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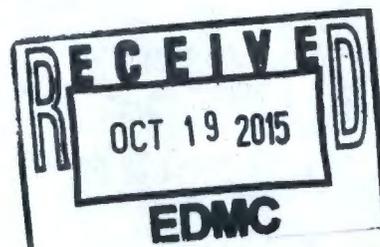
**FINAL**

Office of River Protection

Tri-Party Agreement

Monthly Summary Report

October 2015



26 pgs

**Office of River Protection (ORP)  
Tri-Party Agreement (TPA) Milestone Review  
October 2015 (Monthly Summary Report)**

**Project Earned Value Management System reflects August 2015 information**

Page	Topic	Leads
1	Administrative Items/Milestone Status	Bryan Trimberger/Dan McDonald/Jeff Lyon
2	System Plan	DaBrisha Smith/Jeff Lyon/Dan McDonald
3	Acquisition of New Facilities	Janet Diediker/Jeff Lyon/Dan McDonald
4	Supplemental Treatment and Part B Permit Applications	Steve Pfaff/Jeff Lyon/Dan McDonald
5	242-A Evaporator Status	Richard Valle/Paul Hernandez/Jeff Lyon
7	Double-Shell Tank System Update	Jeremy Johnson/Jeff Lyon
7	Single-Shell Tank Integrity Assurance	Jeremy Johnson/ Jim Alzheimer
8	In Tank Characterization and Summary	Billie Mauss/Michael Barnes
10	Tank Operations Contract Overview	ORP TPA Program Managers/Jeff Lyon
19	Single-Shell Tank Retrieval and Closure Program	Ryan Beach/Jeff Lyon
22	Tank Waste Retrieval Work Plan Status	Chris Kemp/Jeff Lyon
23	Tank in Appendix H, "Status - Single Shell Waste Retrieval Criteria"	Chris Kemp/Jeff Lyon
24	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	Joni Grindstaff/Dan McDonald

<b>Administrative Items/Milestone Status</b>
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Milestone	Title	Due Date	Completion Date	Status
<b>Fiscal Year 2015</b>				
M-062-45-T01	Comp. Neg's 6-Mo After Last Issuance of System Plan	04/30/2015		In Dispute
M-062-45-ZZ	Negotiate a One Time Supplemental Treatment Selection	04/30/2015		In Dispute
M-062-45-ZZ-A	Convert M-062-31-T01 Thru M-062-34-T01 to Interim Milestones	04/30/2015		In Dispute
M-045-62	Phase 2 Corrective Measures Implementation Work Plan For WMA-C	TBD		On Schedule
M-045-92O	Barrier 3 Design/Monitoring Approval From Ecology	06/30/2015		In Dispute
M-045-82	Submit Comp. Permit Modification Request for Tiers 1,2,3	09/30/2015		In Dispute
M-045-91E1	Provide SST Farms Dome Deflection Surveys Every Two Years	09/30/2015	9/21/15	Complete
<b>Fiscal Year 2016</b>				
M-045-92N	Construct Barriers 1 and 2 in 241-SX Farm	10/31/2015		In Dispute
M-062-01AF	Submit Semi-Annual Project Compliance Report	01/31/2016		On Schedule
M-047-07	CD-1 for Secondary Liquid Waste Treatment and CR for CD-2 to Ecology	03/31/2016		To Be Missed
M-090-13	CD-1 for Interim Hanford Storage Project and CR for CD-2 to Ecology	03/31/2016		To Be Missed
M-062-31-T01	Comp. Final Design & Submit RCRA Part B Permit Mod Request for Enhanced WTP & Supplemental Treatment	04/30/2016		On Schedule
M-045-92Q	Submit Barrier 4 Design/Monitoring Plan	06/30/2016		In Dispute
M-062-01AG	Submit Semi-Annual Project Compliance Report	07/31/2016		On Schedule
M-045-56L	Ecology And DOE Agree, At A Minimum, To Meet Yearly (By July)	07/31/2016		On Schedule
<b>Fiscal Year 2017</b>				
M-045-92P	Barrier 3 Construction Complete	10/31/2016		In Dispute
M-062-40E	Select a Minimum of Three Scenario's	10/31/2016		On Schedule

Milestone	Title	Due Date	Completion Date	Status
M-045-61A	Submit to Ecology a primary doc. Phase 2 CMD and Rev. O update to the RFI Report for WMA C	12/31/2016		On Schedule
M-045-84	Comp Neg's of HFFACO Interim Milestones for Closure of 2 <sup>nd</sup> SST WMA	01/31/2017		On Schedule
M-062-01AH	Submit Semi-Annual Project Compliance Report	01/31/2017		On Schedule
M-062-01AI	Submit Semi-Annual Project Compliance Report	07/31/2017		On Schedule
M-045-91E2	Provide SST Farms Dome Deflection Surveys' Every Two Years	09/30/2017		On Schedule

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

CMD = current measuring device.

CR = change request.

DOE = U.S. Department of Energy.

Ecology = Washington State Department of Ecology

HFFACO = Hanford Federal Facility Agreement and Consent Order.

RCRA = Resource Conservation and Recovery Act.

RFI = RCRA Facility Investigation.

SST = single-shell tank.

TBD = to be determined.

WMA-C = Waste Management Area C.

## System Plan

**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: In Dispute.**

### 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, ORP transmitted a letter (14-TPD-0003) to WRPS in response to letter WRPS-1400313 to approve the use of Ecology's Appendix B, "Key Assumptions and Success Criteria," for ORP 11242, *River Protection Project System Plan, Rev. 7*. (System Plan 7)

5. On February 13, 2014 Ecology presented the five selected scenarios to the Hanford Advisory Board Tank Waste Committee.
6. Ecology, ORP, and WRPS reviewed and provided comments for Sections 1.0 and 2.0 of System Plan 7 during the week of February 17, 2014.
7. Ecology, ORP and WRPS reviewed and provided comments for Section 3.0 of the System Plan 7 during the week of March 21, 2014.
8. Ecology, ORP and WRPS reviewed and provided comments for Appendix C, "Modeling Tools," of the System Plan 7 during the week of April 1, 2014.
9. During the week of April 28, 2014, WRPS and 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 ORP.
11. System Plan 7 was reviewed, all comments resolved, and comments incorporated into the document.
12. On October 31, 2014, ORP transmitted System Plan 7 to Ecology.
13. ORP received Ecology's January 14, 2015, transmitted letter 15-NWP-004, regarding Ecology's review of System Plan 7.
14. ORP met with Ecology at the Tank Farms TPA and Consent Decree (CD) monthly status meeting on February 25, 2015.
15. ORP transmitted Letter 15-WSC-0027, ORP's response to Ecology's letter 15-NWP-004 to Ecology on June 2, 2015. ORP's letter provided clarification and several attachments of additional information requested in Ecology's January 14, 2015, letter.

