

FINAL

Office of River Protection
Tri-Party Agreement
Monthly Summary Report
August 2013



**Office of River Protection
Tri-Party Agreement Milestone Review**

**August 2013 (Monthly Summary Report/Project Earned Value Management System reflects
June 2013 information)**

Page	Topic	Leads
1	Administrative Items/Milestone Status	James Lynch/Dan McDonald/Jeff Lyon
2	System Plan; M-62-40	DaBrisha Smith/Jeff Lyon/Dan McDonald
3	Acquisition of New Facilities; M-90-00; M-47-00	Janet Diediker/Jeff Lyon/Dan McDonald
3	Supplemental Treatment and Part B Permit Applications, M-62-00, M-62-20, M-62-30, and M-62-45	Steve Pfaff/Jeff Lyon/Dan McDonald
5	242-A Evaporator Status	Ron Koll/Jeff Lyon
5	SST Integrity Assurance; M-45-91	Jeremy Johnson/ Jim Alzheimer
6	In Tank Characterization and Summary	Billie Mauss/Michael Barnes
8	Tank Operations Contract Overview	Kathy Higgins/Jeff Lyon
14	Single-Shell Tank Corrective Action; M-45, M-50, and M-60	Chris Kemp/Jeff Lyon
15	Single-Shell Retrieval and Closure Program TPA Milestones Status; M-45-00 series	Chris Kemp/Jeff Lyon
17	Tank Waste Retrieval Work Plan Status	Chris Kemp/Jeff Lyon
18	Tank in Tri-Party Agreement (TPA) Appendix H, Status Tank Retrievals with Individual Milestones	Chris Kemp/Jeff Lyon
CD	Waste Treatment and Immobilization Plant (WTP) Overall TPA Summary and Milestone Status; *see the August 2013 ORP Consent Decree 08-5085-FVS Monthly Summary Report for WTP facility-specific information	Delmar Noyes/Dan McDonald

Milestone	Title	Due Date	Completion Date	Status
Fiscal Year 2013				
M-045-20	Submit Interim Measures Investigation Work Plan and TPA Chg Pckgs for M-045-22 Target Dates	12/31/2012	12/06/2012	Completed
M-090-11	Comp. Neg's No More Than 2 Canister Storage Fac. Const. Int. M/S	12/31/2012	11/19/2012	Completed
M-062-01Z	Submit Semi-Annual Project Compliance Report	01/31/2013	1/31/2013	Completed
M-045-21	Submit Sampling and Analysis Plan for 241-TX Tank Farm	03/31/2013	3/11/2013	Completed
M-045-91D-T01	Provide Report on the Concrete Dome Samples from Tank C-107 Plug	05/31/2013	5/21/2013	Completed
M-045-91F-T03	Provide Report on Testing for Ionic Conductivity of SSTs	05/31/2013	5/02/2012	Completed
M-045-56I	Ecology And DOE Agree, At A Minimum, To Meet Yearly (By July)	07/31/2013	06/12/2013	Completed
M-062-01AA	Submit Semi-Annual TPA Project Compliance Report	07/31/2013	07/31/2013	Completed
M-045-91E	Provide SST Farms Dome Deflection Surveys Every Two Years	09/30/2013		On Schedule
Fiscal Year 2014				
M-062-40C	Select a Minimum of Three Scenario's for the System Plan	10/31/2013		On Schedule
M-045-56J	Ecology And DOE Agree, At A Minimum, To Meet Yearly (By July)	07/31/2014		On Schedule
M-045-91B-T01	Provide Ecology report on the Concrete Core from TankA-106 or alt	09/30/2014		On Schedule
M-047-07	CD-1 for Secondary Liquid Waste Treatment and CR for CD-2 to Ecology	09/30/2014		On Schedule
M-090-13	CD-1 for Interim Hanford Storage Project and CR for CD-2 to ECV	09/30/2014		On Schedule
Fiscal Year 2015				
M-062-40D	Submit System Plan	10/31/2014		On Schedule
M-062-40ZZ	Submit One Time Tank Waste Supp Treatment Technologies Report	10/31/2014		On Schedule
M-045-91G-T03	Provide AOR Final Doc. for SSTs on 1,000,000 Gallon Tanks	10/31/2014		On Schedule
M-045-91F-T04	Provide Report on 100-Series SSTs as having Leaked in RPP-32681	12/26/2014		On Schedule
M-045-61	Phase 2 RCRA Facility Investigation/Corrective Measures Study	12/31/2014		To Be Missed
M-045-91G-T04	Provide AOR Final Doc. for SSTs on 55,000 Gallon Tanks	01/30/2015		On Schedule
M-045-91F-T02	Provide Report of Liner Failures for SSTs	03/31/2015		On Schedule
M-062-45-T01	Comp. Neg's 6-Mo After Last Issuance of System Plan	04/30/2015		On Schedule
M-062-45-ZZ	Negotiate a One Time Supplemental Treatment Selection	04/30/2015		On Schedule
M-062-45-ZZ-A	Convert M-062-31-T01 Thru M-062-34-T01 to Interim Milestones	04/30/2015		On Schedule
M-045-91F	Provide Summary Conclusions Report on Leak Integrity	06/30/2015		On Schedule
M-045-62	Phase 2 Corrective Measures Implementation Work Plan For WMA C	06/30/2015		To Be Missed
M-045-92O	Barrier 3 Design/Monitoring Approval From Ecology	06/30/2015		On Schedule
M-045-91G	Provide Summary Conclusions Report of AOR for SSTs	07/28/2015		On Schedule

Milestone	Title	Due Date	Completion Date	Status
Fiscal Year 2015 Continued				
M-045-56K	Ecology And DOE Agree, At A Minimum, To Meet Yearly (By July)	07/31/2015		On Schedule
M-045-91H	Submit Change Pkg (if necessary) to est. Additional Milestones	07/31/2015		On Schedule
M-045-82	Submit Comp. Permit Modification Request for Tiers 1,2,3	09/30/2015		To Be Missed

System Plan

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

M-062-40D, Submit a system plan describing the disposition of all tank waste managed by ORP,
Due: October 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: April 30, 2015, Status: On schedule.

