

**FINAL**

Office of River Protection  
Tri-Party Agreement  
Monthly Summary Report  
August 2014



**Office of River Protection  
Tri-Party Agreement Milestone Review  
August 2014 (Monthly Summary Report/Project Earned Value Management System reflects  
June 2014 information)**

Page	Topic	Leads
1	Administrative Items/Milestone Status	James Lynch/Dan McDonald/Jeff Lyon
2	System Plan; M-062-40	DaBrisha Smith/Jeff Lyon/Dan McDonald
3	Acquisition of New Facilities; M-090-00 and M-047-00	Janet Diediker/Jeff Lyon/Dan McDonald
4	Supplemental Treatment and Part B Permit Applications; M-062-00, M-062-21, M-062-30, and M-062-45	Steve Pfaff/Jeff Lyon/Dan McDonald
5	242-A Evaporator Status	Ron Koll/Jeff Lyon
6	Double-Shell Tank System Update	Jeremy Johnson/Jeff Lyon
6	Single-Shell Tank Integrity Assurance; M-045-91	Jeremy Johnson/ Jim Alzheimer
8	In Tank Characterization and Summary	Billie Mauss/Michael Barnes
9	Tank Operations Contract Overview	Kathy Higgins/Jeff Lyon
16	Single-Shell Tank Corrective Action; M-045-22, M-045-50 series, M-045-60 series, and M-045-92	Chris Kemp/Jeff Lyon
17	Single-Shell Retrieval and Closure Program Tri-Party Agreement (TPA) Milestones Status; M-045-00 series	Chris Kemp/Jeff Lyon
19	Tank Waste Retrieval Work Plan Status	Chris Kemp/Jeff Lyon
20	Tank in 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 U.S. Department of Energy, Office of River Protection Consent Decree 08-5085-FVS Monthly Summary Report for WTP Facility-specific information	Delmar Noyes/Dan McDonald

CD = Consent Decree 08-5085-FVS

Milestone	Title	Due Date	Completion Date	Status
<b>Fiscal Year 2014</b>				
M-062-40C	Select a Minimum of Three Scenario's for the System Plan	12/15/2013	12/12/2013	Completed
M-062-01AB	Submit Semi-Annual TPA Project Compliance Report	01/31/2014	01/31/2014	Completed
M-045-86C	Submit Retrieval Data Report to Ecology for C-104	03/21/2014	02/18/2014	Completed
M-045-22-T02	Submit Results of Vadose Zone Characterization of 241-U to Ecology	04/30/2014	02/20/2014	Completed
M-045-86F	Submit Retrieval Data Report to Ecology for C-108	05/01/2014	11/27/2013	Completed
M-045-86G	Submit Retrieval Data Report to Ecology for C-109	06/04/2014	03/13/2014	Completed
M-045-22-T03	Submit SX Soil Desiccation/Contaminate Removal Tech Results to Ecology	07/31/2014	05/15/2014	Completed
M-045-56J	Ecology and DOE Agree, at a Minimum, to Meet Yearly (by July)	07/31/2014	07/22/2014	Completed
M-062-01AC	Submit Semi-Annual TPA Project Compliance Report	07/31/2014	07/31/2014	Completed
M-045-22-T01	Submit Results of Vadose Zone Characterization of 241-TX to Ecology	09/30/2014		On Schedule
M-045-22	Review M-045-22-T03 Report and Determine Path Forward	09/30/2014		On Schedule
<b>Fiscal Year 2015</b>				
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	Deleted on 08/12/2014	Deleted
M-045-91G-T03	Provide AOR Final Doc. for SSTs on 1,000,000 Gallon Tanks	10/31/2014	07/07/2014	Completed
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-045-86H	Submit Retrieval Data Report to Ecology for C-110	01/29/2015	08/06/2014	Completed
M-045-91G-T04	Provide AOR Final Doc. for SSTs on 55,000 Gallon Tanks	01/30/2015		On Schedule
M-045-91B-T01	Provide Ecology report on the Concrete Core from Tank A-106 or alt	01/31/2015		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
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

AOR = Analyses of Record.

CD-1/-2 = critical decision-1/-2

CR = change request.

DOE = U.S. Department of Energy.

Ecology = Washington State Department of Ecology.

RCRA = Resource Conservation and Recovery Act.

SST = single-shell tank.

TPA = Tri-Party Agreement.

WMA-C = Waste Management Area C.

## System Plan

**M-062-40C, Select a minimum of three scenarios that will be analyzed in the system plan,**  
Due: December 15, 2013, Status: Completed on December 12, 2013.

**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:

1. On October 24, 2013, Washington State Department of Ecology (Ecology) and U.S. Department of Energy (DOE), Office of River Protection (ORP) signed the Tri-Party Agreement (TPA) Change Control Form M-62-13-02, moving out the due date for this embedded milestone from October 31, 2013 to December 15, 2013, for selection of three, or more, scenarios to be modeled in the System Plan.
2. Ecology has defined five scenarios to be analyzed in System Plan 7. Washington River Protection Solutions LLC (WRPS) has included a description of each scenario in the Selected Scenarios for the River Protection Project System Plan, Rev. 7 document released to ORP on December 4, 2013. See joint ORP and Ecology letter 13-TPD-0070, dated December 12, 2013, for completion and description of M-062-40C scenarios.
3. Detailed assumption review was completed, and has been approved by Ecology.
4. On February 11, 2014, DOE-ORP transmitted a letter (14-TPD-0003) to Washington River Protection Solutions LLC in response to letter (WRPS-1400313) to approve the use of Ecology's Appendix B, "Key Assumptions and Success Criteria," for the ORP 11242, River Protection Project System Plan, Rev. 7.
5. On February 13, 2014 Washington State Department of Ecology presented the five selected scenarios to the Hanford Advisory Board Tank Waste Committee.
6. Ecology, DOE-ORP and WRPS reviewed and provided comments for sections 1 and 2 of the System Plan 7 during the week of February 17, 2014.
7. Ecology, DOE-ORP and WRPS reviewed and provided comments for section 3 of the System Plan 7 during the week of March 21, 2014.
8. Ecology, DOE-ORP and WRPS reviewed and provided comments for Appendix C of the System Plan 7 during the week of April 1, 2014.
9. During the week of April 28, 2014, WRPS and DOE-ORP facilitated meetings for Ecology to define detail spending assumptions for Case 5.
10. On July 29, 2014, WRPS Case authors presented the results of the five cases to Ecology and DOE-ORP.

