

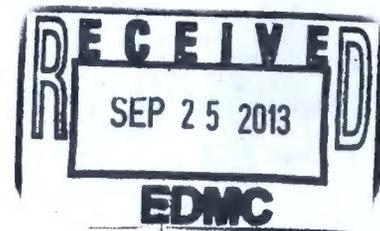
**FINAL**

Office of River Protection

Tri-Party Agreement

Monthly Summary Report

September 2013



**Office of River Protection  
Tri-Party Agreement Milestone Review  
September 2013 (Monthly Summary Report/Project Earned Value Management System  
reflects July 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
9	Tank Operations Contract Overview	Kathy Higgins/Jeff Lyon
15	Single-Shell Tank Corrective Action; M-45, M-50, and M-60	Chris Kemp/Jeff Lyon
16	Single-Shell Retrieval and Closure Program TPA Milestones Status; M-45-00 series	Chris Kemp/Jeff Lyon
18	Tank Waste Retrieval Work Plan Status	Chris Kemp/Jeff Lyon
19	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
<b>Fiscal Year 2013</b>				
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	09/17/2013	Completed
<b>Fiscal Year 2014</b>				
M-062-40C	Select a Minimum of Three Scenario's for the System Plan	10/31/2013		On Schedule
M-045-86C	Submit Retrieval Data Report to Ecology for C-104	03/21/2014		On Schedule
M-045-22-T02	Submit Results of Vadose Zone Characterization of 241-U to Ecology	04/30/2014		On Schedule
M-045-86F	Submit Retrieval Data Report to Ecology for C-108	05/01/2014		On Schedule
M-045-86G	Submit Retrieval Data Report to Ecology for C-109	06/04/2014		On Schedule
M-045-22-T03	Submit SX Soil Desiccation/Contaminate Removal Tech Results to Ecology	07/31/2014		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-045-22-T01	Submit Results of Vadose Zone Characterization of 241-TX to Ecology	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 ECY	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		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

Milestone	Title	Due Date	Completion Date	Status
<b>Fiscal Year 2015 Continued</b>				
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

### 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:

ORP met with Ecology on August 29, 2013 to discuss the System Plan 7 uncertainties.

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

ORP will meet with Ecology in late September 2013 to further discuss System Plan 7 uncertainties and a path forward.

#### Issues:

System Plan 7 framing sessions are on hold until further discussion with Ecology Program Managers is completed.

## 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 six (6) months 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. ORP and Ecology management met on August 29, 2013 to continue discussions of 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: Completed.** Transmitted to Ecology via ORP Letter 13-TF-0066 on September 17, 2013.

**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:**

On August 23, 2013, WRPS transmitted *Dome Survey Report for Hanford Single-Shell Tanks*, RPP-RPT-55202, to ORP. ORP reviewed this report and delivered RPP-RPT-55202 to Ecology on September 17, 2013 via ORP Letter 13-TF-0066, completing TPA Milestone M-045-91E.

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

None.

**Issues:**

None.

### **In Tank Characterization and Summary**

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

**Accomplishments:**

- Completed RPP-PLAN-55529, Rev. 1, *Grab Sampling and Analysis Plan for the 241-AY-102A Leak-Detection Pit.*
- Completed RPP-PLAN-55529, Rev. 0, *Grab Sampling and Analysis Plan for the 241-AY-102A Leak-Detection Pit.*