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

**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: To be missed. 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: To be missed.** 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 Six Months: None.**

**Issues: None.**

### **Supplemental Treatment and Part B Permit Applications**

**M-062-45ZZ (designation for M-062-45 item 3), Negotiate a one-time supplemental treatment selection, Due: April 30, 2015, Status: In dispute.**

**M-062-45ZZ-A, Convert M-062-31-T01 through M-062-34-T01 to Interim Milestones, Due: April 30, 2015, Status: In dispute.**

**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 Six Months:** None.

**Issues:**

On January 30, 2015, ORP provided Ecology Change Control Form M-62-14-02, which proposed adding language under TPA Milestone M-062-45 to defer negotiations required under M-062-45. Ecology did not respond with the 14 day review period that ended February 13, 2015 which is deemed disapproval in accordance with the TPA. In letter 15-TF-0014, dated February 20, 2015, ORP initiated a dispute resolution. Ecology provided a justification for their disapproval on March 12, 2015 via letter 15-NWP-036. Ecology and ORP signed an extension of the dispute resolution period at the TPA project manager level until February 18, 2016. The extension is available in the TPA Administrative Record at <http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=1509230319>

## **242-A Evaporator Status**

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

**242-A Evaporator Status:**

The 242-A Evaporator 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.

<b>Fiscal Year</b>	<b>Campaign No.</b>	<b>Feed Source</b>	<b>Slurry Tank</b>	<b>Comments</b>
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	N/A	N/A	N/A	No campaign conducted in FY 2011 due to ongoing 242-A Evaporator and tank farm facility life extension and American Recovery and Reinvestment Act funded upgrades.
FY 2012	N/A	N/A	N/A	No campaign conducted in FY 2012 due to ongoing 242-A Evaporator and tank farm facility upgrades and revision to the 242-A Evaporator Documented Safety Analysis.
FY 2013	N/A	N/A	N/A	No campaigns to be conducted in FY 2013 due to ongoing 242 A Evaporator and tank farm facility upgrades and revision to the 242-A Evaporator Documented Safety Analysis.
FY 2014	13-01	AP-107	AP-107	Campaign started September 9, 2014. Campaign completed on October 9, 2014.
FY 2015	EC-01	AP-103 AP-104	AP-107	Campaign and flush activities completed on June 21, 2015.
FY 2015	EC-02	AZ-102	AP-103	Completed July 21, 2015.
FY 2015	EC-03	AZ-102	AP-103	Completed September 25, 2015.
FY 2016	EC-04	AW-106	AP-103	Estimated to begin February or March 2016.

FY = fiscal year.  
N/A = not applicable.

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

Steam system safety instrumental systems (SIS) upgrades were completed prior to performance of the EC-03 campaign. EC-03 was initiated on September 13, 2015, and completed September 25, 2015. Waste Volume Reduction was 375,000 including all flush activities.

**Issues:** None.

## Double-Shell Tank System Update

### Ultrasonic Testing Inspection

- Ultrasonic testing (UT) for Tank AN-103 is complete and inspection of the annulus floor has indicated thinning. The results have been documented in RPP-RPT-58776, *Ultrasonic Inspection Results for Double-Shell Tank 241-AN-103 – FY 2015, Rev 0*.
- Ultrasonic inspection operations are ongoing for Tank AN-104. Initial scans have indicated some thinning along the annulus floor. To further evaluate the condition, additional scanning of the annulus floor is currently being performed and the UT work is being completed by ITIVS of South Carolina.

### Visual Inspection

- Continuing bi-weekly inspections of AY-102 waste accumulation sites.
- Continuing bi-monthly comprehensive inspection of AY-102 annulus.
- Annulus visual inspections are completed in Tanks AP-102, AP-103, AP-104, AP-105, AP-106, AP-108 AW-101, AW-102, and AW-104. This completes the FY 2015 annulus inspections for the double-shell tanks (DST).

## Single-Shell Tank Integrity Assurance

**M-045-91I, Provide to Ecology an Independent, Qualified, Registered Professional Engineer (IQRPE) certification of single-shell tanks (SST) 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:**

Completion of M-045-91H. The work completed to date under M-045-91F and M-045-91G does not necessitate the creation of any additional milestones. In accordance with a March 25, 2015, meeting with Ecology, ORP considers M-045-91H complete and does not intend to submit a change package for the creation of any additional milestones for SST integrity.

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

Begin planning for the SST integrity assessment by an IQRPE (M-045-91I).

**Issues:** None.

## In Tank Characterization and Summary

For the period from September 1 through September 30, 2015:

### Accomplishments:

- Completed RPP-RPT-58766, *Derivation of Best-Basis Inventory for Tank 241-SX-110*, Rev 0.
- Completed RPP-RPT-58765, *Derivation of Best-Basis Inventory for Tank 241-SX-109*, Rev 0.
- Completed RPP-RPT-58764, *Derivation of Best-Basis Inventory for Tank 241-SX-107*, Rev 0.
- Completed RPP-RPT-58456, *Derivation of Best-Basis Inventory for Tank 241-AP-103 as of July 4, 2015*, Rev 1.
- Completed RPP-RPT-58698, *Derivation of Best-Basis Inventory for Tank 241-TX-107 as of July 1, 2015*, Rev 0.
- Completed RPP-RPT-58771, *Derivation of Best-Basis Inventory for Tank 241-SX-115*, Rev 0.
- Completed RPP-RPT-58770, *Derivation of Best-Basis Inventory for Tank 241-SX-114*, Rev 0.
- Completed RPP-RPT-50313, *Derivation of Best-Basis Inventory for Tank 241-AP-101 as of July 1, 2015*, Rev 2.
- Completed RPP-RPT-48103, *Derivation of Best-Basis Inventory for Tank 241-AP-107 as of July 1, 2015*, Rev 5.
- Completed RPP-RPT-46792, *Derivation of Best-Basis Inventory for Tank 241-AW-102 as of July 1, 2015*, Rev 8.
- Completed RPP-RPT-44049, *Derivation of Best-Basis Inventory for Tank 241-AZ-102 as of July 7, 2015*, Rev 8.
- Completed RPP-RPT-58620, *Derivation of Best-Basis Inventory for Tank 241-AX-101 as of July 1, 2015*, Rev 0.
- Completed RPP-CALC-60596, *Tank 241-AP-107 FY15 Q4 Process Knowledge Concentration Vector Calculations*, Rev 0.
- Completed RPP-CALC-60595, *Tank 241-AW-102 FY15 Q4 Process Knowledge Concentration Vector Calculation*, Rev 0.
- Completed RPP-CALC-60591, *Tank AZ-102 FY15 Q4 Supernatant Process Knowledge Vector Concentrations Calculation*, Rev 0.
- Completed RPP-SPEC-33590, *Data Quality Objectives for the Evaluation of Stack Chemical Emissions*, Rev 2.
- RPP-RPT-58891, *Final Report for Tank 241-AY-102A Leak-Detection Pit Liquid Grab Samples, July 2015*, Rev 0, was released September 9, 2015.
- Completed 241-SY-102 core sample anaerobic extrusions September 10, 2015. Three samples were extruded for lab analysis.

- Completed slurry sampling for 242-A Evaporator campaign EC-03. Two samples were obtained for lab analysis.

**Planned Action within the Next Six Months:**

***Tank sampling:***

- Tank 241-AN-106 grab sampling is planned for October 2015.
- Tank 241-C-111 hard heel retrieval in-process grab sampling is planned for October 2015.
- Tank 241-SY-101 grab sampling is planned for December 2015.
- Tank 241-AN-101 grab sampling is planned for December 2015.
- Tank 241-C-102 clamshell closure sampling is planned for January 2016.
- Tank 241-C-111 ORSS closure sampling is planned for March 2016.
- Tank 241-AP-107 grab sampling is planned for March 2016.
- Tank 241-AW-102 grab sampling (Evaporator campaign EC-05) is planned for March 2016.
- Tank 241-AW-106 grab sampling (Evaporator campaign EC-06) is planned for April 2016.

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

BBI updates for the following tanks were completed in September:

- |              |              |
|--------------|--------------|
| • 241-AP-101 | • 241-SX-107 |
| • 241-AP-103 | • 241-SX-109 |
| • 241-AP-107 | • 241-SX-110 |
| • 241-AW-102 | • 241-SX-114 |
| • 241-AX-101 | • 241-SX-115 |
| • 241-AZ-102 | • 241-TX-107 |

BBI updates for the following tanks currently are planned to be completed in October:

- |              |              |
|--------------|--------------|
| • 241-AY-101 | • 241-C-105  |
| • 241-C-102  | • 241-SY-102 |

***Data Quality Objectives (DQO):***

- RPP-44057, *Data Quality Objectives to Support Strategic Planning*, Rev 2, is in-process to clarify DQO applicability and obtain data used to update the BBIs.
- HNF-SD-WM-DQO-001, *Data Quality Objectives for the Tank Farms Waste Compatibility Program*, Rev 21, is in-process to simplify quality control parameters.
- RPP-8532, *Double-Shell Tanks Chemistry Control Data Quality Objectives*, Rev 15, is in-process to identify additional analyses for corrosion mitigation and to simplify quality control parameters.

**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 (TOC) for monthly performance reporting. The earned value analysis is not intended to be a measurement of performance against existing TPA milestones.

As of August 31, 2015, WRPS TOC has worked 315 days without a Lost Time Workday Injury, and 4 days since the last recordable case. There was one recordable case in August.

August-15										
	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
CM	31,307	34,786	43,513	3,479	(8,727)	1.11	0.80			
FYTD	445,884	447,319	471,368	1,435	(24,049)	1.00	0.95	506,645		
CTD	2,789,789	2,765,798	2,772,314	(23,991)	(6,515)	0.99	1.00	3,665,322	3,675,072	(9,750)

ACWP = actual cost of work performed.  
 BAC = budget at completion.  
 BCWP = budgeted cost of work performed.  
 BCWS = budgeted cost of work scheduled.  
 CM = current month  
 CPI = cost performance index.  
 CTD = cumulative to date

CV = cost variance.  
 EAC = estimate at completion.  
 FYTD = fiscal year to date  
 SPI = schedule performance index.  
 SV = schedule variance.  
 VAC = variance at completion.

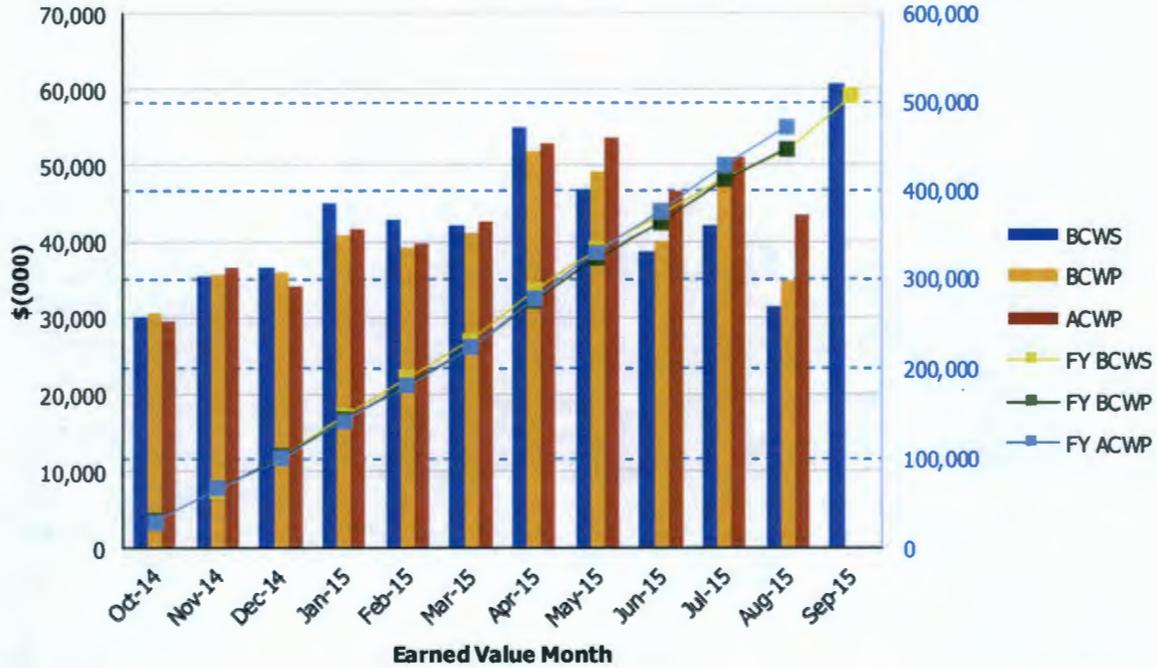
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2015 Earned Value Data