Significant Past Accomplishments:

The Washington River Protection Solutions LLC (WRPS) facilitated a review of Appendix B of System Plan 6, and highlighted assumption and model updates since the last revision, with Washington State Department of Ecology and the U.S. Department of Energy (DOE), Office of River Protection (ORP) during the week of July 8th, 2013. This activity was then followed by two scenario framing sessions, for Single Shell and Double Shell tank systems, with Washington State Department of Ecology and the U.S. Department of Energy (DOE), Office of River Protection (ORP) during the week of July 15th.

Significant Planned Actions in the Next 6 Months:

ORP will meet with Ecology Program Managers to discuss the System Plan Rev.7 uncertainties.

Issues:

System Plan 7 framing sessions are on hold until further discussion with Ecology.

Acquisition of New Facilities

M-090-13, Submit CD-1 for Interim Hanford Storage Project and Tri-Party Agreement (TPA) Change Request for CD-2 to Ecology, Due: September 30, 2014, Status: On schedule. Created by TPA Change Control Form M-90-12-02, signed by ORP and Ecology on November 19, 2012, to “Submit to Ecology, a Conceptual Design Report Package (Critical Decision-1) for the Interim Hanford Storage Project (storage of the first two years of Hanford Site Immobilized High-Level Waste from WTP operations) and a TPA Change Request (in accordance with TPA Action Plan Section 12.0) to submit to Ecology, a Preliminary Design Report package (Critical Decision-2).”

M-090-00, Acquire/modify facilities for storage of Immobilized High-Level Waste (IHLW), Due: December 31, 2019, Status: On schedule.

M-047-07, Submit CD-1 for Secondary Liquid Waste Treatment and CR for CD-2 to Ecology, Due September 30, 2014, Status: On schedule. Created by TPA Change Control Form M-47-12-02, signed by ORP and Ecology on November 19, 2012, to “Submit to Ecology, a Conceptual Design Report package (Critical Decision-1) for the Secondary Liquid Waste Treatment Project and a TPA Change Request (in accordance with TPA Action Plan Section 12.0) to submit to Ecology, a Preliminary Design Report package (Critical Decision-2).”

M-047-00, Complete Work Necessary to provide facilities for management of secondary waste from the Waste Treatment and Immobilization Plant (WTP), Due: December 31, 2022, Status: On schedule.

Significant Past Accomplishments:

On November 19, 2012, Ecology and ORP signed TPA Change Control Forms M-47-12-02 and M-90-12-02 establishing M-047-07 and M-090-13, respectively. ORP letter 12-ECD-0225 notified Ecology of the completion of milestones M-047-06 and M-090-11.

Significant Planned Actions in the Next 6 Months:

None.

Issues:

None.

Supplemental Treatment and Part B Permit Applications

M-062-40ZZ, Submit a one-time Tank Waste Supplemental Treatment Technologies Report if a supplemental treatment technology is proposed other than a second Low-Activity Waste (LAW), Due: October 31, 2014, Status: On schedule.

M-062-45ZZ, Negotiate a one-time supplemental treatment selection, Due: April 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: April 30, 2015, Status: On schedule.

M-062-31-T01, Complete final design and submit Resource Conservation and Recovery Act Part B permit modification request, Due: April 30, 2016, Status: On schedule.

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

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

M-062-45XX, No later than December 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: December 31, 2021, Status: On schedule.

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

M-062-21, Annually submit data that demonstrates operation of the WTP, Due: February 28, 2023, Status: On schedule.

M-062-00, Complete Pretreatment Processing and Vitrification of High-Level Waste and Low-Activity Waste Tank Wastes, Due: December 31, 2047, Status: On schedule.

Significant Past Accomplishments:

None.

Significant Planned Actions in the Next 6 Months:

None.

Issues:

At the January 2013 TPA Project Manager's Monthly (PMM) meeting, ORP stated DOE and Ecology are currently in discussions to move out the due dates for M-062-40ZZ and M-062-45ZZ (current due dates October 31, 2014 and April 30, 2015, respectively).

ORP provided a draft change package for these milestones on February 12, 2013. Ecology provided comments on May 9, 2013. At the July 23, 2013 PMM, ORP stated that meetings were to be scheduled with Ecology management to discuss a path forward.

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

242-A Campaign Strategy:

The 242-A campaign strategy for Fiscal Year (FY) 2010 through FY2015 depicted in the following table has been updated based on ORP-11242, *River Protection Project Plan* 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.
FY10	10-02	AW-106	AW-106	Campaign 10-02 was an acceleration of previously planned Campaign 11-01.
FY11	NA	NA	NA	No campaign conducted in FY11 due to ongoing 242-A and Tank Farm facility life extension and ARRA funded upgrades.
FY12	NA	NA	NA	No campaign conducted in FY12 due to ongoing 242-A and Tank Farm facility upgrades and revision to the 242-A Documented Safety Analysis.
FY13	NA	NA	NA	No campaigns to be conducted in FY13 due to ongoing 242-A and Tank Farm facility upgrades and revision to the 242-A Documented Safety Analysis.
FY14	14-01	AP-107	AP-107	Estimated start late November 2013. Requires two passes to achieve waste volume reduction.
FY14	14-02	AW-106	AP-107	Estimated start late February 2014.
FY14	14-03	AZ-102	AP-103	Estimated start June 2014.
FY15	15-01	AW-106	AP-103	Estimated start October 2014.
FY15	15-02	AZ-102	AP-103	Estimated start March 2015.

FY = fiscal year.

NA = not applicable.

SST Integrity Assurance

M-045-91E, Provide to Ecology a compilation of the single-shell tank (SST) farms dome deflection surveys every two years, beginning September 30, 2013, Due: September 30, 2013, 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: October 31, 2014, Status: On schedule.

M-045-91F-T04, Provide to Ecology, as a Hanford Federal Facility Agreement and Consent Order secondary document, a report on the 100-series SSTs, which have been or will be identified as having leaked in RPP-32681, Revision 0, Due: December 26, 2014, 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: January 30, 2015, 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 an alternate tank, Due: January 31, 2015, Status: On schedule.

M-045-91F-T02, Provide to Ecology as a Hanford Federal Facility Agreement and Consent Order 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: March 31, 2015, 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 M-045-91F-T04, Due: June 30, 2015 Status: On schedule.

M-045-91G, Provide a Summary Conclusions Report of Structural Analysis of Record for SSTs, Due: July 28, 2015, 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 of milestones to date, Due: July 31, 2015, Status: On schedule.