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

- Review System Plan Rev. 7
- Issue System Plan Rev. 7

### Issues:

None.

### **Acquisition of New Facilities**

**M-090-13, Submit Critical Decision-1 for Interim Hanford Storage Project and TPA Change Request for CD-2 to Ecology**, Due: March 31, 2016, 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 Change Request (CR) for CD-2 to Ecology**, Due: March 31, 2016, 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:**

ORP and Ecology signed TPA Change Packages M-47-14-01 and M-90-14-01 on July 14, 2014 moving the due date for M-047-07 and M-090-13 to March 31, 2016.

#### **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: Deleted.\***

**M-062-45ZZ (designation for M-062-45 item #3), 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 LAW Tank Wastes, Due: December 31, 2047, Status: On schedule.**

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

\*Per ORP letter 14-TF-0052, signed by ORP on May 6, 2014 and provided to Ecology on May 7, 2014, ORP documented the ORP/Ecology discussions for the One-Time Hanford Tank Waste Supplemental Treatment Technologies Report and that ORP does not intend to submit this report. ORP received Ecology's response letter, 14-NWP-110, on May 29, 2014. ORP Letter 14-TF-0088, dated and delivered to Ecology on July 31, 2014, submitted a signed TPA Change Package to delete the requirement of the One-Time Hanford Tank Waste Supplemental Treatment Technologies Report from TPA Milestone M-062-40. Ecology signed TPA Change Package M-62-14-01 deleting M-062-40ZZ on August 12, 2014.

**Significant Planned Actions in the Next 6 Months: None.**

**Issues: None.**

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

**242-A Evaporator Status:**

The 242-A campaign strategy for fiscal year (FY) 2010 through FY 2015 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
FY 2010	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.
FY 2010	10-02	AW-106	AW-106	
FY 2011	NA	NA	NA	No campaign conducted in FY 2011 due to ongoing 242-A and tank farm facility life extension and <i>American Recovery and Reinvestment Act</i> funded upgrades.
FY 2012	NA	NA	NA	No campaign conducted in FY 2012 due to ongoing 242-A and tank farm facility upgrades and revision to the 242-A Documented Safety Analysis.
FY 2013	NA	NA	NA	No campaigns to be conducted in FY 2013 due to ongoing 242-A and tank farm facility upgrades and revision to the 242-A Documented Safety Analysis.
FY 2014	13-01	AP-107	AP-107	Estimated start late August to early September 2014. Requires two passes to achieve waste volume reduction.
FY 2014	14-01	AW-106	AP-107	Estimated start November 2014.
FY 2015	14-02	AZ-102	AP-103	Estimated start February 2015.
FY 2015	14-03	AW-106	AP-103	Estimated start March 2015.
FY 2015	15-01	AZ-102	AP-103	Estimated start June 2015.

FY = fiscal year.

NA = not applicable.

On August 11, 2014, the DOE-ORP Readiness Assessment Team presented their findings at the WRPS Exit Briefing. Discussions addressed four WRPS Pre-Start Findings; four WRPS and one DOE Post-Start Findings; eight WRPS and three DOE Observations; and Notable Practices also.

The DOE RA Final Report is scheduled to be issued by August 13, 2014. Tentatively, the Evaporator Campaigns are scheduled to begin in the last quarter of FY2014.

## Double-Shell Tank System Update

### Ultrasonic Testing

- The final UT report for AP-106 is being finalized.
- Vendor is completing system integration of the Phased Array (PAUT)-Electro Magnet Acoustic Transducer (EMAT) equipment. Performance demonstration testing is planned in September 2014 at PNNL.

### Visual Inspection

- Continuing weekly inspections of AY-102 Risers 77, 83, and 87.
- Continuing monthly comprehensive inspection of AY-102 annulus.
- Completed the FY14 comprehensive annulus inspections of tanks AP-101, AP-107, AN-102, AN-107, and AW-105. Completed annulus inspections of AP-104 and AP-106 via four risers.

## Single-Shell Tank Integrity Assurance

**M-045-91G-T03, Provide to Ecology the structural analyses of record final documentation for single-shell tanks (SST) for 1,000,000 gallon tanks (A, AX, and SX Farms), Due: October 31, 2014, Status: Completed. See ORP Letter 14-TF-0074, dated July 7, 2014.**

**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, Rev. 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:**

- The leak cause and location analysis for 241-TX Farm, RPP-RPT-54917 was approved for External Clearance and Released.
- In support of M-045-91B-T01, destructive testing of the concrete core specimens from the sidewall of SST A-106 was successfully performed last week by CTL Group in Skokie, IL. The testing included determination of elastic modulus, Poisson's ratio, and compressive strength. The testing indicated favorable results with values generally greater (and in many cases significantly greater) than expected. Detailed comparison with the values used in the analysis of record (and with those originally specified) will be performed when the data report is received.