August-15

**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 2014	\$30,052	\$30,480	\$29,607	1.01	1.03	\$30,052	\$30,480	\$29,607	1.01	1.03
Nov 2014	\$35,246	\$35,697	\$36,417	1.01	0.98	\$65,298	\$66,178	\$66,024	1.01	1.00
Dec 2014	\$36,377	\$35,858	\$33,978	0.99	1.06	\$101,675	\$102,036	\$100,002	1.00	1.02
Jan 2015	\$45,082	\$40,697	\$41,603	0.90	0.98	\$146,757	\$142,733	\$141,605	0.97	1.01
Feb 2015	\$42,913	\$39,189	\$39,643	0.91	0.99	\$189,671	\$181,922	\$181,248	0.96	1.00
Mar 2015	\$42,159	\$41,174	\$42,721	0.98	0.96	\$231,830	\$223,096	\$223,968	0.96	1.00
Apr 2015	\$54,958	\$51,747	\$52,923	0.94	0.98	\$286,788	\$274,843	\$276,891	0.96	0.99
May 2015	\$46,888	\$49,161	\$53,532	1.05	0.92	\$333,676	\$324,005	\$330,423	0.97	0.98
Jun 2015	\$38,744	\$40,149	\$46,503	1.04	0.86	\$372,420	\$364,154	\$376,926	0.98	0.97
Jul 2015	\$42,157	\$48,379	\$50,929	1.15	0.95	\$414,577	\$412,533	\$427,855	1.00	0.96
Aug 2015	\$31,307	\$34,786	\$43,513	1.11	0.80	\$445,884	\$447,319	\$471,368	1.00	0.95
Sep 2015	\$60,762					\$506,645				

CTD	\$2,789,789	\$2,765,798	\$2,772,314	0.99	1.00
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ACWP = actual cost of work performed.  
 BCWP = budgeted cost of work performed.  
 BCWS = budgeted cost of work scheduled.  
 CPI = cost performance index.

EVMS = Earned Value Management System.  
 FY = fiscal year.  
 SPI = schedule performance index

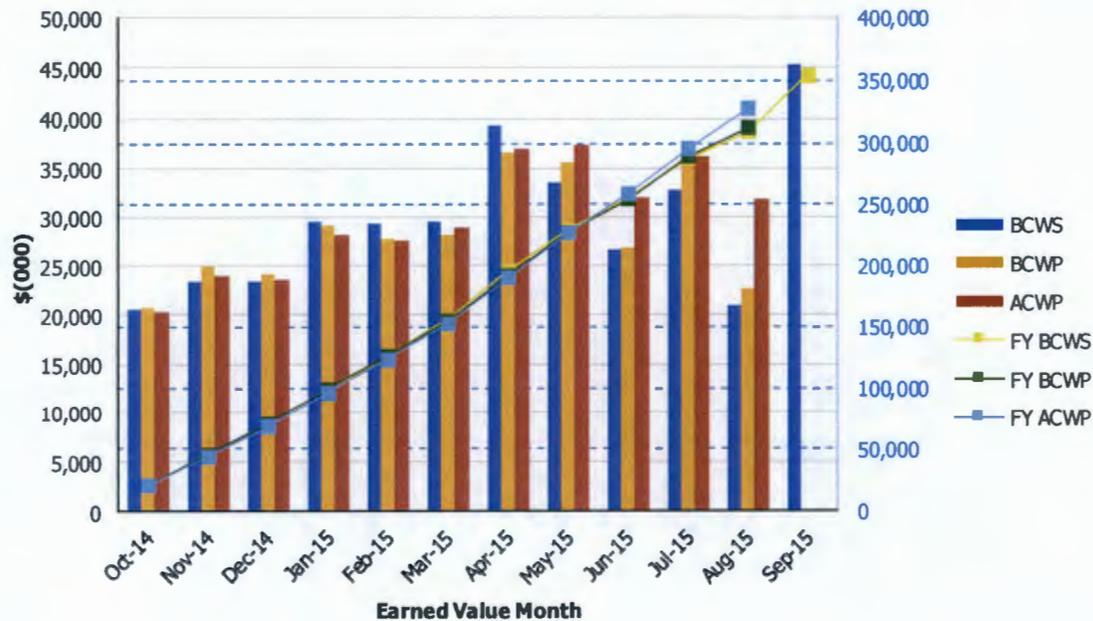
**EXC-01a: Fiscal Year Cost and Schedule Report**

