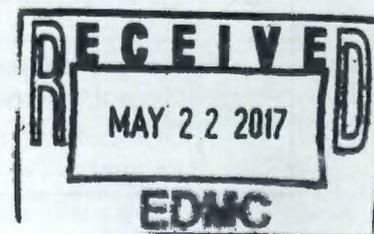


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FINAL  
Office of River Protection  
Tri-Party Agreement  
Report  
May<sup>1</sup> 2017



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<sup>1</sup> The narrative descriptions of progress in this report cover the period from April 01–30, 2017.  
Earned Value Management System data and descriptions cover the period of March 01–31, 2017.

**Tri-Party Agreement (TPA) Milestone Review**

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11	Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility	R. Valle S. Schleif
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23	Tank Operations Contract Overview	ORP TPA PMs ECY TPA PMs
23	Waste Treatment and Immobilization Plant (WTP) Overall TPA Summary and Milestone Status; see the Office of River Protection Consent Decree Monthly Report	J. Grindstaff D. McDonald

## Administrative Items/Milestone Status

Milestone	Title	Due Date	Completion Date	Status
<b>Fiscal Year 2015</b>				
M-062-45-T01	Complete Negotiations 6-Mo After Last Issuance of System Plan	04/30/2015		In Abeyance
M-062-45-ZZ	Negotiate a One Time Supplemental Treatment Selection	04/30/2015		In Abeyance
M-062-45-ZZ-A	Convert the M-062-31-T01 Through M-062-34-T01 to Interim Milestones	04/30/2015		In Abeyance
M-045-82	Modified See Fiscal Year 2017			Responsiveness summary to public comments is being prepared
<b>Fiscal Year 2016</b>				
M-047-07	CD-1 for Secondary Liquid Waste Treatment and CR for CD-2 to Ecology	03/31/2016		In Abeyance
M-090-13	CD-1 for Interim Hanford Storage Project and CR for CD-2 to Ecology	03/31/2016		In Abeyance
M-062-31-T01	Complete Final Design & Submit RCRA Part B Permit Mod Request for Enhanced WTP & Supplemental Treatment	04/30/2016		In Abeyance
<b>Fiscal Year 2017</b>				
M-062-40E	Select a Minimum of Three Scenarios	10/31/2016	10/06/2016	Complete
M-045-61A	Submit to Ecology a primary doc. Phase 2 CMS, and Rev. 0 update to the RFI Report for WMA-C	12/31/2016	12/29/2016	Complete
M-062-01AH	Submit Semi-Annual Project Compliance Report	01/31/2017	01/31/2017	Complete
M-045-84	Initiate Negotiations to Establish HFFACO Interim Milestones for Closure of 2nd SST WMA	04/03/2017	03/14/2017	Complete

Milestone	Title	Due Date	Completion Date	Status
M-045-82	Submit to Ecology the draft Tier 2 closure plan for WMA-C	05/15/2017		On Schedule
M-045-82A	Submit to Ecology the draft Tier 3 closure plans for the C-200 tanks.	05/15/2017		On Schedule
M-045-62	Submit to Ecology the draft Tier 3 closure plans to implement corrective measures.	To be established in accordance with the date identified in the M-045-82 Tier 2 closure plan		On Schedule
M-045-83	Complete the Closure of WMA-C	To be established in accordance with the date identified in the M-045-82 Tier 2 closure plan		On Schedule
M-045-56M	Ecology and DOE Agree, at a Minimum, to Meet Yearly (by July)	07/31/2017		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
M-045-92S	DOE and Ecology Will Agree On Locations For Barriers 3 And 4	09/30/2017		On Schedule
<b>Fiscal Year 2018</b>				
M-062-40F	Submit System Plan	10/31/2017		On Schedule
M-062-32-T01	Start Construction of Supplemental Vitrification Treatment Facility and/or WTP Enhancements	04/20/2018		In Abeyance
M-045-92O	Barrier 3 Design/Monitoring Plan Submitted to Ecology	06/30/2018		On Schedule
M-045-56N	Ecology And DOE Agree, At A Minimum, To Meet Yearly (By July)	07/31/2018		On Schedule

Milestone	Title	Due Date	Completion Date	Status
M-045-91I	Provide IQRPE Certification of SSTs Structural Integrity	09/30/2018		On Schedule
M-045-92T	Barrier 3 Design/Monitoring Plan Approved by Ecology	09/30/2018		On Schedule

CD-1/-2	critical decision-1/-2	RCRA	<i>Resource Conservation and Recovery Act</i>
CMS	corrective measures study		
CR	change request	RFI	RCRA Facility Investigation.
DOE	U.S. Department of Energy	SST	single-shell tank.
Ecology	WA State Department of Ecology	WTP	Waste Treatment and Immobilization Plant.
HFFACO	Hanford Federal Facility Agreement and Consent Order	WMA	waste management area.
IQRPE	independent qualified registered professional engineer	WMA-C	C Farm waste management area.