- Completed RPP-RPT-47306, Rev. 1, *Waste Type Analysis for Aluminum Leachability Estimates of All Non-Retrieved Hanford Tank Wastes*.
- Completed grab sampling of the 241-AY-102A annulus leak detection pit on August 28, 2013, per RPP-PLAN-55529, Rev. 1, *Grab Sampling and Analysis Plan for the 241-AY-102A Leak Detection Pit*. Three samples and one field blank were collected and delivered to the laboratory on 8/28/2013.
- Completed grab sampling of the 241-AY-102A annulus leak detection pit on August 6, 2013, per RPP-PLAN-55529, Rev. 0, *Grab Sampling and Analysis Plan for the 241-AY-102A Leak Detection Pit*. Three samples and one field blank were collected and delivered to the laboratory on 8/6/2013.
- RPP-RPT-55185, Rev. 1, *Final Report for Tank 241-C-104 Waste Solid Samples in Support of Tank Closure* was released on August 1, 2013.
- RPP-RPT-55492, Rev. 0, *Final Report for Tank 241-C-109 Waste Solid Samples in Support of Tank Closure* was released on August 8, 2013.
- RPP-RPT-55731, Rev. 0, *Final Report for Tank 241-AY-101 Grab Sampling and Characterization of Double-Shell Tank Supernate and Solids* was released on August 20, 2013.
- RPP-RPT-55549, Rev. 0, *Final Report for Adsorbent Samples from the Stored Pump for AY-102A Leak-Detection Pit, June 2013* was released on August 22, 2013.
- RPP-RPT-55749, Rev. 0, *Final Report for Tank 241-AY-102A Annulus Leak-Detection Pit Liquid Grab Samples, June 2013* was released on August 22, 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 2014.
- 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 following tanks have been identified for updates in FY13 Quarter 4. The BBI updates will be released in September 2013.

- 241-AN-101
- 241-AN-106
- 241-AY-101
- 241-AY-102
- 241-AZ-101
- 241-C-101
- 241-C-104
- 241-C-107

***Data Quality Objectives***

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

**Issues:**

None.

## TANK OPERATIONS CONTRACT OVERVIEW

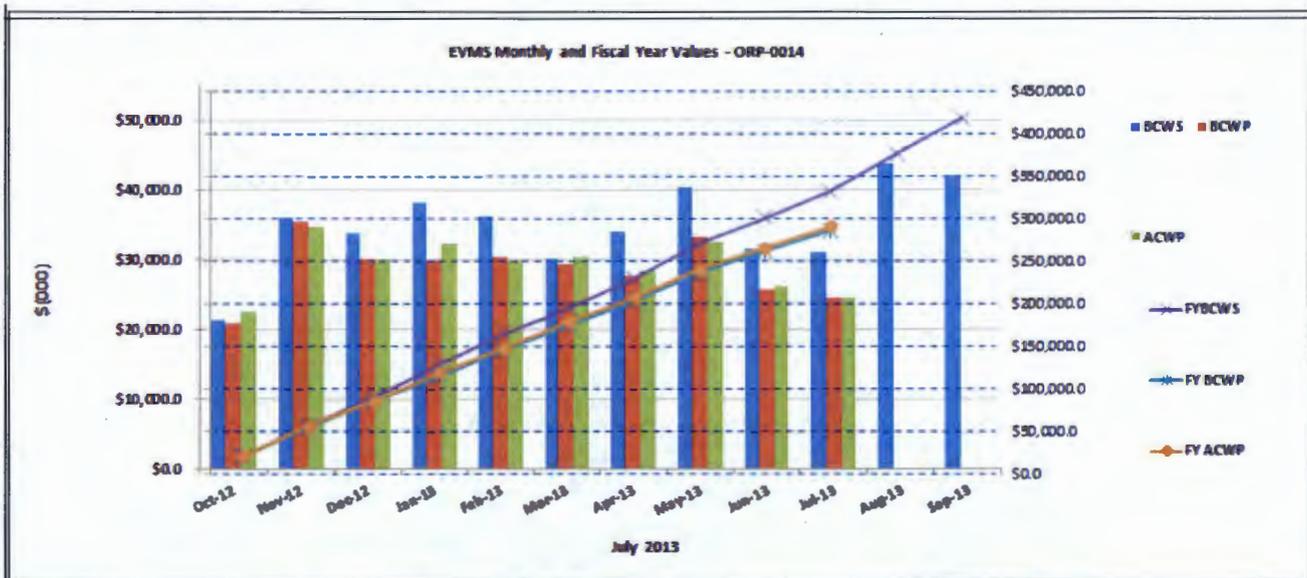
### Project Performance

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 July 2013, WRPS TOC has worked 77 days without a Lost Time Workday Injury and 7 days since the last Recordable case. There were no Days Away, Restricted, or Transferred (DART) cases and one Recordable case in July.

