesel Generator (EDG) procurement

### **Issues:**

No significant issues at this time.

## Pretreatment (PT) Facility

### Significant Past Accomplishments:

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 47%, engineering/design is 78% complete, procurement is 42% complete and construction is 33% complete.

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.

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 77-ft and 98-ft elevation. Construction completions for the month of December include: placement of two slabs (7737 and 7739) and completion of a prior incomplete placement (7744) at the 77-ft elevation, and placement of one concrete wall (5-30) from the 77-ft to 98-ft elevation.

The 30-ton hot cell crane and Hot cell Shield door were rigged into the hot cell after significant preparation for lifting it above the 77-ft walls and through the slab opening at 56-ft using the largest crane available at site. 2 more cranes will be installed in the hot-cell in the same manner to aid construction in the hot cell. On-going work includes: Installation of piping, cable trays and supports, ductwork and steel.

Engineering continues to implement the changes from the technical issue resolutions in the P&ID drawings and other documents. Baseline Change Proposals (BCP) incorporating these changes were implemented in December following completion of the DOE review. Three hundred and nine (309) piping isometric drawings were issued for construction. Two purchase orders (PO's) were issued: Spiral Plate Heat Exchanger; and the Ultra Filters. Two PO Revisions were issued, one for Mechanical Agitators, and the other for High Integrity Fans.

BNI has completed award of 45 PO's exceeding the Calendar Year 2010 goal of 35 awards. DOE concurred with the BNI completion of the fee milestone activity "Issued for Construction Mechanical Systems (MS) Drawings and specifications for Racks at 56-ft and 77-ft".

### 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 P&ID's and Calculations for 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 2 major Jumper frames
- Install the 2<sup>nd</sup> hot cell shield door
- Complete placement of 5 slabs and 19 walls, totaling about ~2,800 CY
- Erection of 4<sup>th</sup> tier structural steel (77-ft to 98-ft elevation)
- Re-Commit MS Design for FRP, CXP, AND PWD
- PO rev – Flex Jumpers (CM-MRA-EWU0-00005) Harness A
- Release 4 Solenoid Valve Utility Racks to Fabrication

**Issues:**

Design and fabrication of vessel HLP-22, is the critical path for PT. 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 for HLP-22 are scheduled to be complete by the end of March 2011. Efforts are also ongoing for the analysis of the on-site vessels in order to support the vessel alteration sequence. Design and analysis has been completed for vessel UFP-62C, and the draft permit package has been provided to the Department of Ecology for review. 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 for alteration by the end of April 2011.

The physical benchmark testing 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 to the 5 non-Newtonian vessels.

Resolution of the major technical issues was originally included in Forecast Update 4 of which DOE reviewed in October. BNI has rolled the technical issues into a BCP which was implemented into the project baseline in December.

## High-Level Waste (HLW) Facility

The HLW Facility will receive the separated high-level waste from the Pretreatment (PT) facility. The concentrate is blended with glass formers and converted into molten glass in one of the two HLW melters and then poured into cylindrical stainless steel canisters. After cooling, the canisters are sealed and decontaminated prior to shipment to interim storage. The HLW Facility is 52% complete overall, with engineering design 86% complete, procurement 62% complete, and construction 33% complete.

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.

### Significant Past Accomplishments:

All of the support steel and deck plating for the HEPA filter housings in the Filter Cave was fabricated and delivered to the WTP warehouse early December. In addition, multiple duct and pipe shipments were also completed and delivered in December. The most notable deliveries include the two 60-inch diameter duct segments which serve as the supply and exhaust distribution headers distributing/collecting ventilation airflows to/from the C5V ventilation system HEPA filter housings. The first four remote C5VHEPA filter housings are currently being fabricated by the vendor. Fabrication of the HEPA filter housings for the Melter Offgas (HOP) and Pulse Jet Vent (PJV) systems will begin in February and March 2011. The HEPA filter housings for all three systems are scheduled for delivery to the Project in beginning in February 2011 and the last housing will arrive in August 2011. All delivery dates support the filter cave critical path schedule.

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

- Commence installation of duct, pipe, and support steel in the Filter Cave (01/2011)
- Complete Civil, Structural, and Architectural Title II Design Contract Milestone (02/2011)
- Receive initial delivery of C5V HEPA Filter Housings (02/2011-03/2011)
- Commence roofing of Annex (03/2011)
- Receive Canister Decontamination Vessels (04/2011)
- Set Shielded Personnel Access Door RWH-DOOR-20 in the Waste Drum Swabbing and Monitoring Area (05/2011)
- Complete fabrication of C5V Dampers (05/2011-07/2011)

### Issues:

- The build-out of the Filter Cave is on the critical path schedule for the HLW Facility. The complicated installation of the support steel, housings, dampers, large diameter ducting, and piping requires precise coordination. WTP construction craft and the ventilation subcontractor have developed a detailed (Level-5) schedule that provides the installation sequencing for each pipe spool and each piece of support steel.

The procurement and fabrication of vessels is also receiving management focus and priority. Procurements that have been on-hold are being revised to incorporate the revised ground motion studies and more formalized quality requirements. Vessel status 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 90%, procurement is 80%, 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

Engineering issued confirmed calculations for the *LAW Critical Instrument Service Air Backup Bottles Sizing, Design Pressure and Design Temperature Calculation for LFP (LAW Melter Feed Process) System, Design Pressure and Design Temperature Calculation for Chilled Water System, Design Pressure and Design Temperature Calculation for LCP (LAW Concentrate Receipt Process) System, and the Concentrate Receipt Pumps*. Engineering also issued an instrument data sheet for LAW “commercial” pressure transmitters and developed controls and instrumentation (C&I) installation reports for several areas within the LAW facility. Integrated control network software was developed for the autosampling (ASX) system. In addition, controls and instrumentation (C&I) software was developed for several other systems, including ventilation, sodium hydroxide reagent, and environmental monitoring systems.