**Significant Planned Actions in the Next 6 Months:**

- Issue report on testing of the Tank A-106 sidewall.
- Issue leak cause and location summary report and SST leak rate analysis.
- An SSTIP Expert Panel meeting is scheduled for the August 28 and 29 in Richland.

**Issues:**

None.

## In Tank Characterization and Summary

For the period from July 1 through July 31, 2014:

### Accomplishments:

- Completed RPP-RPT-46616, *Derivation of Best-Basis Inventory for Tank 241-C-104 as of April 1, 2014*, Rev 6.
- Completed RPP-RPT-45147, *Derivation of Best-Basis Inventory for Tank 241-C-108 as of April 1, 2014*, Rev 4.
- Completed RPP-RPT-51343, *Derivation of Best-Basis Inventory for Tank 241-C-109 as of April 1, 2014*, Rev 4.
- Completed RPP-RPT-44639, *Derivation of Best-Basis Inventory for Tank 241-AP-104 as of April 1, 2014*, Rev 9.
- Completed RPP-RPT-52180, *Derivation of Best-Basis Inventory for Tank 241-SX-106 as of April 2, 2014*, Rev 1.
- Completed RPP-RPT-56866, *Derivation of Best-Basis Inventory for Tank 241-A-103 as of April 1, 2014*, Rev 0.
- Completed RPP-PLAN-57535, *Sampling and Analysis Plan for 242-A Process Condensate*, Rev 0.
- Completed RPP-PLAN-58022, *Sampling and Analysis Plan for 242-A Evaporator Cooling Water and Steam Condensate*, Rev 0.
- RPP-RPT-57968, *Final Report for Tank 241-AY-102A Leak-Detection Pit Liquid Grab Samples June 2014*, was released July 16, 2014.
- Completed monthly 241-AY-102A Leak-Detection Pit liquid grab sampling on July 7, 2014. Three samples were received at the lab.
- Completed 241-C-112 clamshell sampling July 11, 2014. One sample was received at the lab.

### Planned Action within the Next 6 Months:

#### *Tank sampling:*

- Tank 241-AZ-102 grab sampling (Evaporator campaign 14-02) scheduled for August 2014.
- Monthly 241-AY-102A LDP grab sampling is currently scheduled for the months of August and September 2014.
- Tank 241-AN-101 for C-102/C-112 retrievals planned for August 2014.
- Tank 241-SY-102, 1<sup>st</sup> core sample (Riser #20) is currently scheduled for September 2014.
- Tank 241-SY-102, 2<sup>nd</sup> core sample (Riser #4) is currently scheduled for October 2014.
- Tank 241-C-112 closure clamshell or fingertrap sampling is currently planned for October 2014.
- Tank 241-AW-106 (Evaporator campaign 14-03) is currently planned for October 2014.
- Tank 241-C-107 closure drag sample is currently planned for October 2014.

- Tank 241-C-105 MARS-V drag sampling is currently planned for October 2014.
- Tank 241-C-101 ORSS closure sampling is currently planned for October 2014.
- Tank 241-AN-106 at 100% C-105 retrieval planned for December 2014.
- Tank 241-AZ-102 (Evaporator campaign 15-01) planned for December 2014.
- Tank 241-AY-101 (Evaporator campaign 15-02) planned for January 2015.

**Multi-Media sampling:**

- 241-AZ-301 annual condensate sampling is currently planned for September 2014.

**Best-Basis Inventory (BBI) updates:**

The following tanks were identified for BBI updates in FY 2014 Quarter 3 but have been deferred. These tanks will be included in the list of FY 2014 Quarter 4 tanks for BBI updates that is currently being developed.

- 241-AW-102
- 241-BX-101
- 241-BX-110
- 241-BY-102
- 241-S-111

**Data Quality Objectives (DQO):**

A screening DQO is in-process to obtain data from tank stacks on the odorous tank vapors reported by tank farm workers.

**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 30, 2014, Washington River Protection Solutions LLC, the Tank Operations Contractor, has worked 104 days without a lost time workday injury and 32 days since the last recordable case. There was no recordable case in the month of June.

June-14										
	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
CM	34,705.6	33,423.7	31,594.5	(1,282.0)	1,829.1	0.96	1.06			
FYTD	306,197.8	290,114.1	280,479.8	(16,083.7)	9,634.3	0.95	1.03	449,661.4	423,357.7	26,303.7
CTD	2,197,941.7	2,181,857.9	2,172,223.6	(16,083.7)	9,634.3	0.99	1.00	3,193,371.9	3,175,195.9	18,176.0

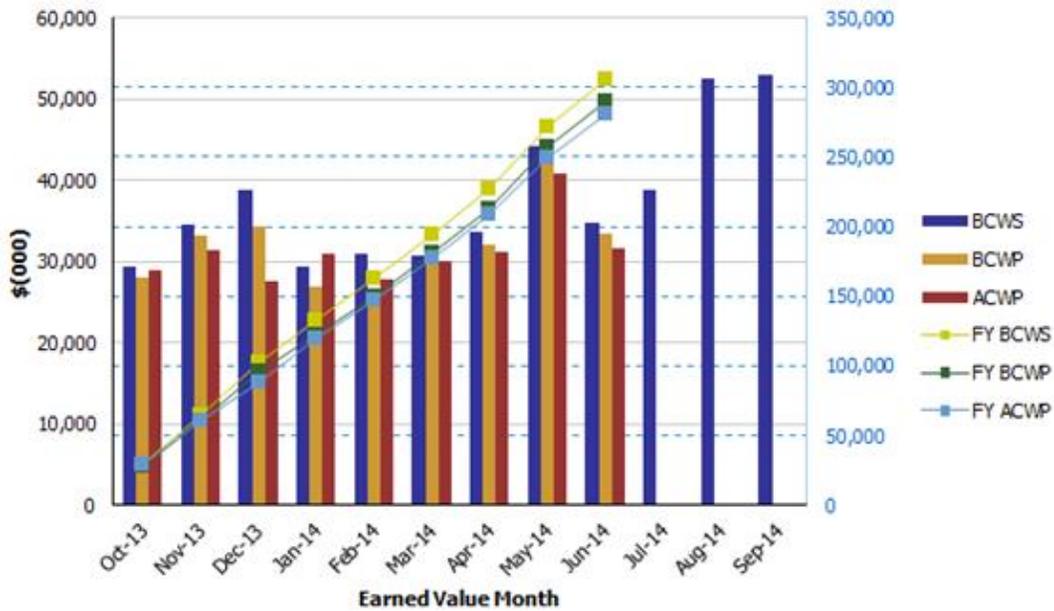
Red shaded cells indicates a SPI/CPI less than 0.90