M-045-91I, Provide to Ecology an Independent, Qualified, Registered Professional Engineer (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: September 30, 2018, Status: On schedule.

Significant Past Accomplishments:

Change Control Form M-45-13-01 was signed by Ecology on June 27, 2013, approving changes to the SST Integrity Program. Issued *Hanford Single-Shell Tank Leak Causes and Locations - 241-B Farm*.

Significant Planned Actions in the Next 6 Months:

Continue work for delivery of SST dome deflection surveys (M-045-91E).

Issues:

None.

In Tank Characterization and Summary

For the period from July 1 – July 31, 2013:

Accomplishments:

- Completed RPP-PLAN-50310, Rev. 2, *Tank 241-AN-106 Grab Sampling and Analysis Plan in Support of Corrosion Mitigation during Tank 241-C-107 Retrieval.*
- Completed RPP-PLAN-55317, Rev. 0, *Sampling and Analysis Plan for Tank AZ-301 Liquid.*
- Completed RPP-RPT-45764, Rev. 02, *Derivation of Best-Basis Inventory for Tank 241-AN-102 as of April 9, 2013.*
- Completed RPP-RPT-46686, Rev. 4, *Derivation of Best-Basis Inventory for Tank 241-AW-106 as of April 1, 2013.*
- Completed RPP-RPT-43979, Rev. 12, *Derivation of Best-Basis Inventory for Tank 241-AY-101 as of April 1, 2013*
- Completed RPP-RPT-44643, Rev. 4, *Derivation of Best-Basis Inventory for Tank 241-SY-102 as of April 1, 2013*
- Completed RPP-RPT-55192, Rev. 0, *Derivation of Best-Basis Inventory for Tank 241-AW-103 as of April 1, 2013*
- Completed RPP-RPT-43992, Rev. 8, *Derivation of Best-Basis Inventory for Tank 241-AN-106 as of April 1, 2013*
- Completed grab sampling of condensate tank AZ-301 on July 29, 2013 per RPP-PLAN-55317, Rev. 0, *Sampling and Analysis Plan for Tank AZ-301 Liquid.*
- Completed grab sampling of the 241-AY-102A annulus leak detection pit on July 24, 2013, per RPP-PLAN-54083, *FY2013 Grab Sampling and Analysis Plan for the 241-AY-102A Tank Annulus Leak Detection Pit*, Characterization Change Notice 13-CCN-13. Three samples and one field blank were collected and delivered to the lab on 7/24/2013.

Planned Action within the next 6 Months:***Tank sampling***

- Tank 241-C-112 grab sampling during hard heel dissolution is currently scheduled for September/October 2013.
- Tank 241-C-107 Off-Riser Sampling System sampling is currently scheduled for January 2013.
- Tank 241-C-110 closure sampling using fold track operations to push samples to a clam shell sampler is scheduled for October/November 2013.
- Tank 241-AN-106 grab sampling for chemistry control is currently scheduled for September/October 2013.

Best-Basis Inventory Updates

The tanks identified for updates in FY13 Quarter 4 are still being approved by ORP. The BBI updates will be issued in September 2013.

Data Quality Objectives

- A data quality objective (DQO) on a solubility model is due to be released in August/September 2013.
- A revision to the tank farms waste compatibility program DQO is due to be released in August 2013.

Issues:

None.

TANK OPERATIONS CONTRACT OVERVIEW

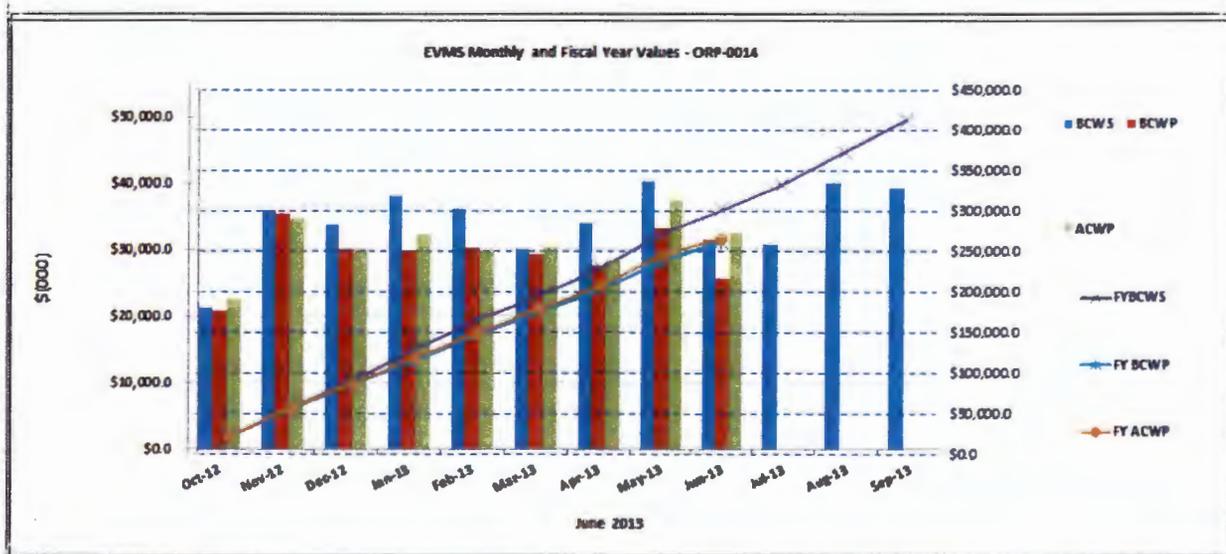
Project Performance

The earned value performance reporting reflects the format, work breakdown structure reporting levels, and variance thresholds as agreed to with the tank operations contractor for monthly performance reporting. The earned value analysis is not intended to be a measurement of performance against existing TPA milestones.