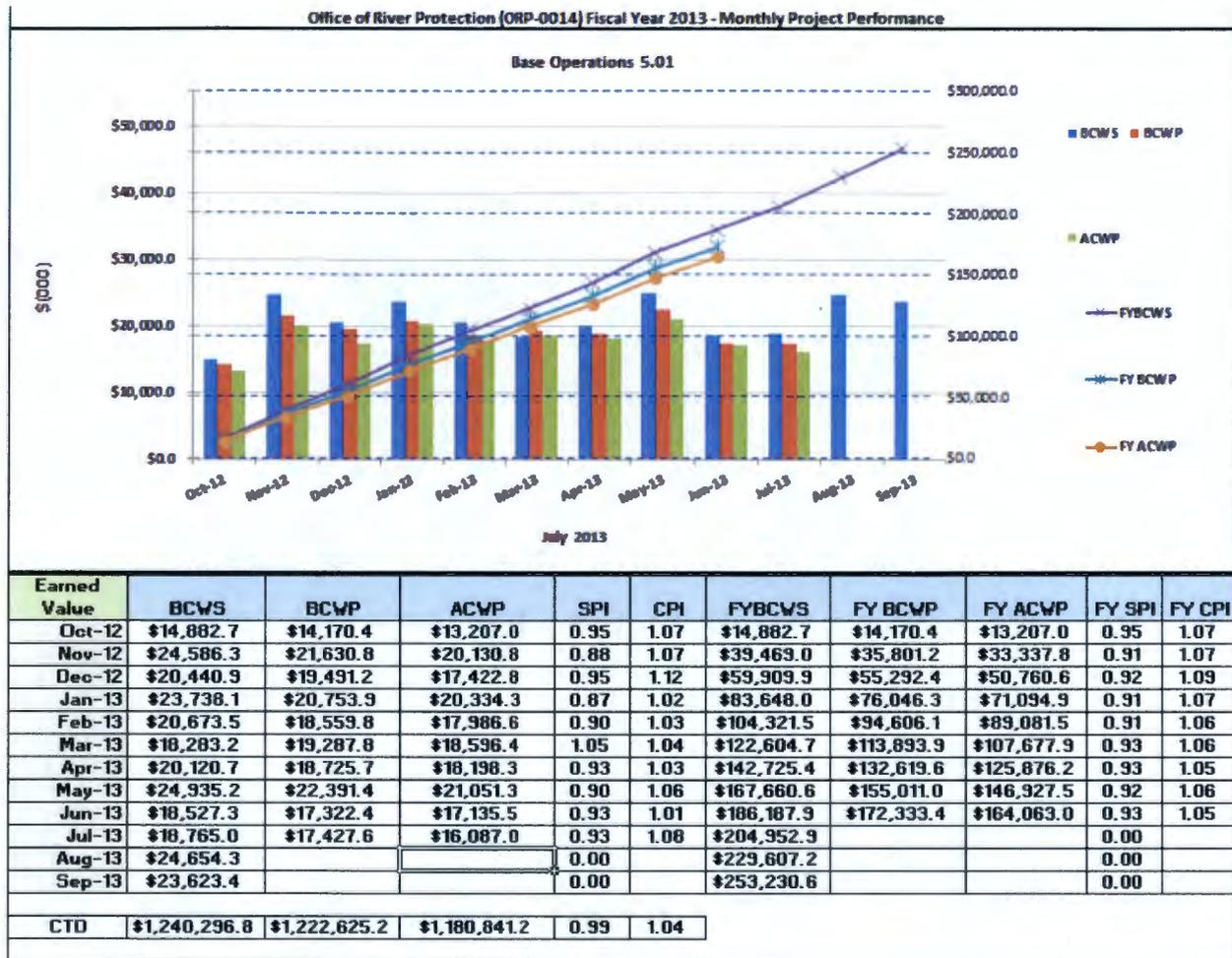
	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
CM	30,918.3	24,548.4	24,555.7	(6,369.9)	(7.3)	0.79	1.00			
FYTD	332,124.3	286,604.5	291,004.0	(45,519.8)	(4,399.5)	0.86	0.98	411,560.1	373,606.4	37,953.7
CTD	1,936,224.4	1,885,480.8	1,816,149.7	(50,743.6)	69,331.1	0.97	1.04	3,264,614.8	3,195,092.4	69,522.4