Green shaded cells indicate a SPI/CPI between 0.90 and 0.99

Blue shaded cells indicate a SPI/CPI greater than or equal to 1.0.

**Tank Farms ORP-0014**

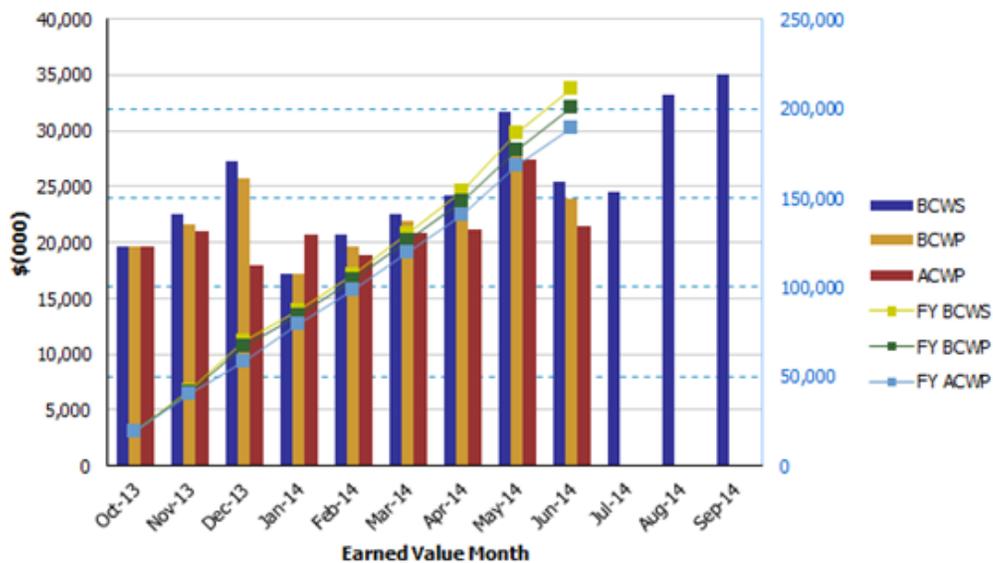
EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2013	\$29,474	\$27,946	\$29,015	0.95	0.96	\$29,474	\$27,946	\$29,015	0.95	0.96
Nov 2013	\$34,535	\$33,081	\$31,448	0.96	1.05	\$64,009	\$61,027	\$60,463	0.95	1.01
Dec 2013	\$38,698	\$34,362	\$27,634	0.89	1.24	\$102,706	\$95,389	\$88,096	0.93	1.08
Jan 2014	\$29,325	\$26,999	\$30,991	0.92	0.87	\$132,032	\$122,388	\$119,087	0.93	1.03
Feb 2014	\$30,875	\$26,774	\$27,782	0.87	0.96	\$162,907	\$149,162	\$146,869	0.92	1.02
Mar 2014	\$30,709	\$31,870	\$30,045	1.04	1.06	\$193,616	\$181,032	\$176,914	0.94	1.02
Apr 2014	\$33,608	\$32,120	\$31,172	0.96	1.03	\$227,224	\$213,152	\$208,086	0.94	1.02
May 2014	\$44,269	\$43,538	\$40,799	0.98	1.07	\$271,492	\$256,690	\$248,885	0.95	1.03
Jun 2014	\$34,706	\$33,424	\$31,595	0.96	1.06	\$306,198	\$290,114	\$280,480	0.95	1.03
Jul 2014	\$38,860									
Aug 2014	\$52,413									
Sep 2014	\$52,860									
<b>CTD</b>	<b>\$2,197,942</b>	<b>\$2,181,858</b>	<b>\$2,172,224</b>	<b>0.99</b>	<b>1.00</b>					

**Tank Farms ORP-0014  
Base Operations 5.01**

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2013	\$19,628	\$19,630	\$19,598	1.00	1.00	\$19,628	\$19,630	\$19,598	1.00	1.00
Nov 2013	\$22,525	\$21,675	\$21,051	0.96	1.03	\$42,153	\$41,305	\$40,649	0.98	1.02
Dec 2013	\$27,266	\$25,724	\$18,016	0.94	1.43	\$69,419	\$67,029	\$58,664	0.97	1.14
Jan 2014	\$17,246	\$17,269	\$20,778	1.00	0.83	\$86,664	\$84,298	\$79,443	0.97	1.06
Feb 2014	\$20,732	\$19,631	\$18,894	0.95	1.04	\$107,396	\$103,929	\$98,337	0.97	1.06
Mar 2014	\$22,587	\$21,924	\$20,834	0.97	1.05	\$129,983	\$125,853	\$119,170	0.97	1.06
Apr 2014	\$24,256	\$22,528	\$21,164	0.93	1.06	\$154,238	\$148,381	\$140,334	0.96	1.06
May 2014	\$31,690	\$28,630	\$27,412	0.90	1.04	\$185,929	\$177,011	\$167,777	0.95	1.06
Jun 2014	\$25,451	\$23,901	\$21,476	0.94	1.11	\$211,380	\$200,912	\$189,252	0.95	1.06
Jul 2014	\$24,492									
Aug 2014	\$33,302									
Sep 2014	\$34,991									
<b>CTD</b>	<b>\$1,416,995</b>	<b>\$1,442,446</b>	<b>\$1,431,978</b>	<b>1.02</b>	<b>1.01</b>					