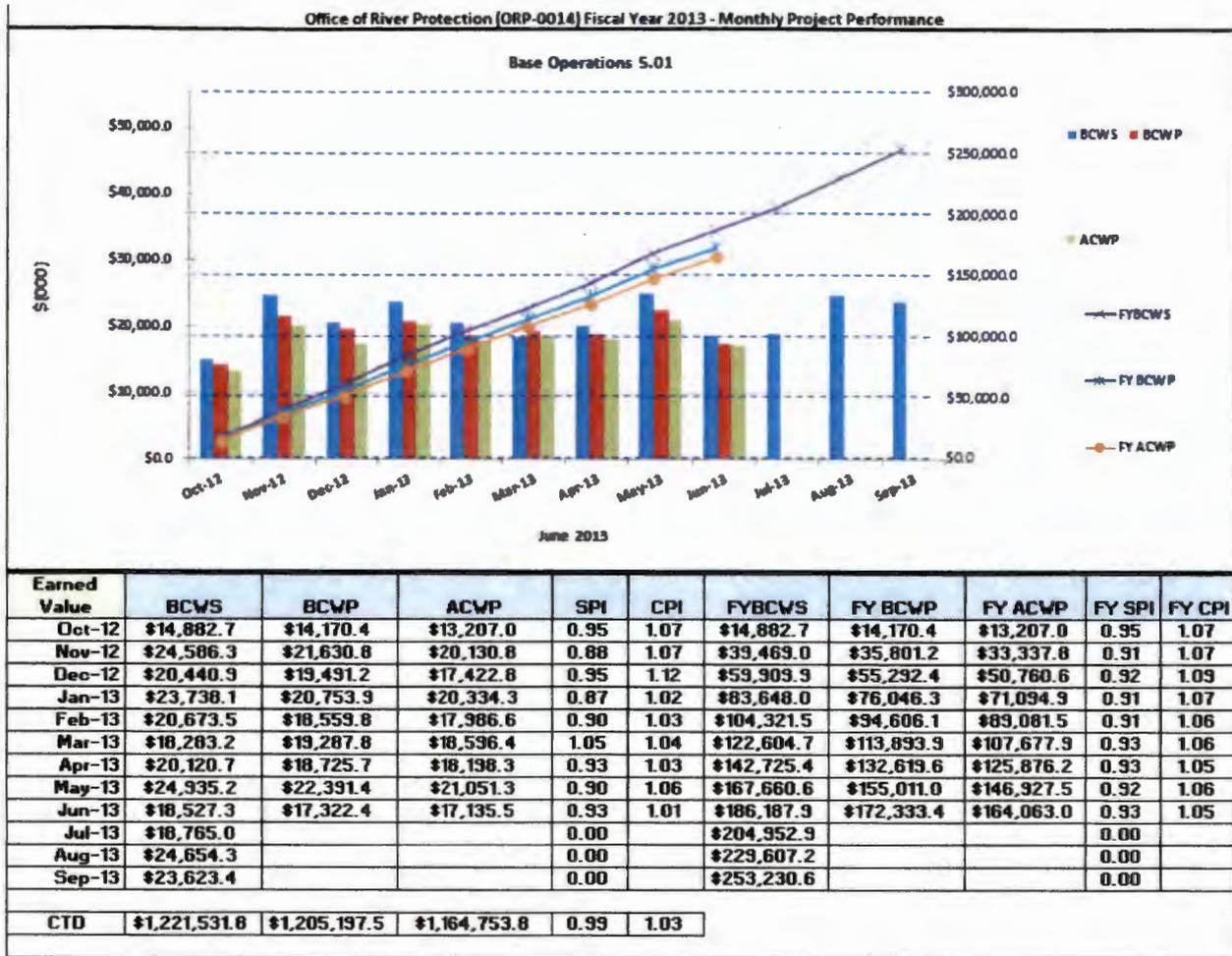
As of June 2013 WRPS worked 746,515 hours (76 days) without a lost time workday injury and (76 days) without a recordable case.

	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
CM	40,387.8	33,112.9	32,460.5	(7,274.9)	652.4	0.82	1.02			
FYTD	269,751.6	236,378.6	240,235.8	(33,373.0)	(3,857.2)	0.88	0.98	411,560.1	381,898.3	29,661.8
CTD	1,905,306.1	1,860,932.3	1,797,594.0	(44,373.8)	63,338.3	0.98	1.04	7,015,096.9	6,950,779.7	64,317.2

Red shaded cells indicates a SPI/CPI less than .90;
 Green shaded cells indicate a SPI/CPI between .90 and .99; and
 Blue shaded indicates a SPI/CPI greater than or equal to 1.0



Earned Value	BCWS	BCWP	ACWP	SPI	CPI	FYBCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct-12	\$21,350.5	\$20,911.7	\$22,382.9	0.98	0.93	\$21,350.5	\$20,911.7	\$22,382.9	0.98	0.93
Nov-12	\$35,910.8	\$35,319.2	\$34,775.1	0.98	1.02	\$57,261.3	\$56,230.9	\$57,158.0	0.98	0.98
Dec-12	\$33,795.4	\$30,044.9	\$29,940.1	0.89	1.00	\$91,056.7	\$86,275.8	\$87,098.1	0.95	0.99
Jan-13	\$38,179.6	\$29,766.1	\$32,202.8	0.78	0.92	\$129,236.3	\$116,041.9	\$119,300.9	0.90	0.97
Feb-13	\$36,167.5	\$30,290.9	\$29,773.7	0.84	1.02	\$165,403.8	\$146,332.8	\$149,074.6	0.88	0.98
Mar-13	\$30,026.2	\$29,261.1	\$30,306.9	0.97	0.97	\$195,430.0	\$175,593.9	\$179,381.5	0.90	0.98
Apr-13	\$33,933.7	\$27,671.7	\$28,393.7	0.82	0.97	\$229,363.7	\$203,265.6	\$207,775.2	0.89	0.98
May-13	\$40,387.8	\$33,112.9	\$37,267.1	0.82	0.89	\$269,751.5	\$236,378.5	\$245,042.3	0.88	0.96
Jun-13	\$31,454.5	\$25,677.6	\$32,460.5	0.82	0.79	\$301,206.0	\$262,056.2	\$266,448.3	0.87	0.98
Jul-13	\$30,773.6			0.00		\$331,979.6			0.00	
Aug-13	\$39,989.2			0.00		\$371,968.8			0.00	
Sep-13	\$39,407.6			0.00		\$411,376.4			0.00	
CTD	\$1,905,306.1	\$1,860,932.3	\$1,791,594.0	0.98	1.04					