Red shaded cells indicates a SPICPI less than .90;  
 Green shaded cells indicate a SPICPI between .90 and .99 and  
 Blue shaded indicates a SPICPI 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	\$32,460.5	0.82	1.02	\$269,751.5	\$236,378.5	\$240,235.7	0.88	0.98
Jun-13	\$31,454.5	\$25,677.6	\$26,212.6	0.82	0.98	\$301,206.0	\$262,056.1	\$266,448.3	0.87	0.98
Jul-13	\$30,918.3	\$24,548.4	\$24,555.7	0.79	1.00	\$332,124.3	\$286,604.5	\$291,004.0	0.86	0.98
Aug-13	\$43,606.5			0.00		\$375,730.8			0.00	
Sep-13	\$41,945.9			0.00		\$417,676.7			0.00	

CTD	\$1,936,224.4	\$1,885,480.8	\$1,816,149.7	0.97	1.04
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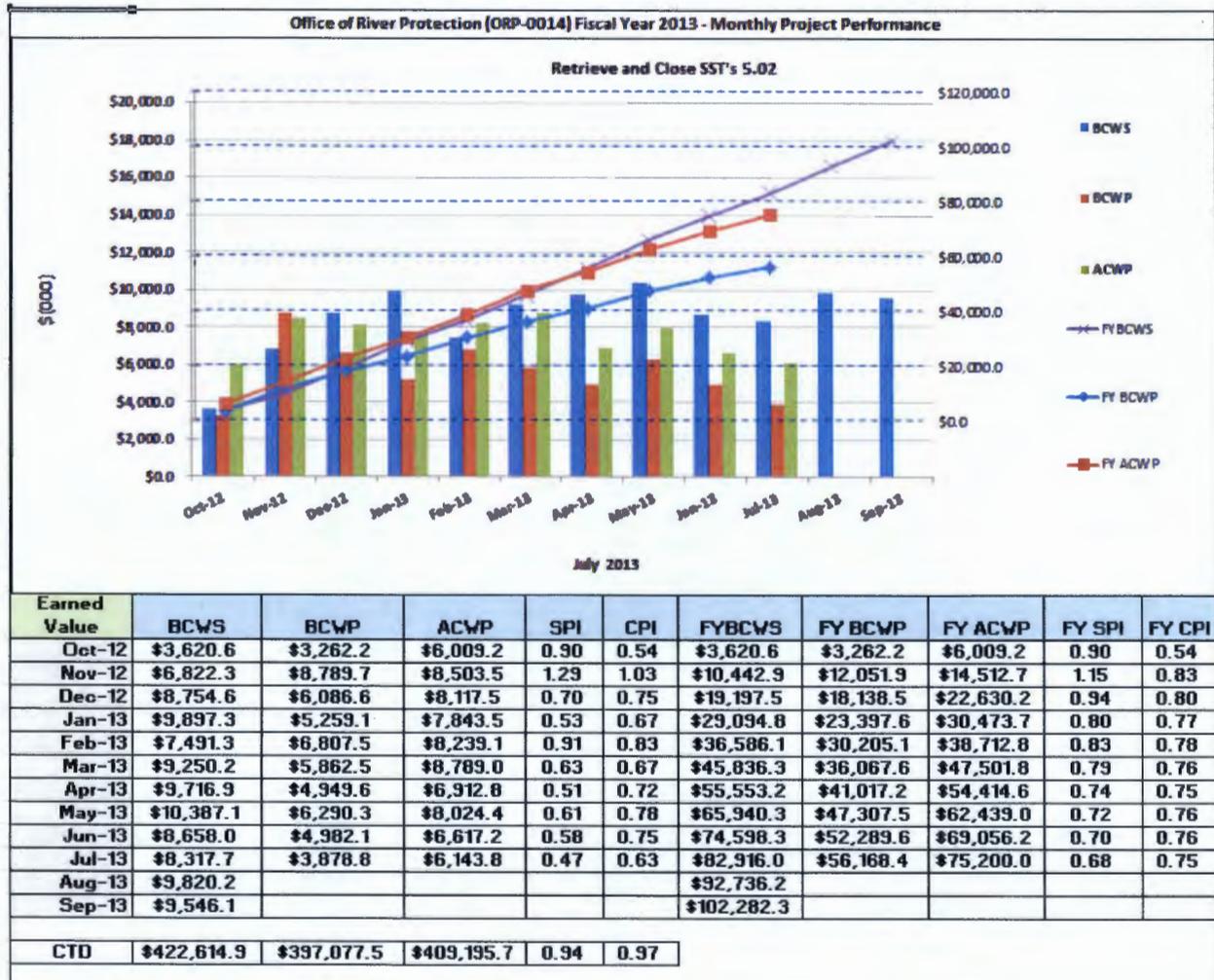
**Base Operations and Tank Farm Projects**