**Base Operations and Tank Farm Projects**

The current month favorable cost variance (CV) of \$2,425K is primarily due to:

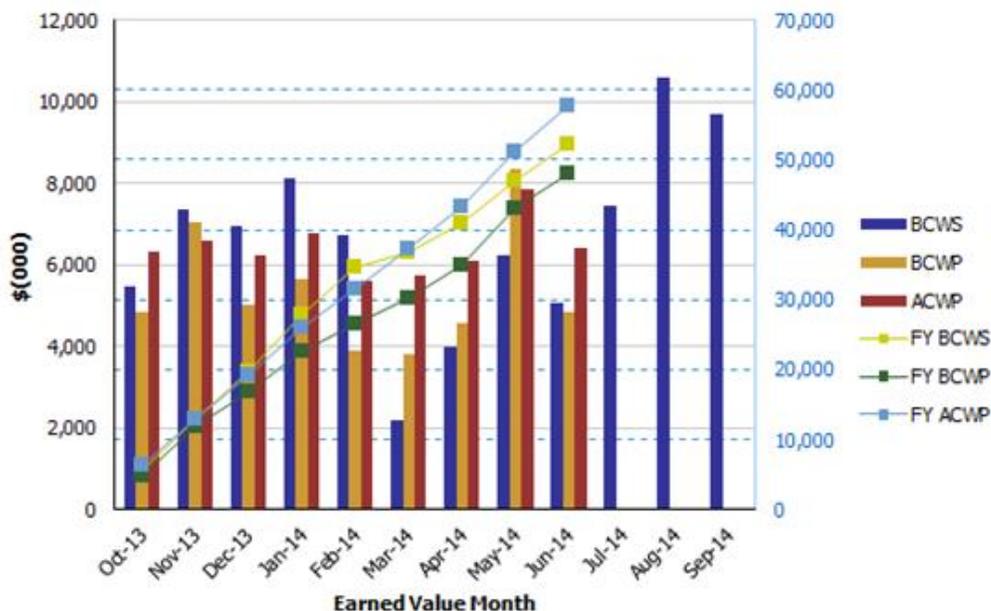
- Less laboratory and chemists were needed to accomplish testing and analysis at 222-S.
- Asbestos abatement planned for DST Integrity work not required.
- A credit to the spares account due to an overcharge.

The current month unfavorable schedule variance (SV) of (\$1,550K) is due to the following:

- Delay in performing the 242-A Readiness Assessment and unplanned corrective maintenance activities on the Pump Room Jumper.
- Delay in performing DST transfers caused by the 242-A Evaporator Campaign.
- AW and AN Farm electrical upgrades and freeze protection delays.
- AY-102 pit and riser video examinations due to lack of industrial hygiene support.

**Tank Farms ORP-0014  
Retrieve and Close SST's 5.02**

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2013	\$5,483	\$4,823	\$6,336	0.88	0.76	\$5,483	\$4,823	\$6,336	0.88	0.76
Nov 2013	\$7,366	\$7,054	\$6,609	0.96	1.07	\$12,849	\$11,876	\$12,945	0.92	0.92
Dec 2013	\$6,970	\$5,002	\$6,231	0.72	0.80	\$19,820	\$16,878	\$19,176	0.85	0.88
Jan 2014	\$8,102	\$5,661	\$6,765	0.70	0.84	\$27,922	\$22,539	\$25,941	0.81	0.87
Feb 2014	\$6,726	\$3,914	\$5,602	0.58	0.70	\$34,647	\$26,453	\$31,543	0.76	0.84
Mar 2014	\$2,201	\$3,805	\$5,729	1.73	0.66	\$36,849	\$30,258	\$37,273	0.82	0.81
Apr 2014	\$4,000	\$4,558	\$6,079	1.14	0.75	\$40,848	\$34,816	\$43,352	0.85	0.80
May 2014	\$6,255	\$8,331	\$7,855	1.33	1.06	\$47,103	\$43,146	\$51,207	0.92	0.84
Jun 2014	\$5,055	\$4,826	\$6,413	0.95	0.75	\$52,158	\$47,972	\$57,621	0.92	0.83
Jul 2014	\$7,437									
Aug 2014	\$10,588									
Sep 2014	\$9,711									
CTD	\$478,997	\$474,811	\$484,460	0.99	0.98					