- Procurement

The two, LAW autosampling units for the autosampling (ASX) system were received in December. The two LAW melters were moved into temporary storage at the site. Other procurement activities included the issuance of material requisitions for the variable area flowmeters and pressure relief valves as well as a material requisition for the purchase of the LAW offgas important-to-safety (ITS) uninterruptible power supply system.

- Construction

During December, BNI completed installation of the personnel elevator doors. Construction began installing pumps for the sodium hydroxide reagent (SHR) system and continued to install cooling panels, the fire alarm system, grating in the B-cell, and the transfer corridor bogie rails. Other normal activities continued such as installation of piping and hangers, cable tray, conduit and wiring, instrument enclosures, lighting fixtures, partition wall framing and gypsum wallboard, and perimeter sealants.

- Commissioning

Controls and instrumentation (C&I) software was tested for several systems, including ventilation, sodium hydroxide reagent, and environmental monitoring systems.

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

- Complete installation of LAW personnel elevator

**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 45%, engineering is 81%, procurement is 73%, and construction is 69%.

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

In December BNI engineering issued eight (8) civil, structural, and architectural (CS&A) drawings for the LAB and eight related calculations. In addition controls and instrumentation (C&I) software was developed for the miscellaneous gases (MXG), bottled nitrogen gas (BNG), bottled argon gas (BAG), and bottled helium gas (BHG) systems.

- Procurement

Material requisitions were issued for the purchase of LAB-specific variable area flowmeters and pressure relief valves.

- Construction

In December, BNI began installation of the LAB autosampling equipment. In addition, other construction activities continued, including piping installation in the C2, C3, and C5 drainage pits, electrical raceway, piping and hangers for the chilled water, low pressure steam, and steam condensate systems, conduit, lighting, and electrical equipment.

- Commissioning

Controls and instrumentation (C&I) software testing was performed for the LAB C1V ventilation system and for the miscellaneous gases (MXG), bottled nitrogen gas (BNG), bottled argon gas (BAG), and bottled helium gas (BHG) systems.

### 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 85%, procurement is 44%, 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 confirmed calculation to support sizing of the relief valves for the demineralized water (DIW) and process service water (PSW) systems. Control logic diagrams were issued for the Diesel Fuel Oil (DFO) system. The integrated safety management evaluation was completed for the emergency diesel generator (EDG) ashfall mitigation design. Software life cycle documents were issued for the standby diesel generator (SDG) fuel tank heater controller and the plant service air (PSA) system.

- Procurement

The major focus has been on procurement of the Emergency Diesel Generators (EDGs). The proposal for this equipment continues under review and analysis prior to awarding a contract. Interactions of BNI Engineering with the ammonia system vaporizer skid vendor continued to ensure approval of the design calculations for this equipment. The CO<sub>2</sub> vessel delivery is now expected in January.

- Construction

BNI construction completed setting two electrical manholes and installing electrical duct bank at the anhydrous ammonia storage facility (AASF). Additional work at the anhydrous ammonia storage facility (AASF) included continued installation of piping commodities. Installation of pressure safety valve instrumentation was initiated for the plant cooling water (PCW) system at the chiller compressor plant (CCP) building. BNI continued multiple construction activities at the chiller compressor plant (CCP), the glass former storage facility (GFSF), the non-dangerous/non-radioactive effluent (NLD) facility, and the water treatment facility.

- Commissioning

Work continued on the development of a decontamination guide.

### 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 December 2010</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	924.8	591.5	64%	219.4	197.3	90%	233.3	187.5	80%	315.8	200.7	64%
Analytical Lab	343.2	155.5	45%	51.5	41.5	81%	56.9	41.3	73%	88.7	61.4	69%
Balance of Facilities	523.6	238.6	46%	69.4	58.7	85%	83.9	37.1	44%	226.6	134.8	60%
High-Level Waste	1,417.5	731.1	52%	328.1	283.1	86%	440.1	273.7	62%	523.4	170.2	33%
Pretreatment	2,446.7	1,106.3	47%	653.9	510.0	78%	708.0	297.2	42%	893.3	293.9	33%
Shared Services	4,768.9	3,089.9	65%	1,081.0	855.7	79%	470.2	330.7	70%	1,405.7	977.8	70%
<b>Total WTP w/o UB</b>	<b>10,424.7</b>	<b>5,912.8</b>	<b>57%</b>	<b>2,403.3</b>	<b>1,946.3</b>	<b>81%</b>	<b>1,992.4</b>	<b>1,167.5</b>	<b>59%</b>	<b>3,453.5</b>	<b>1,838.7</b>	<b>53%</b>
Undistributed Budget	65.7	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>10,490.4</b>	<b>5,912.8</b>	<b>56%</b>	<b>2,403.3</b>	<b>1,946.3</b>	<b>81%</b>	<b>1,992.4</b>	<b>1,167.5</b>	<b>59%</b>	<b>3,453.5</b>	<b>1,838.7</b>	<b>53%</b>

**Source:** WTP Contract Performance Report

**Note:** 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.