Data Set: FY 2015 Earned Value Data

August-15

**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 2014	\$20,627	\$20,833	\$20,428	1.01	1.02	\$20,627	\$20,833	\$20,428	1.01	1.02
Nov 2014	\$23,471	\$24,929	\$23,988	1.06	1.04	\$44,098	\$45,762	\$44,416	1.04	1.03
Dec 2014	\$23,467	\$24,105	\$23,548	1.03	1.02	\$67,565	\$69,867	\$67,964	1.03	1.03
Jan 2015	\$29,511	\$29,162	\$28,218	0.99	1.03	\$97,075	\$99,029	\$96,182	1.02	1.03
Feb 2015	\$29,299	\$27,739	\$27,582	0.95	1.01	\$126,375	\$126,768	\$123,764	1.00	0.98
Mar 2015	\$29,525	\$28,162	\$28,967	0.95	0.97	\$155,900	\$154,929	\$152,732	0.99	0.99
Apr 2015	\$39,203	\$36,623	\$36,998	0.93	0.99	\$195,103	\$191,553	\$189,730	0.98	0.99
May 2015	\$33,584	\$35,557	\$37,250	1.06	0.95	\$228,686	\$227,109	\$226,980	0.99	1.00
Jun 2015	\$26,594	\$26,830	\$32,081	1.01	0.84	\$255,280	\$253,940	\$259,061	0.99	1.02
Jul 2015	\$32,674	\$35,612	\$36,276	1.09	0.98	\$287,954	\$289,551	\$295,337	1.01	1.02
Aug 2015	\$20,845	\$22,598	\$31,783	1.08	0.71	\$308,799	\$312,150	\$327,120	1.01	1.05
Sep 2015	\$45,399					\$354,198				
CTD	\$1,846,227	\$1,837,993	\$1,834,803	1.00	1.00					

**Base Operations and Tank Farm Projects**

The current month favorable schedule variance (SV) of \$1,753K is due to the following:

- AP-102 HIHTL installation authorized unpriced work (AUW) replan; scope resulted in a single-point adjustment by aligning BCWS and BCWP to ACWP.
- AP-102 equipment removal and installation AUW replan; scope resulted in a single-point adjustment by aligning BCWS and BCWP to ACWP.

- Level rise/Leak checks completed the AP-107 and AP-104 level rises ahead of schedule. Completion was expected in the next period but the majority of the work was completed in the current period.
- AP exhauster installation schedule performance recovery from earlier periods related to the Inlet Air Control Station work. Field work and procurement was initially planned for completion in an earlier period in FY 2015.

The current month unfavorable cost variance (CV) of **(\$9,185K)** is due to the following:

- AP-102 HIHTL procured shielding originally planned to be delivered/costed in August was actually delivered in March. Additionally, A UW replan scope resulted in a single-point adjustment by aligning BCWS and BCWP to ACWP.
- AY-102 Administrative Order and Environmental Support A UW replan; scope resulted in a single-point adjustment by aligning BCWS and BCWP to ACWP.
- Effluent Treatment Facility (ETF)/ Liquid Effluent Retention Facility (LERF)/Treatment Effluent Disposal Facility (TEDF) spare parts A UW replan; scope resulted in a single-point adjustment by aligning BCWS and BCWP to ACWP.
- ETF/LERF/TEDF materials and subcontract support replan on the A UW; scope resulted in a single-point adjustment by aligning BCWS and BCWP to ACWP.

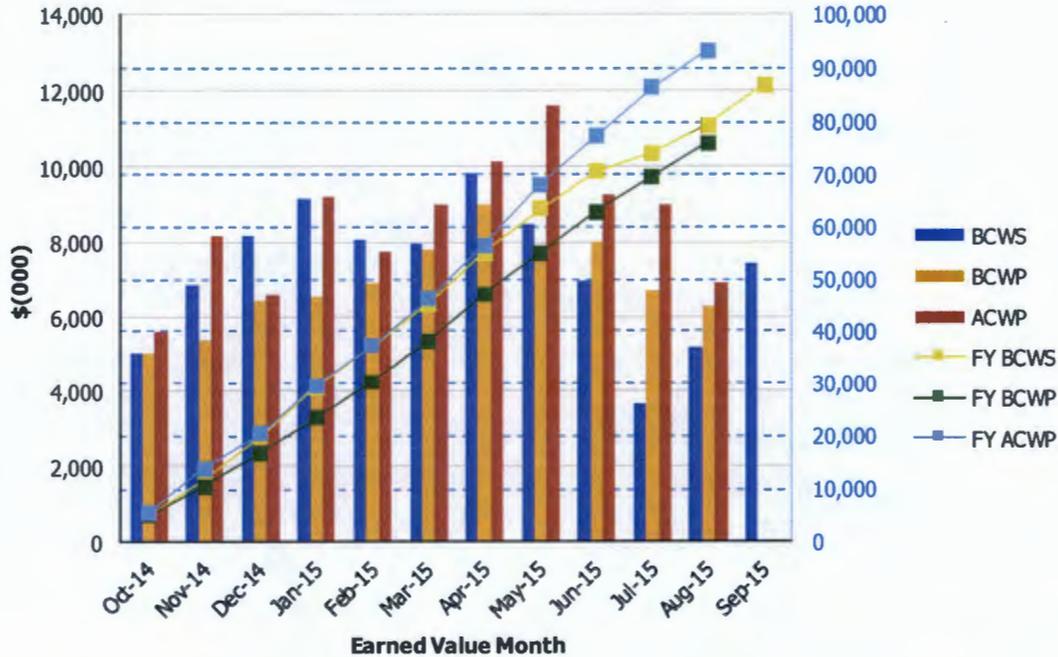
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2015 Earned Value Data

August-15

**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 2014	\$5,024	\$5,011	\$5,609	1.00	0.89	\$5,024	\$5,011	\$5,609	1.00	0.89
Nov 2014	\$6,852	\$5,392	\$8,174	0.79	0.66	\$11,876	\$10,403	\$13,783	0.88	0.75
Dec 2014	\$8,171	\$6,453	\$6,612	0.79	0.98	\$20,047	\$16,856	\$20,395	0.84	0.83
Jan 2015	\$9,167	\$6,524	\$9,195	0.71	0.71	\$29,214	\$23,380	\$29,589	0.80	0.79
Feb 2015	\$8,075	\$6,924	\$7,719	0.86	0.90	\$37,290	\$30,304	\$37,309	0.81	0.81
Mar 2015	\$7,971	\$7,801	\$9,009	0.98	0.87	\$45,261	\$38,105	\$46,318	0.84	0.82
Apr 2015	\$9,818	\$9,019	\$10,148	0.92	0.89	\$55,079	\$47,124	\$56,466	0.86	0.83
May 2015	\$8,474	\$7,830	\$11,613	0.92	0.67	\$63,553	\$54,954	\$68,079	0.86	0.81
Jun 2015	\$6,981	\$8,021	\$9,247	1.15	0.87	\$70,534	\$62,976	\$77,326	0.89	0.81
Jul 2015	\$3,666	\$6,714	\$8,983	1.83	0.75	\$74,199	\$69,690	\$86,309	0.94	0.81
Aug 2015	\$5,201	\$6,256	\$6,916	1.20	0.90	\$79,400	\$75,946	\$93,225	0.96	0.81
Sep 2015	\$7,417					\$86,818				
CTD	\$584,899	\$571,363	\$602,569	0.98	0.95					