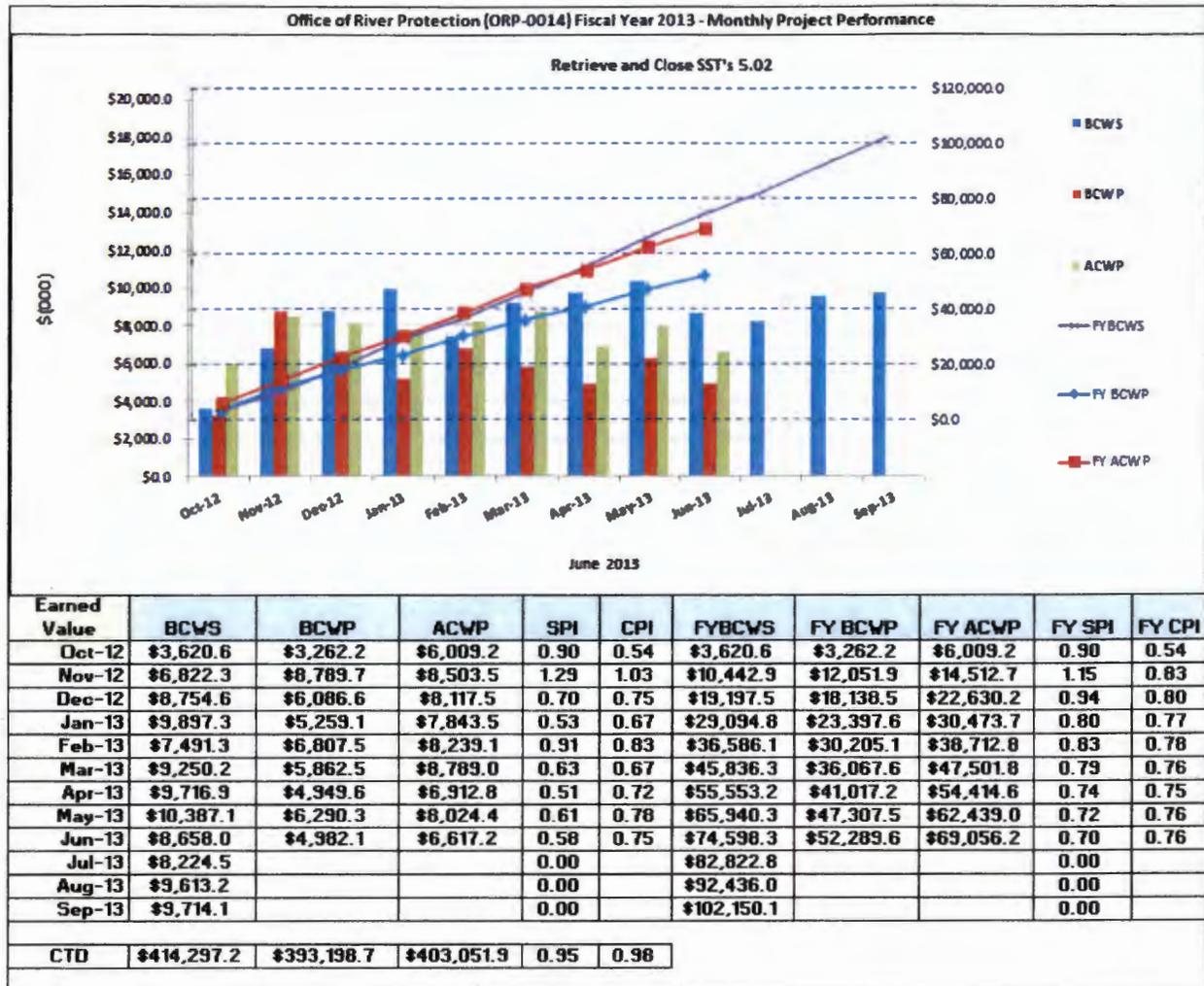


Base Operations and Tank Farm Projects

The unfavorable schedule variance of **(\$1,205K)** is due to delays in the following Tank Farm Project activities as a result of sequestration and the subcontractor work being placed on hold until reprogramming completed:

- Two month delay for the AY-102 Corrosion probe array removal
- Deferral of DST AN-103 ultrasonic testing
- SST integrity projects (sidewall coring, water hammer testing, benchmark repairs, SST Expert Panel
- DST Transfer Readiness due to jumper installation delay due to size and alignment repairs not anticipated.

The favorable cost variance of \$187k is not reportable.