**Retrieval and Close Single-Shell Tanks**

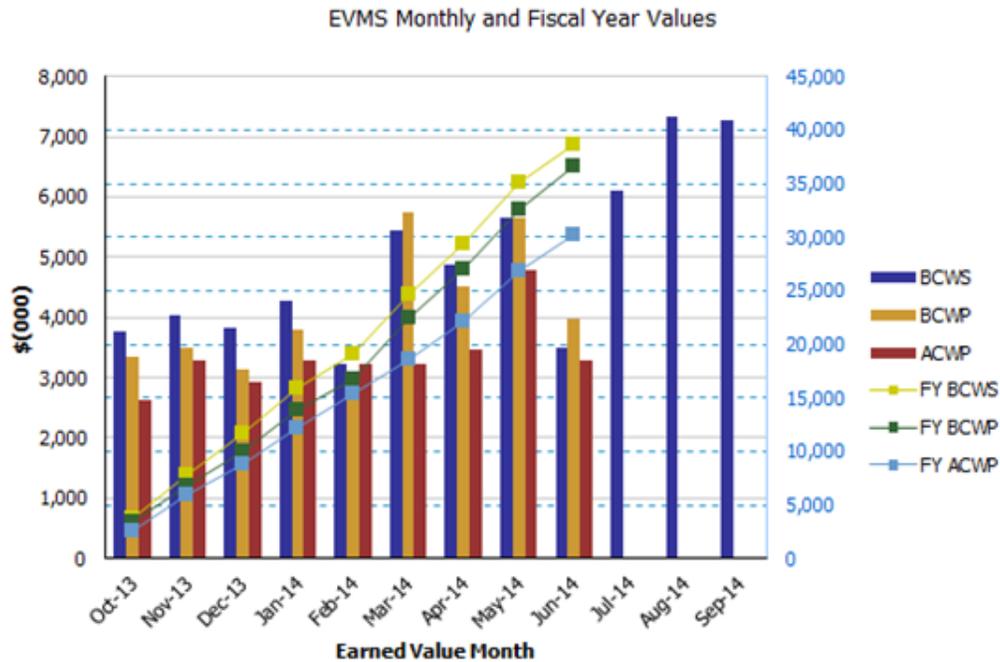
The current month unfavorable cost variance (CV) of (\$1,588K) is due to:

- Additional costs incurred to install and test unplanned freeze protection skirts at C-105.
- C-105 Operational Acceptance Test took longer than planned due to procedure changes.
- Additional cost incurred at C-102 due to limited DST space limitations.

The current month unfavorable schedule variance (SV) of (\$229K) is due to:

- Issues with the waste accumulation tank level probes impacted the operations acceptance testing completion and limited the operating efficiency of the MARS-V at C-105.
- Delays in completing and approving the AX Farm work package due to recent vapor issues which required additional work for Interim Barrier Characterization.
- Delays in the review of the next generations MARS-V design document. These delays are due to focus on C-105 troubleshooting and repairs.

**Tank Farms ORP-0014**  
**Waste Feed Delivery/Treatment/Double-Shell Tank Retrieval Closure 5.03**



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2013	\$3,766	\$3,335	\$2,640	0.89	1.26	\$3,766	\$3,335	\$2,640	0.89	1.26
Nov 2013	\$4,041	\$3,488	\$3,295	0.86	1.06	\$7,807	\$6,824	\$5,934	0.87	1.15
Dec 2013	\$3,813	\$3,150	\$2,941	0.83	1.07	\$11,620	\$9,973	\$8,875	0.86	1.12
Jan 2014	\$4,282	\$3,803	\$3,277	0.89	1.16	\$15,902	\$13,776	\$12,152	0.87	1.13
Feb 2014	\$3,225	\$2,926	\$3,239	0.91	0.90	\$19,126	\$16,702	\$15,391	0.87	1.09
Mar 2014	\$5,438	\$5,757	\$3,240	1.06	1.78	\$24,565	\$22,459	\$18,631	0.91	1.21
Apr 2014	\$4,876	\$4,507	\$3,480	0.92	1.30	\$29,441	\$26,966	\$22,112	0.92	1.22
May 2014	\$5,651	\$5,649	\$4,780	1.00	1.18	\$35,092	\$32,626	\$26,892	0.93	1.21
Jun 2014	\$3,497	\$3,991	\$3,300	1.14	1.21	\$38,588	\$36,617	\$30,192	0.95	1.21
Jul 2014	\$6,091									
Aug 2014	\$7,323									
Sep 2014	\$7,264									

CTD	\$254,833	\$252,861	\$246,436	0.99	1.03
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**Waste Feed Delivery/Treatment/Double-Shell Tank Closure**

The current month favorable cost variance (CV) of \$690K is due to:

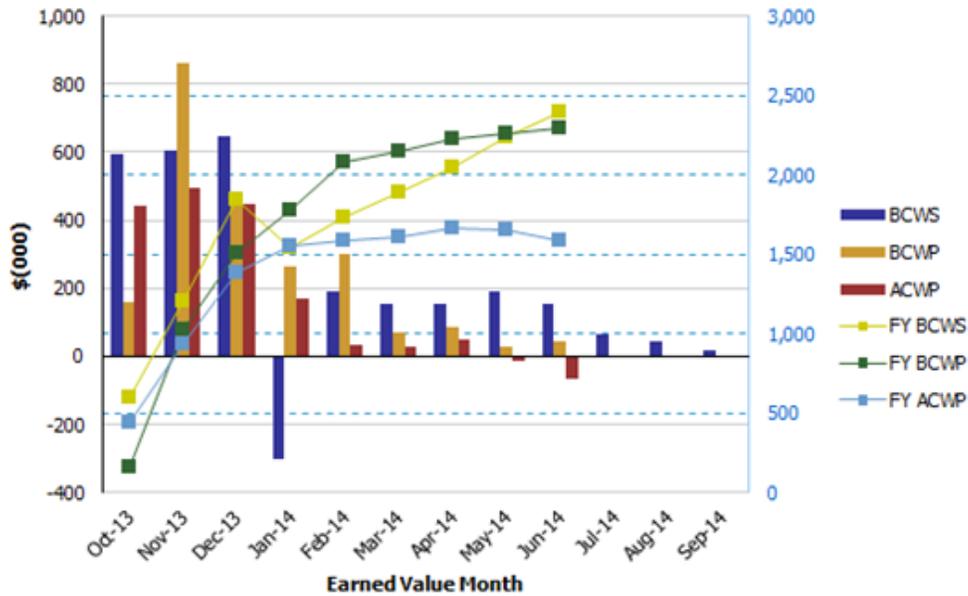
- Fewer resources required for WTP Interface Management and WTP TOC Integrated Readiness support than planned due to utilizing experienced personnel with knowledge of scope.