#### Retrieve and Close Single Shell Tanks

The current month favorable schedule variance (SV) of \$1,055K is due to:

- Schedule Recovery: Tank 241-C-105 retrieval operations estimated 19,000 gallons of waste has been retrieved since the last reporting period.

- Schedule Recovery: Crews completed extended reach sluicer system (ERSS) installation activities at riser 6 and initiated ERSS installation activities at riser 3 at Tank 241-C-111 to support retrieval operations in early October: this work was originally planned to be completed in May.
- Schedule Recovery: Crews continued field activities relates to the replacement of the 241-C-111 slurry pump: this work was originally schedule to be completed in July.
- Schedule Recovery: Receipt of previously delayed materials related to mechanical components for the A/AX Ventilation System.

The current month unfavorable cost variance (CV) of (\$660K) is due to:

- Project required to carry full retrieval crew during work stoppages: lockout/tag out (LOTO), AN-106 decant and slow retrieval rates (1 gallon per minute versus planned 3 gallons per minute).

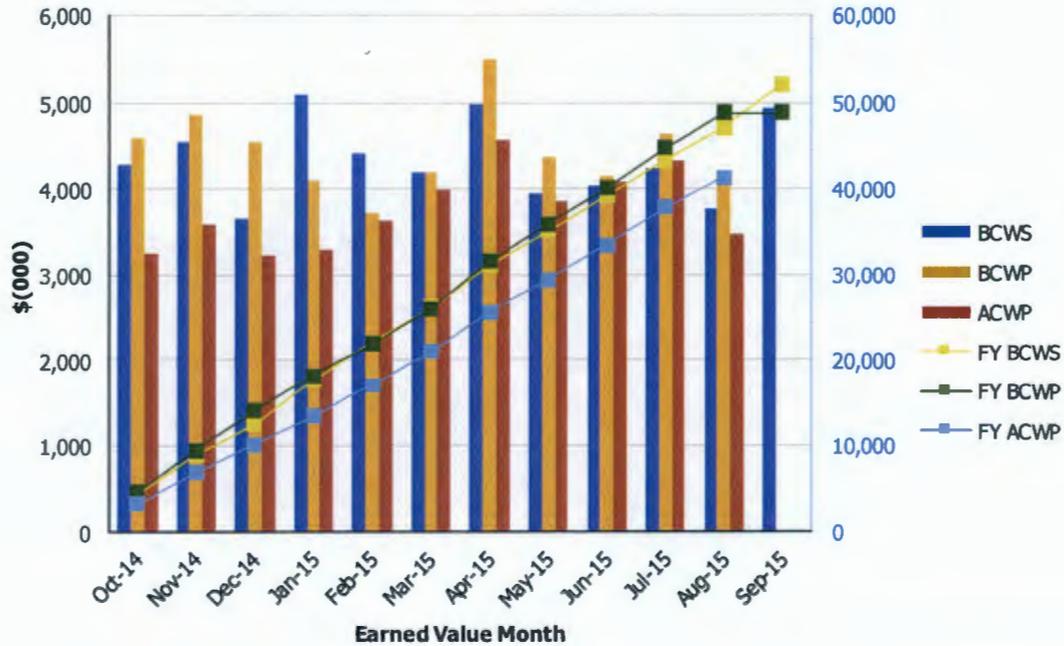
**EXC-01a: Fiscal Year Cost and Schedule Report**

Data Set: FY 2015 Earned Value Data

August-15

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

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 2014	\$4,277	\$4,604	\$3,261	1.08	1.41	\$4,277	\$4,605	\$3,261	1.08	1.41
Nov 2014	\$4,549	\$4,876	\$3,585	1.07	1.36	\$8,826	\$9,480	\$6,846	1.07	1.38
Dec 2014	\$3,652	\$4,559	\$3,229	1.25	1.41	\$12,478	\$14,040	\$10,075	1.13	1.39
Jan 2015	\$5,101	\$4,113	\$3,308	0.81	1.24	\$17,579	\$18,152	\$13,383	1.03	1.36
Feb 2015	\$4,413	\$3,734	\$3,636	0.85	1.03	\$21,992	\$21,887	\$17,019	1.00	1.29
Mar 2015	\$4,185	\$4,206	\$3,988	1.00	1.05	\$26,177	\$26,092	\$21,008	1.00	1.24
Apr 2015	\$4,989	\$5,497	\$4,584	1.10	1.20	\$31,166	\$31,590	\$25,592	1.01	1.23
May 2015	\$3,946	\$4,372	\$3,849	1.11	1.14	\$35,112	\$35,961	\$29,441	1.02	1.22
Jun 2015	\$4,043	\$4,154	\$4,082	1.03	1.02	\$39,155	\$40,115	\$33,522	1.02	1.20
Jul 2015	\$4,250	\$4,650	\$4,341	1.09	1.07	\$43,406	\$44,765	\$37,864	1.03	1.18
Aug 2015	\$3,759	\$4,116	\$3,473	1.09	1.19	\$47,165	\$48,881	\$41,336	1.04	1.18
Sep 2015	\$4,933					\$52,098	\$48,881			
CTD	\$323,734	\$321,445	\$301,681	0.99	1.07					

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

The current month favorable schedule variance (SV) of \$356K is due to:

- Schedule recovery of subcontractor work supporting secondary waste form development and low temperature waste form.