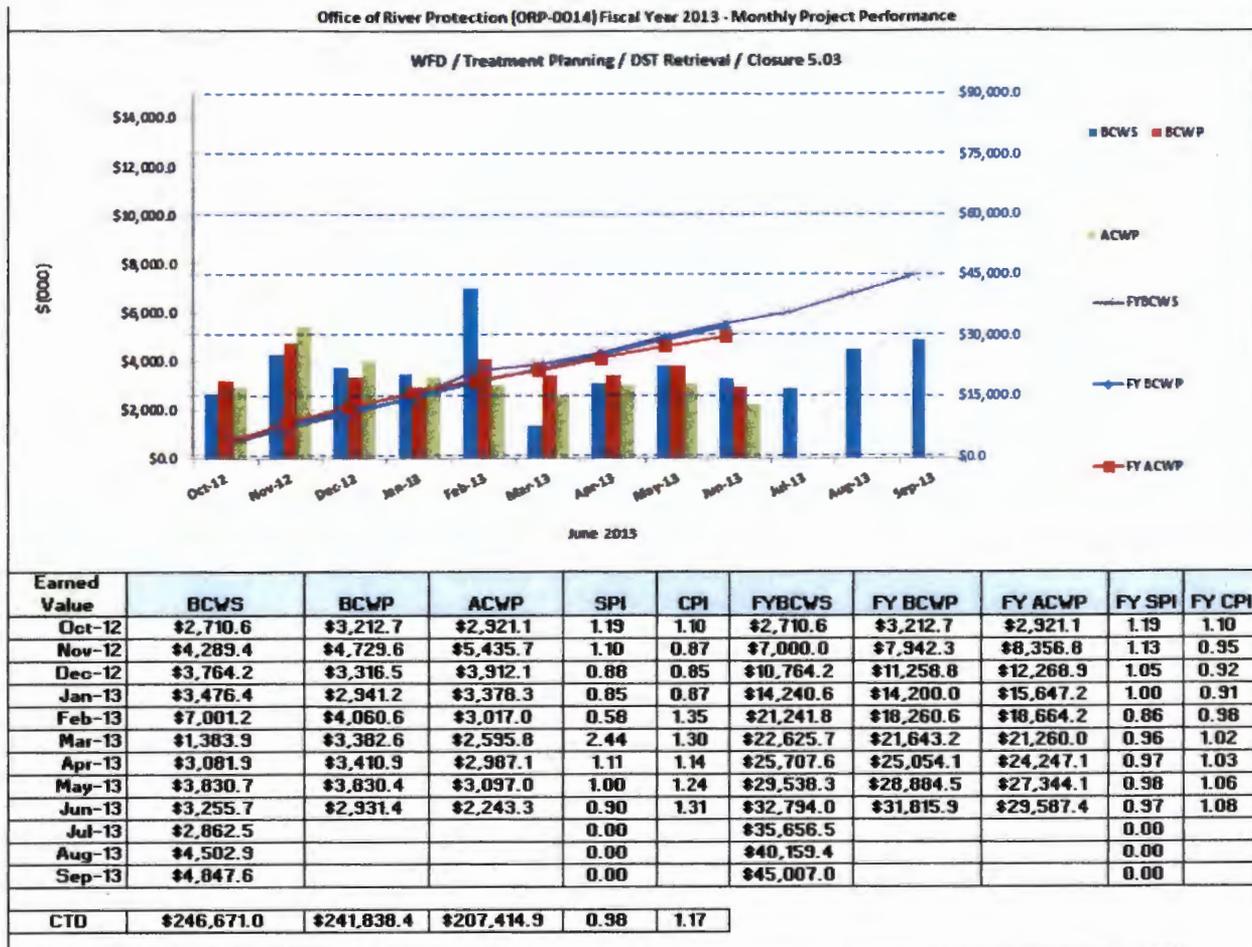
Retrieval and Close Single-Shell Tanks

The current month unfavorable schedule variance (SV) of **(\$3,676k)** is due to:

- Retrieval design delays of the hard heel retrieval system in C-111, as the retrieval strategy has changed in response to DST deep bed sludge safety basis issues and resource availability issues.
- Changes in strategy for the C-112 mechanical hard heel retrieval technology. The C-112 hard heel retrieval activities are being realigned to accelerate caustic dissolution and defer the high-pressure Extended Reach Sluicing System as a result of the deep bed sludge safety basis issue and resource availability.
- Retrieval operation delays in starting waste retrieval for C-102, as operations have been realigned to coincide with the completion of C-112 hard heel retrieval in FY 2014.
- 5-month delayed start of hard heel retrieval operations in C-110 as a result of sequestration. However, the unfavorable variance is partially offset by accelerated progress of the fabrication and preparations for system start-up of the hot water skid.
- 3-week delay to the start of fieldwork for the six Hose-in-Hose Transfer Line (HIHTLs) to be removed this year, as resources were unavailable to support shield plate and hose barn removals.

The current month unfavorable cost variance (CV) of **(\$1,635K)** is due to:

- Longer retrieval operations than planned for C-101, causing higher costs.
- Higher subcontract and labor costs needed to resolve issues with the MARS-V prior to field deployment, including resolving eductor plugging, the safety instrument system, cross-flow filter systems, temperature monitoring, and hydraulic power unit corrosion. Management oversight has increased to resolve technical issues in support of project demobilization and closeout.
- Increased radiological control and engineering resources needed to complete the contract actions associated with the C-110 retrieval system installation activities.
- Unexpected labor costs for troubleshooting the AN-106 pump leak that occurred during the C-107 hard heel retrieval.
- Unanticipated C-Farm Infrastructure DST Receiver Tank repairs for a leak in the AN-106 pump during start-up of C-107 hard heel removal operations, which required crews to perform replacement of the siphon hose, resulting in additional labor hours charged.



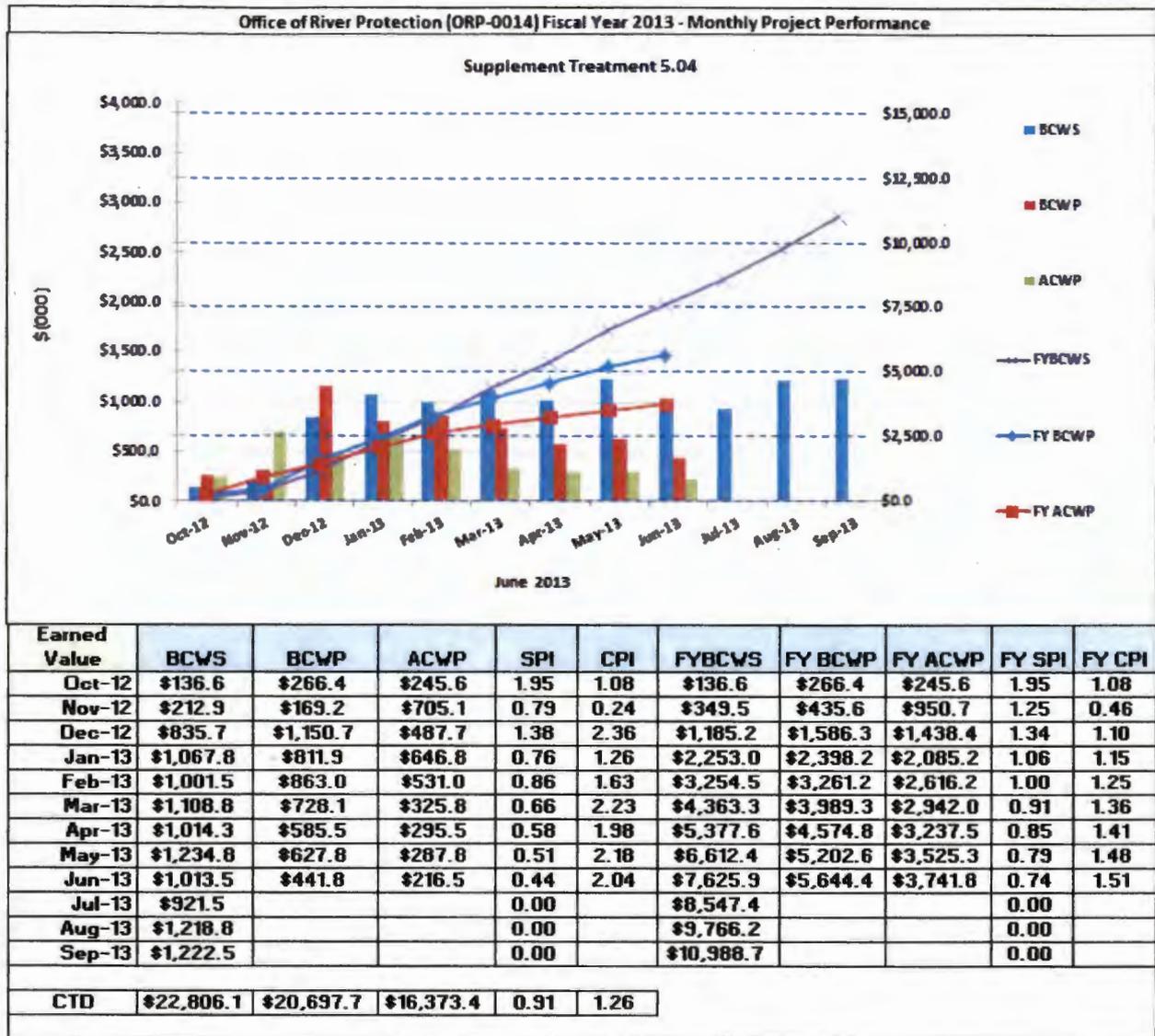
Waste Feed Delivery/Treatment/Double-Shell Tank Retrieval Closure