The current month favorable schedule variance (SV) of \$494K is due to:

- Continued delay in the readiness of the core sampling platform causing a 5 month delay to sampling activities at DST SY-102.
- Slow resource (sub-contractor) ramp up of the development and qualification tasks, adsorption-desorption measurements and Hydrogeological data work scope for IDF Glass Testing being performed by PNNL.

**Tank Farms ORP-0014  
Supplement Treatment 5.04**

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2013	\$597	\$158	\$441	0.26	0.36	\$597	\$158	\$441	0.26	0.36
Nov 2013	\$603	\$864	\$494	1.43	1.75	\$1,200	\$1,022	\$934	0.85	1.09
Dec 2013	\$648	\$486	\$446	0.75	1.09	\$1,848	\$1,508	\$1,380	0.82	1.09
Jan 2014	(\$304)	\$266	\$171	-0.88	1.56	\$1,544	\$1,775	\$1,551	1.15	1.14
Feb 2014	\$194	\$302	\$34	1.56	8.91	\$1,737	\$2,077	\$1,585	1.20	1.31
Mar 2014	\$153	\$68	\$29	0.45	2.36	\$1,890	\$2,145	\$1,614	1.14	1.33
Apr 2014	\$153	\$85	\$51	0.56	1.67	\$2,043	\$2,230	\$1,665	1.09	1.34
May 2014	\$191	\$26	-\$13	0.14	-1.98	\$2,234	\$2,256	\$1,652	1.01	1.37
Jun 2014	\$156	\$43	-\$67	0.28	-0.64	\$2,390	\$2,299	\$1,585	0.96	1.45
Jul 2014	\$66									
Aug 2014	\$42									
Sep 2014	\$18									

CTD	\$19,983	\$19,892	\$19,179	1.00	1.04
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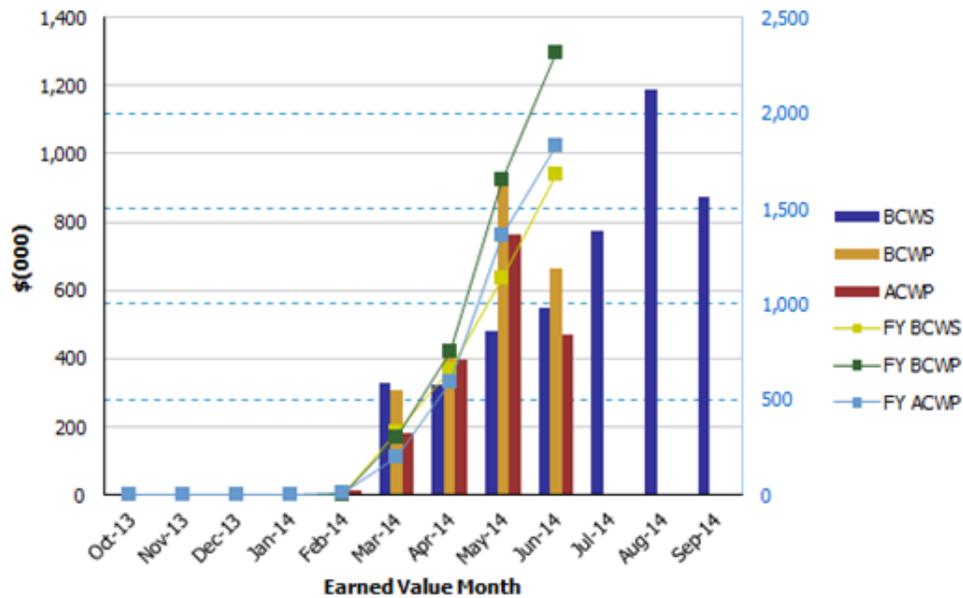
**Supplemental Treatment**

The current month favorable cost variance (CV) of \$109K is within threshold.

The current month unfavorable schedule variance (SV) of (\$113K) is with threshold.

**Tank Farms ORP-0014  
Treat Waste 5.5**

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2013	\$0	\$0	\$0	0.00	0.00	\$0	\$0	\$0	0.00	0.00
Nov 2013	\$0	\$0	\$0	0.00	0.00	\$0	\$0	\$0	0.00	0.00
Dec 2013	\$0	\$0	\$0	0.00	0.00	\$0	\$0	\$0	0.00	0.00
Jan 2014	\$0	\$0	\$0	0.00	0.00	\$0	\$0	\$0	0.00	0.00
Feb 2014	\$0	\$0	\$13	0.00	0.00	\$0	\$0	\$13	0.00	0.00
Mar 2014	\$330	\$306	\$183	0.93	1.67	\$330	\$306	\$196	0.93	1.56
Apr 2014	\$324	\$443	\$397	1.37	1.11	\$653	\$748	\$593	1.15	1.26
May 2014	\$482	\$903	\$765	1.88	1.18	\$1,135	\$1,651	\$1,358	1.45	1.22
Jun 2014	\$547	\$664	\$472	1.21	1.41	\$1,682	\$2,315	\$1,830	1.38	1.27
Jul 2014	\$775									
Aug 2014	\$1,188									
Sep 2014	\$874									
CTD	\$1,682	\$2,315	\$1,830	1.38	1.27					

***Treat Waste***

The current month favorable cost variance (CV) of \$192K is due to:

- Efficiencies in revising the LAWPS design documents due to using experienced engineers.