The current month favorable cost variance (CV) of \$643K is due to:

- Reflects under-stated performance in previous months, resulting this month in a positive cost variance. The performance was not aligned with actual cost data received from Pacific Northwest National Laboratory (PNNL)/Savannah River National Laboratory (SRNL) primarily on low temperature waste form development and is now being trued up at the end of FY 2015.

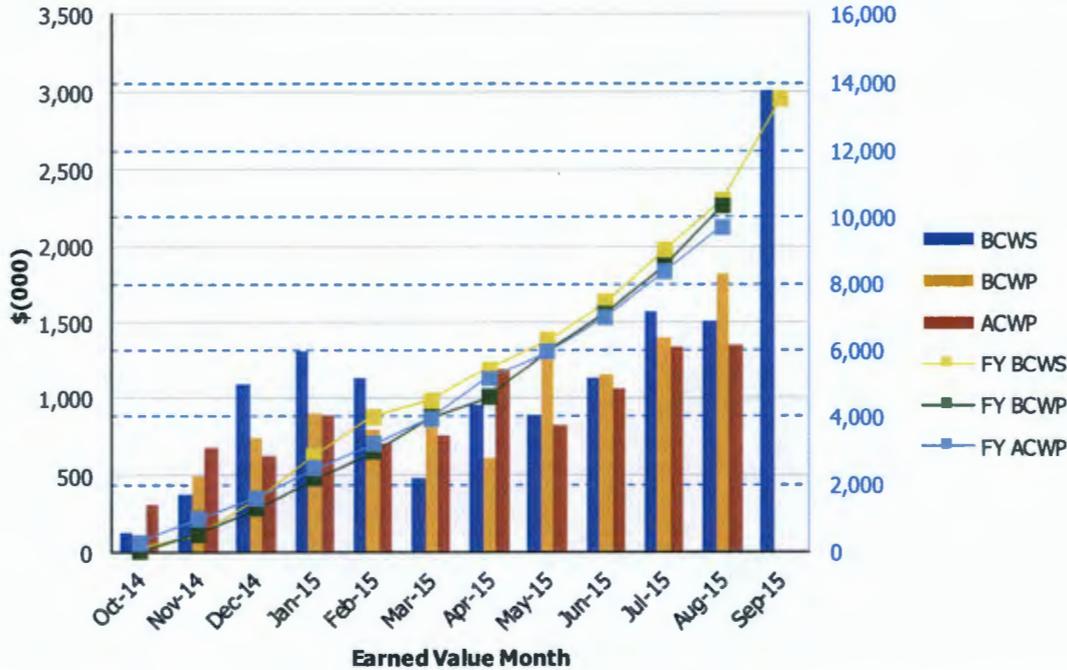
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2015 Earned Value Data

August-15

**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 2014	\$124	\$32	\$308	0.26	0.10	\$124	\$32	\$308	0.26	0.10
Nov 2014	\$374	\$500	\$674	1.34	0.74	\$498	\$532	\$982	1.07	0.54
Dec 2014	\$1,087	\$741	\$628	0.68	1.18	\$1,585	\$1,273	\$1,610	0.80	0.79
Jan 2015	\$1,304	\$899	\$883	0.69	1.02	\$2,889	\$2,172	\$2,493	0.75	0.87
Feb 2015	\$1,126	\$792	\$707	0.70	1.12	\$4,015	\$2,964	\$3,200	0.74	0.93
Mar 2015	\$478	\$1,006	\$754	2.11	1.33	\$4,492	\$3,970	\$3,954	0.88	1.00
Apr 2015	\$948	\$607	\$1,194	0.64	0.51	\$5,441	\$4,577	\$5,148	0.84	0.89
May 2015	\$884	\$1,403	\$818	1.59	1.71	\$6,325	\$5,980	\$5,966	0.95	1.00
Jun 2015	\$1,127	\$1,144	\$1,057	1.02	1.08	\$7,452	\$7,124	\$7,023	0.96	1.01
Jul 2015	\$1,566	\$1,402	\$1,328	0.90	1.06	\$9,018	\$8,526	\$8,351	0.95	1.02
Aug 2015	\$1,501	\$1,816	\$1,341	1.21	1.35	\$10,519	\$10,342	\$9,692	0.98	1.07
Sep 2015	\$3,012					\$13,531				

CTD	\$14,818	\$14,887	\$14,089	1.00	1.06
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#### Treat Waste

The primary current month favorable schedule variance (SV) of \$314K is due to:

- Recovery of expanded isotherm testing (sRF-3) request for proposal, issue contract, and draft test plan activities that were planned to be performed in a previous reporting period.

The primary current month favorable cost variance (CV) of \$475K is due to:

- Lower than planned subcontract labor usage and material procurement during integrated scale technology maturation driven by utilizing: existing equipment, equipment modifications, and existing materials.

### **Single-Shell Tank Retrieval and Closure Program**

**M-045-00, Complete closure of all SST farms, Due:** January 31, 2043, Status: On schedule.

**M-045-56K, Complete Implementation of Agreed to Interim Measures, Due:** July 31, 2015, Status: Complete. Annual meeting was held July 15, 2015. Meeting notes have been placed in the Administrative Record at this location:

<http://pdw.hanford.gov/arpir/index.cfm/viewDoc?accession=0080444H>

**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-045-61A, Submit to Ecology for review and approval as an Agreement primary document, document review process, a Phase 2 Corrective Measures Study, and Revision 0 update to the RFI Report for WMA-C), Due:** December 31, 2016, Status: On Schedule. The *Phase 2 RCRA Facility Investigation Report Draft A* for Waste Management Area C (WMA-C), RPP-RPT-58339, was transmitted to Ecology on December 23, 2014, via letter 14-TF-0131. This milestone was created by *Hanford Federal Facility Agreement and Consent Order (HFFACO)* change package M-45-14-03, signed October 1, 2014.

**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:** Six months after the approval of the corrective measures study (CMS) submitted under milestone M-045-61A Status: TPA Change Control form M-45-15-02 approved on April 14, 2015.