The current month unfavorable schedule variance (SV) of **(\$1,337.4K)** is primarily due to:

- Tank Chemistry Testing and Analysis delays associated with laboratory procurement of Ammonia cover gas causing a delay of 3 months to testing and reassignment of pitting corrosion testing due to reassignment of resources to DST AY-102 liner corrosion analysis.
- AY-102 corrosion probe coupon assembly removal due to delaying startup due to sequestration.
- Deferral of DST AN-103 Ultrasonic testing into fiscal year 2014 due to sequestration impacts
- NDE Equipment Storage and Support due to camera design and fabrication delays driven by additional time needed to finalize the project specification document.
- 242-A Campaign delay which is now scheduled for November
- DST Infrastructure Upgrades put on hold due to continuing resolution.

The current month favorable cost variance (CV) of \$1,340K is primarily due to the following:

- Tank Waste Sampling Management efficiencies realized during the grab sampling of AY-102 Leak Detection Pit. The sampling plan and equipment used was left in place from the previous sample.
- 222-S Equipment costs or actuals not yet posted.



**Retrieval and Close Single-Shell Tanks**

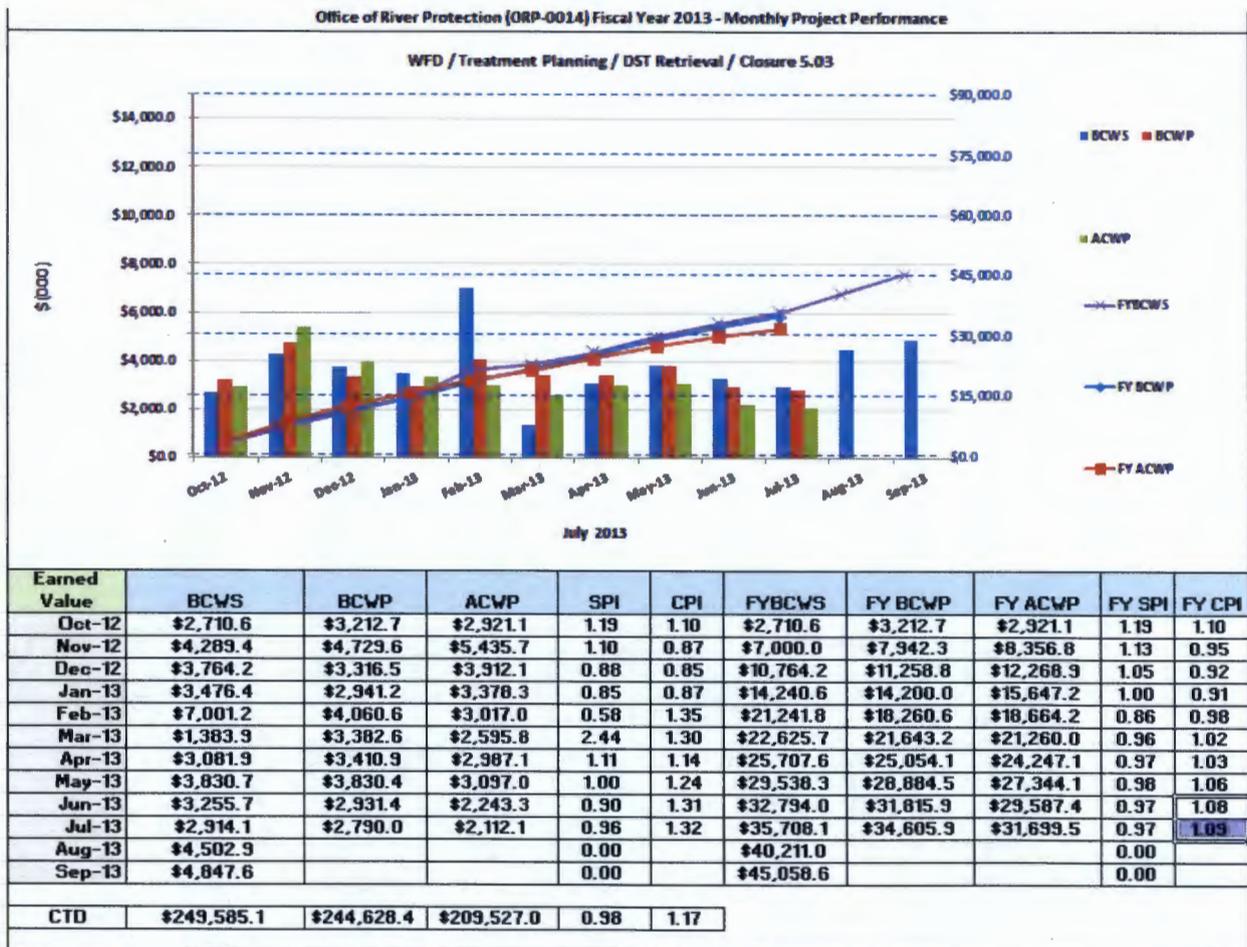
The current month unfavorable schedule variance (SV) of **(\$4,439K)** is due to