The unfavorable schedule variance of **(\$324K)** is due to:

- AY/AZ Ventilation Upgrade project placed on hold due to the issues identified with double-shell tank AY-101.

The favorable cost variance of \$688k is due to the following:

- RPP System Plan positive cost variance is due to efficiencies experienced from the G2 Systems software training and the Hanford Tank Waste Operations Simulator modeling improvement activities costing less than planned.
- The Supplemental Treatment projects are more mature and the level of detail required for flow sheet development is less than originally planned resulting in efficiencies.



Supplemental Treatment

The unfavorable schedule variance (\$572k) is due to:

- Immobilization – Maturation – The One Time Report – As a result of sequestration activities are ramped down for the remainder of the fiscal year

The favorable cost variance \$225k is due to:

- Immobilization – Maturation – One Time Report – Project Management is not utilizing subcontractor due to the delay/deferral of report activities.

Work Breakdown Structure 5.2 Retrieve and Close Single-Shell Tanks

M-045-22, Review M-045-22-T03 Report and Determine Path Forward, Due: September 30, 2014, based on M-045-20 TPA Change Package M-45-12-05, Status: On schedule. This ORP/Ecology decision point will determine whether to continue with soil desiccation/contaminant removal testing and other interim measures, and if the remaining work in milestone M-045-92 should be modified. ORP submitted TPA change package M-45-12-05 adding dates for M-045-22 and its targets with the revised work plan via letter 13-TF-0014, *The U.S. Department of Energy, Office of River Protection (ORP) submittal of Revised 200 West Area Tank Farms Interim Measures Investigation Work Plan in Completion of Hanford Federal Facilities Agreement and Consent Order (HFFACO) Milestone M-045-20*. Ecology approved the TPA change package on April 1, 2013.

M-045-22-T01, Submit Results of Vadose Zone Characterization of 241-TX to Ecology, Due: September 30, 2014, based on M-045-20 TPA Change Package M-45-12-05, Status: On schedule.

M-045-22-T02, Submit Results of Vadose Zone Characterization of 241-U to Ecology, Due: April 30, 2014, based on M-045-20 TPA Change Package M-45-12-05, Status: On schedule.

M-045-22-T03, Submit SX Soil Desiccation/Contaminate Removal Tech Results to Ecology, Due: July 31, 2014, based on M-045-20 TPA Change Package M-45-12-05, Status: On schedule.

M-045-56I, Complete Implementation of Agreed to Interim Measures, Due: July 31, 2013, Status: Completed June 12, 2013. The annual meeting was held on June 12, 2013; meeting notes have been entered into the TPA Administrative Record.

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 Waste Management Areas (WMA) (pending the CMS report, milestone M-45-58, and implementation of other interim corrective measures), Due: TBD, 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: December 31, 2014, Status: To be missed. Please see issues.

M-045-62, Submit to Ecology for review and approval as an Agreement primary document a Phase 2 Corrective Measures Study Implementation Plan for WMA C, Due: June 30, 2015, Status: To be missed. Please see issues.

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: September 30, 2017, Status: On schedule. This milestone date has been modified according to M-45-12-04 and the decision to move forward with construction/design of additional barriers dependent on discussions per M-045-22.

M-045-92N, Construct Barriers 1 and 2 in 241-SX Farm, Due: October 31, 2015, Status: On schedule. The decision to move forward with construction/design of additional barriers is dependent on discussions per M-045-22.

M-045-92O, Submit a Final Design and Monitoring Plan for Interim Barrier 3, Due: June 30, 2015, Status: On schedule. The decision to move forward with construction/design of additional barriers is dependent on discussions per M-045-22.

Significant Past Accomplishments:

- Automated data collection systems for T-Farm and TY Farm interim barrier monitoring continue gathering data.
- The summary report on T and TY barrier monitoring performed in 2012 was released.
- The test site was selected for the pore water extraction test south of SX farm under the M-045-20 work plan, and direct-push work to place the extraction and monitoring wells is underway.
- Direct push of four boreholes near the C-200 tanks has been completed and deep electrodes placed for resistivity evaluations. Collection of resistivity data is underway.
- Data collection in U Farm for electrical resistivity characterization was completed. Data analysis and reporting will be completed in FY2014.
- Direct-push field work in TX Farm was initiated under the M-045-20 work plan and M-045-21 sampling and analysis plan.
- Annual M-045-56 meeting on interim measures was held and meeting minutes generated.

Significant Planned Actions in the Next 6 Months:

- Complete direct-push field work in TX Farm under the M-045-20 work plan.
- Complete analysis and reporting of the electrical resistivity data collected in U Farm under the M-045-20 work plan.
- Complete electrical resistivity field work near the C-200 tanks per the WMA C Phase 2 Resource Conservation and Recovery Act Field Investigation/Corrective Measures Study Work Plan.
- Complete the field set up and equipment design for the SX farm pore water extraction proof of principle test under the M-045-20 work plan.

SST Retrieval and Closure Program

M-045-82, Submit complete permit mod requests for Tiers 1, 2, and 3 of the SST, Due: September 30, 2015, Status: To be missed. Please see issues.