The current month favorable schedule variance (SV) of \$117K is due:

- Acceleration of LAWPS conceptual design 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. See ORP letter 13-TF-0014, dated March 18, 2013 and TPA Change Package M-45-12-05 (approved on April 1, 2013) for more information.

**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: Complete. ORP submitted this deliverable to ECY on February 20, 2014, via letter 14-TF-0015.

**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: Complete. ORP submitted this deliverable to ECY on May 15, 2014, via letter 14-TF-0054.

**M-045-56J, Complete Implementation of Agreed to Interim Measures**, Due: July 31, 2014, Status: Complete. The M-045-56 annual meeting was held on July 22, 2014 and meeting minutes are in the review process.

**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 Corrective Measures Study report, Milestone M-45-58, and implementation of other interim corrective measures)**, Due: To be determined, Status: On schedule.

**M-045-61, Submit to Ecology for review and approval as an Agreement primary document a Phase 2 RCRA Facility Investigation/Corrective Measures Study Report for WMA Area C (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, Complete Installation of Four (4) Additional Interim Barriers** (see interim milestones below), Due: October 31, 2017, Status: On schedule. TPA Change Package M-45-12-04 describes these milestones and how the process to move forward with construction/design of additional barriers will depend on discussions and decisions per TPA Milestone 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-045-920, 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
- Pore water extraction test south of SX Farm under the M-045-20 work plan has been completed and the report provided to ECY to complete M-045-22-T03
- Data collection in U Farm for electrical resistivity characterization was completed. Data analysis and reporting was completed, and the report provided to ECY to complete M-045-22-T02
- Direct-push field work in TX Farm under the M-045-20 work plan and M-045-21 sampling and analysis plan has been completed. Sample analysis has been completed and the final report is being prepared.
- Documentation of the WMA-C Phase 2 Resource Conservation and Recovery Act Facility Investigation Report continues.

**Significant Planned Actions in the Next 6 Months:**

- Issue the report on the results of soil characterization in TX farm to meet TPA Target Date M-045-22-T01.
- Complete documentation of the WMA-C Phase 2 Resource Conservation and Recovery Act Facility Investigation Report.

**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 milestones 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 SST 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.

- M-045-86C: Retrieval Data Report for C-104 was due March 21, 2014. Completed on February 18, 2014 with letter 14-TF-0013
- M-045-86F: Retrieval Data Report for C-108 was due May 1, 2014. Completed on November 27, 2013 with letter 13-TF-0120
- M-045-86G: Retrieval Data Report for C-109 was due June 4, 2014. Completed on March 13, 2014 with letter 14-TF-0020
- M-045-86H: Retrieval Data Report for C-110 was due January 29, 2015. Completed on August 6, 2014 with letter 14-TF-0086.

**Significant Past Accomplishments:**

- Submitted the Retrieval Data Report for C-110
- Completed post-retrieval logging of the drywells near C-104, C-109, and C-110 to support the retrieval data reports
- Retrieval completion certification for C-110 was transmitted to Ecology on January 29, 2014 under ORP letter 14-TF-0007
- See discussions above and related discussions in Consent Decree report.

**Significant Planned Activities in the Next 6 Months:**

- Continue developing the WMA-C performance assessment
- Develop a draft of the Tier 1 (framework) closure plan for WMA C as required by the TPA
- See discussions above and related discussions in Consent Decree report.

**Issues:**

ORP and Ecology continue to meet to develop an integrated path forward that addresses all the deliverables associated with Milestones M-045-61, M-045-62, and M-045-82.

### Tank Waste Retrieval Work Plan Status

Tank	TWRWP	Expected Revisions	First Retrieval Technology	Second Technology	Third Technology
C-101	RPP-22520, Rev. 8	Complete	Modified Sluicing with ERSS	High-Pressure Water deployed with the ERSS	-
C-102	RPP-22393, Rev. 7	In Process	Modified Sluicing with ERSS	High-Pressure Water deployed with the ERSS	-
C-104	RPP-22393, Rev. 7	Complete	Modified Sluicing	Chemical Retrieval Process complete per 13-TF-0018	-
C-105	RPP-22520, Rev. 8	Complete	MARS-V	MARS-V-High Pressure Water Spray	-
C-107	RPP-22393, Rev. 7	Complete	MARS-S	MARS-S -High Pressure Water Spray	Water Dissolution
C-108	RPP-22393, Rev. 7	Complete	Modified Sluicing	Chemical Retrieval Process complete per 13-TF-0025	-
C-109	RPP-21895, Rev. 5	Complete	Modified Sluicing	Chemical Retrieval Process complete per 13-TF-0037	-
C-110	RPP-33116, Rev. 3	Complete	Modified Sluicing	Mechanical Waste Conditioning with an In-Tank Vehicle	High Pressure Water
C-111	RPP-37739, Rev. 2	Complete	Modified Sluicing	High pressure water using the ERSS	Chemical Dissolution Process with ERSS
C-112	RPP-22393, Rev. 7	Complete	Modified Sluicing	Chemical Retrieval Process	-

ERSS = Extended Reach Sluicing System.

MARS = Mobile Arm Retrieval System.

S = sluicing.

TWRWP = Tank Waste Retrieval Work Plan.

V = vacuum.

#### Significant Accomplishments:

None.

#### Significant Planned Activities in the Next 6 Months:

None.

#### 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 Performance Assessment (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 the 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 Change Package M-45-11-04.

**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 Tank A-103 and due date of September 30, 2022, per Change Package M-45-11-04.

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

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

**No significant planned activities in the next 6 months and no issues for Tank 241-A-103.**

### **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.

**No significant planned activities in the next 6 months and no issues for Tank 241-S-112.**