- Retrieval design delays of the hard heel retrieval system in C-111, as the retrieval strategy has changed in response to DST deep 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.
- 5-month delayed starting waste retrieval for C-102, as operations have been realigned to coincide with the completion of C-112 hard heel retrieval in fiscal year 2014.
- 3-week delay to the start of fieldwork for the six 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 **(\$2,265K)** is due to

- Longer retrieval operations than planned for C-101, causing high costs.

- Higher subcontract and labor costs need 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 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.
- Unanticipated delays to the Interim Barrier Characterization due to high temperatures during demobilization requiring more time in the field.



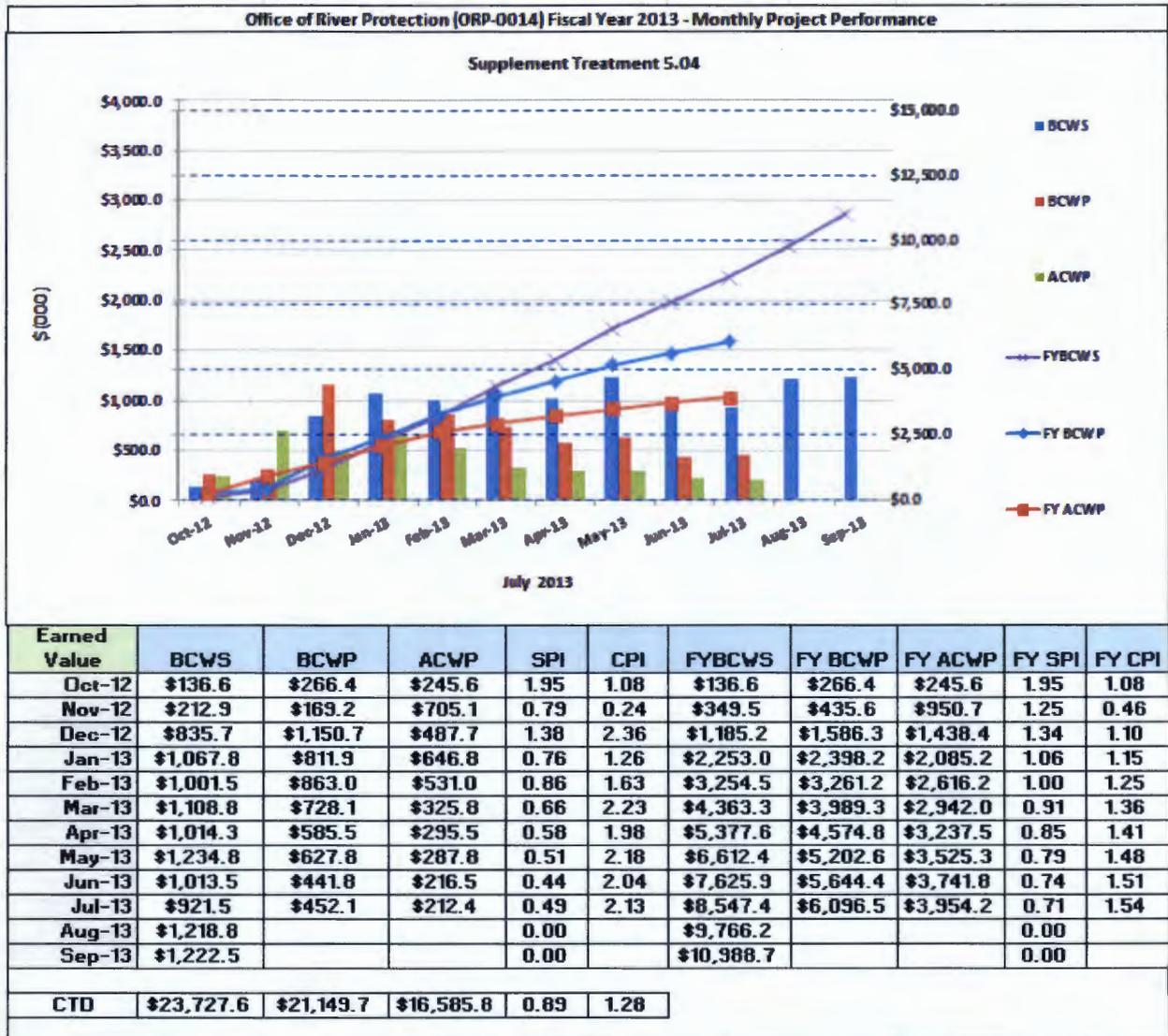
**Waste Feed Delivery/Treatment/Double-Shell Tank Retrieval Closure**

The current month unfavorable schedule variance (SV) of **(\$124K)** is due to:

- Delaying plans to start construction of the AY/AZ ventilation upgrades at this time, design of the AY/AZ ventilation upgrade was completed in January 2013, but initiation of any associated procurement, construction, and safety basis activities requires DOE-ORP approval.
- The FY 2013 Operational Optimization workscope for Waste Feed Delivery Mixing and Sampling is not being performed and has been deferred to FY 2014 as a result of continuing resolution funding impacts. The full-scale demonstration workscope to support the full-scale waste feed delivery mixing demonstration, is being delayed due to the changed condition of tank AY-102, which was planned to be utilized for the demonstration. Due to tank leaking issues this is not feasible, and the full-scale demonstration workscope will be deferred until a new path forward is defined.
- Not starting the AP Farm infrastructure design due to funding constraints. This scope will be deferred in a company-wide BCR (RPP-13-071).

The current month favorable cost variance (CV) of \$678K is due to:

- WTP Support Program Development of the direct feed high-level waste business case scope that was being performed under an advanced work authorization.
- RPP [River Protection Project] System Plan completing the comment resolution of the draft document activity in the month, while the costs were incurred in previous periods.
- WFD System Performance efficiencies within the optional scaled performance test. Remaining simulant from prior testing was utilized so less simulant was needed to be procured.



**Supplemental Treatment**

The current month unfavorable schedule variance (SV) of **(\$469.5K)** is due to:

- The ramp down of the one-time report activities as a result of sequestration.

The current month favorable cost variance (CV) of \$239K is due to:

- Technetium (Tc) removal and low temperature waste form maturation subcontract activities. A significant portion of the Tc and low temperature waste form subcontract workscope is being performed by SRNL under an inter entity work order agreement.

## 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 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 has been completed.
- 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 continues under the M-045-20 work plan and M-045-21 sampling and analysis plan.

#### **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 analysis and reporting of electrical resistivity data collected 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, analysis, and reporting 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
- Develop a retrieval data report for 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 2013-07 for TWRWP RPP-37739 allowing the use of second and third retrieval technologies.

#### 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 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.