M-045-84, Complete negotiations of TPA interim milestones for closure of second WMA, Due: January 31, 2017, Status: On schedule.

M-045-83, Complete the closure of WMA C, Due: June 30, 2019, Status: On schedule.

M-045-85, Complete negotiations of TPA interim MS for closure of remaining WMAs, Due: January 31, 2022, Status: On schedule.

M-045-70, Complete waste retrieval from all remaining SSTs, Due: December 31, 2040, Status: On schedule.

M-045-00, Complete Closure of all Single-Shell Tank Farms, Due: January 31, 2043, Status: On schedule.

M-045-86, Submit retrieval data report to Ecology for 19 tanks retrieved, Due: To be determined (12 months after retrieval certification), Status: On schedule. The Retrieval Data Report for C-104 is due March 21, 2014. The Retrieval Data Report for C-108 is due May 1, 2014. The Retrieval Data Report for C-109 is due June 4, 2014.

Significant Past Accomplishments:

- Completed post-retrieval sampling, analyzing, and reporting of results for tank C-108 in support of the M-045-86 retrieval data report.
- Completed post-retrieval spectral gamma logging of drywells near tank C-108 in support of the M-045-86 retrieval data report.
- Completed post-retrieval sampling analysis and reporting of results for tank C-104 in support of the M-045-86 retrieval data report.
- Completed post-retrieval sampling of tank C-109 in support of the M-045-86 retrieval data report.
- See discussions above and related discussions in Consent Decree report.
- Initiate numeric modeling for the WMA C performance assessment.

Significant Planned Activities in the Next 6 Months:

- Develop a retrieval data report for tank C-104
- Continue analysis of the post-retrieval samples from tank C-109
- Issue a retrieval data report for C-108
- See discussions above and related discussions in Consent Decree report.

Issues:

The WMA-C performance assessment (PA) was not funded at the beginning of FY2013. ORP has reported previously that the WMA-C PA would need to be funded by March 31, 2013, in order to maintain the milestone schedule. Although funding of the WMA-C PA has been identified to begin work in FY2013, TPA milestones M-045-61, M-045-62, and M-045-82 are still to be missed.

ORP began discussions with Ecology about a TPA project manager-level agreement to determine an alternative path forward for milestones M-045-61 and M-045-62 on March 14, 2013. ORP and Ecology have continued to meet (most recently on June 20, 2013) to develop a path forward for these milestones.

ORP and Ecology will meet separately to discuss TPA milestone M-045-82 for the Tier 1, 2, and 3 WMA-C SST closure submittal. ORP and Ecology will discuss impacts to this work scope and the potential for a Tier 1 submittal.

Tank Waste Retrieval Work Plan Status

Tank	TWRWP	Expected Revisions	Retrieval Technology	Second Technology	Third Technology
C-101	RPP-22520, Rev. 7	Complete	Modified Sluicing with ERSS	High-Pressure Water with ERSS	-
C-102	RPP-22393, Rev. 6A	In Process	Modified Sluicing with ERSS	High-Pressure Water with ERSS	-
C-104	RPP-22393, Rev. 6A	Complete	Modified Sluicing	Chemical Dissolution, retrieval complete per 13-TF-0018	-
C-105	RPP-22520, Rev. 7	Complete	MARS-V	MARS-V-High Pressure Water	-
C-107	RPP-22393, Rev. 6A	Complete	MARS-S	MARS-S-High Pressure Water	-
C-108	RPP-22393, Rev. 6A	Complete	Modified Sluicing	Chemical Dissolution, retrieval complete per 13-TF-0025	-
C-109	RPP-21895, Rev. 5	Complete	Modified Sluicing	Chemical Dissolution, retrieval complete per 13-TF-0037	-
C-110	RPP-33116, Rev. 2	Complete	Modified Sluicing	Mechanical Waste Conditioning	High Pressure Water
C-111	RPP-37739, Rev. 1	In Process	Modified Sluicing	High pressure water with ERSS	Chemical Dissolution with ERSS
C-112	RPP-22393, Rev. 6A	In Process	Modified Sluicing	Chemical Dissolution	-

ERSS = Extended Reach Sluicer System.

MARS = Mobile Arm Retrieval System.

TWRWP = Tank Waste Retrieval Work Plan.

Significant Accomplishments:

ORP and Ecology approved Modification Notice 2013-05 for TWRWP RPP-22393 allowing the high resolution resistivity system to be used for C-102 leak detection. Prior to the modification, weekly moisture logging was required when not in active retrieval because of high interstitial liquid levels. The change now allows the Tank Operations Contractor to perform 30 days of high resolution resistivity monitoring once per quarter rather than weekly moisture logging.

Significant Planned Activities in the Next 6 Months:

Work with Ecology on an update to the Tank Waste Retrieval Work Plan RPP-37739 for C-111 to include a second and third retrieval technology.

Issues:

None.

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

Tank 241-C-106

Significant Past Accomplishments:

None.

Significant Planned Activities in the Next 6 Months:

Continue U.S. Nuclear Regulatory Commission (NRC) review of the C-106 exception request. A request for additional information was received from the NRC in February 2009.

Issues:

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.

Tank Retrievals with Individual Milestones

Tank 241-A-103

M-045-15, Completion of Tank A-103 SST Waste Retrieval, Due: September 30, 2022, Status: On schedule. Change package M-45-11-04 replaced tank S-102 with tank A-103 and changed to milestone completion date for M-045-15 to September 30, 2022.

M-045-15A, Embedded Milestone, Submit a Retrieval Data Report Pursuant to Agreement Appendix I, Due: September 30, 2022, Status: On schedule. Updated with tank A-103 and due date of September 30, 2022, per M-45-11-04 change package.

M-045-15D, Embedded Milestone, if appropriate, DOE will request an exception to waste retrieval criteria pursuant to Agreement Appendix H, Due: September 30, 2022, Status: On schedule. Updated with A-103 tank and due date of September 30, 2022, per M-45-11-04 change package.

Significant Past Accomplishments:

Change package M-45-11-04 was signed by ORP and Ecology on April 19, 2011.

Significant Planned Activities in the Next 6 Months:

None.

Issues:

None.

Tank 241-S-112

M-045-13, Interim Completion of Tank S-112 SST Waste Retrieval and Closure Demonstration Project, Due: To be determined (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: To be determined, Status: On schedule as part of M-045-84 or 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 6 Months:

None.

Issues:

None.