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

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

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

**M-045-86, Submit retrieval data report (RDR) to Ecology for 19 tanks retrieved, Due: To be determined (12 months after retrieval certification), Status: At risk.**

- M-045-86I: RDR for C-101 was due September 24, 2015, completed on September 24, 2015 with letter 15-TF-0099.
- M-045-86C: RDR for C-104 was due March 21, 2014, completed on February 18, 2014 with letter 14-TF-0013
- M-45-86E: RDR for C-107 was due July 28, 2015, completed on September 15, 2015 with letter 15-TF-0086.
- M-045-86F: RDR for C-108 was due May 1, 2014, completed on November 27, 2013 with letter 13-TF-0120
- M-045-86G: RDR for C-109 was due June 4, 2014, completed on March 13, 2014 with letter 14-TF-0020
- M-045-86H: RDR for C-110 was due January 29, 2015, completed on August 6, 2014 with letter 14-TF-0086.
- M-045-86K: RDR for C-112 was due September 30, 2015, completed on September 30, 2015 with letter 15-TF-0098

**M-045-92, Complete Installation of Four (4) Additional Interim Barriers** (see interim milestones below), Due: October 31, 2017, Status: In Dispute. TPA Change Control form M-45-15-01 submitted via letter 15-TF-0027 on March 31, 2015. Change was not approved and dispute resolution process was initiated via letter 15-TF-0042 on April 20, 2015. Dispute is at the project manager level and has been extended to October 15, 2015.

**M-045-92N, Construct Barriers 1 and 2 in 241-SX Farm, Due: October 31, 2015, Status: In Dispute.** TPA Change Control form M-45-15-01 submitted via letter 15-TF-0027 on March 31, 2015. Change was not approved and dispute resolution process was initiated via letter 15-TF-0042 on April 20, 2015. Dispute is at the project manager level and has been extended to October 15, 2015.

**M-045-92O, Submit a Final Design and Monitoring Plan for Interim Barrier 3, Due: June 30, 2015, Status: In Dispute.** TPA Change Control form M-45-15-01 submitted via letter 15-TF-0027 on March 31, 2015. Change was not approved and dispute resolution process was initiated via letter 15-TF-0042 on April 20, 2015. Dispute is at the project manager level and has been extended to October 15, 2015.

**Significant Past Accomplishments:**

- Automated data collection systems for T Farm and TY Farm interim barrier monitoring continue gathering data

- Documentation of the WMA-C Phase 2 Resource Conservation and Recovery Act (RCRA) Facility Investigation Report (RFI) was completed, and RPP-RPT-58339 was transmitted to Ecology on December 23, 2014, completing M-045-61.
- Completed the annual interim barrier monitoring report for data collected in 2014, RPP-ENV-58420.
- Submitted practicability evaluation request to forego a third retrieval technology in Tank 241-C-102 to Ecology for review.
- Completed Tank-C-105 MARS-V initial retrieval campaign (45 percent retrieved at end of August).
- Completed Tank-C-111 ERSS Installation at Riser #6.
- Completed C-107, C-112 and C-101 retrieval data reports (RDR).
- Completed uncertainty analysis for the Tank Farm Risk Assessment.
- Finalized Integrated Disposal Facility (IDF) Performance Assessment (PA) data packages from Workshop 2

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

- Continue data collection for T Farm and TY Farm interim surface barrier monitoring
- Develop the annual interim barrier monitoring report for data collected in 2015
- M-45-56K meet yearly – complete implementation of agreed to interim measures (meeting minutes/TPA Administrative Record)
- Complete C-105 first and second technology retrieval operations.
- M-45-86a - Complete C-101 RDR
- Complete C-111 ERSS installation and complete retrieval operations (second and third technologies)
- M-45-86j – Complete C-112 RDR
- Complete A/AX infrastructure (water and utilities) design – FY 2015 Phase 4A and Phase 5
- Finalize AX-Farm tank waste retrieval work plans (TWRWP)
- Complete C.2.2.2-1 integrated SST WMA closure plan (FY 2015)
- PBI-11.0.3 – Complete AX Farm tank retrieval system media for AX Farm to AX-102 retrieval system
- Complete AX Farm field work for tower, stack extension, and platform installation
- Complete AX Farm office trailer design (temporary facilities)
- Complete A/AX infrastructure SIS design modifications
- Complete equipment removal/disposal at AX-101 pit and riser
- Complete AX-2707 fencing and gate upgrades

- Finalize TPA/RCRA Tier 1 Closure Plan
- Finalize/Issue material for Workshop 3 and 4 for IDF PA
- Complete TPA/RCRA Tier 3 closure plan templates and perform scoping for PA (A Complex)
- Complete WMA-C tank residuals draft performance assessment results

#### Issues:

- Change control form M-45-15-01 was submitted by ORP via letter 15-TF-0027 to Ecology for approval. Ecology disapproved M-45-15-01 via 15-NWP-075 due to (1) interim barriers are necessary to mitigate impacts to human health and the environment, (2) the sooner barriers are installed the better along with further delays to the WTP, and (3) barrier size of 100 foot boundary is important. On April 20, 2015 via 15-TF-0042 ORP initiated dispute. On April 23, 2015 the first extension was signed to August 16, 2015. On May 14, 2015, and June 25, 2015, ORP and Ecology met to resolve the dispute in two meetings and a draft M-45-15-04 with Force Majeure language as per the request from Ecology on May 14, 2015. On July 1, 2015, ORP and Ecology had a third meeting to resolve the dispute. This dispute has been extended to October 15, 2015, with a proposed draft settlement proposed by Ecology.
- Change Control Form M-45-15-03 for M-045-82 milestone was sent on June 30, 2015 via 15-TF-0065. On July 14, 2015, Ecology disputed the M-45-15-03 via 15-NWP-128 based on (1) M-45-15-3 does not cite good cause for extensions, (2) the form does not describe all impacts of the changes, and (3) Ecology would like to work with ORP to develop a logic diagram that describes the sequence of activities necessary to complete the milestone. On July 16, 2015, via 15-TF-0069 ORP initiated dispute resolution and on July 31, 2015, the extension of dispute at the project manager level was extended to October 20, 2015.

### 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	Complete	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	-

Tank	TWRWP	Expected Revisions	First Retrieval Technology	Second Technology	Third Technology
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 Six Months:**

- Develop AX Farm tank waste retrieval work plans.

**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 Six 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 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 six 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 six months and no issues for Tank 241-S-112.**