## **System Plan**

***One System Division Director:*** Jon Peschong

***Federal Program Manager:*** Kaylin Burnett

### **Significant Past Accomplishments:**

- Modeling for the remainder of the 11 cases was completed and the results reviewed by the U.S. Department of Energy, Office of River Protection (ORP) and the Washington State Department of Ecology (Ecology), in April.
- Drafts of five case write-ups provided to System Plan 8 team for informal review.

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

- Continue negotiations of the M-062-45 milestones with intent to utilize information from System Plan 8 negotiations.
- WRPS will provide the draft final System Plan 8 to ORP by May 23, 2017. ORP will share the document with Ecology at the Thursday, May 25<sup>th</sup> meeting.

### **Issues:**

- None.

### Acquisition of New Facilities

**Tank Farms Assistant Manager:** Glyn Trenchard

**Deputy Federal Project Director:** Janet Diediker

- 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: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.
- 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: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.
- M-090-00**      **Acquire/Modify Facilities for Storage of Immobilized High-Level Waste (IHLW)**  
Due: December 31, 2019  
Status: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.
- 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: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.

**Significant Past Accomplishments:**

- None.

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

- None.

**Issues:**

- None.

**Supplemental Treatment and Part B Permit Applications**

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Project Director:** Steve Pfaff

- 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 Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.
- M-062-45-ZZ** **(designation for M-062-45 item 3), Negotiate a one-time supplemental treatment selection**  
Due: April 30, 2015  
Status: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.
- M-062-45-ZZ-A** **Convert M-062-31-T01 through M-062-34-T01 to Interim Milestones**  
Due: April 30, 2015  
Status: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.
- M-062-31-T01** **Complete final design and submit Resource Conservation and Recovery Act Part B permit modification request**  
Due: April 30, 2016  
Status: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.
- M-062-32-T01** **Start construction of supplemental vitrification treatment facility and/or WTP enhancements**  
Due: April 30, 2018  
Status: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.
- M-062-33-T01** **Complete construction of supplemental vitrification treatment facility and/or WTP enhancements**  
Due: April 30, 2021  
Status: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.

**M-062-45-XX**     **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: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.

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

**M-062-00**     **Complete Pretreatment Processing and Vitrification of High-Level Waste and LAW Tank Wastes**  
Due: December 31, 2047  
Status: At risk.

**Significant Past Accomplishments:**

- None.

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

- None.

**Issues:**

- Negotiations on the items identified in the M-062-45 milestone began on September 8, 2016, per decision by the Interagency Management Integration Team.

## 242-A Evaporator Status

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Paul Hernandez

The 242-A Evaporator campaign strategy for fiscal year (FY) 2016 through fourth quarter of FY 2017 is depicted in the following table:

Fiscal Year	Campaign No.	Feed Source	Slurry Tank	Comments
FY 2016	EC-04	AP-104	AP-103	Completed April 15, 2016 WVR = 258 kgal
FY 2016	EC-05	AP-104	AP-104	Completed April 21, 2016 WVR = 46 kgal
FY 2017	EC-06	AY-101	AP-104	242-A Evaporator campaign EC-06 has been postponed until replacement of failed radiation monitoring systems RC-1, RC-2, and RC-3 are completed. This is expected mid-year of calendar year 2017.
FY 2017	EC-07	AW-106	AP-104	242-A Evaporator campaign EC-07 will follow EC-06.
FY 2018	EC-08	AP 106/107 Blend	AP-103	Will require blending of waste in 102-AW, sampling, and sample analysis prior to campaign start. This cannot occur until campaign EC-07 is completed.

FY fiscal year.

kgal thousand gallons.

WVR waste volume reduction.

### Significant Past Accomplishments:

- The class 2 permit modification covering the removal of the diesel generator requiring changes to Chapter 6.0, "Procedures to Prevent Hazards" and Chapter 7.0, "Contingency Plan," and updates to storage volumes in Chapter 1.0, "Part A Form" at the 242-A Evaporator were submitted to Ecology for informal review on November, 14, 2016.

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

- Future campaign and outage scheduling
- Continue integrity assessment on 242-A Evaporator components

- Replace P-B-2 associated pressure relief valves
- Replace radiation monitoring systems RC-1, RC-2, and RC-3
- Replace and extend the vessel vent stack. Equivalent or better material will be used. The new vent stack will be approximately 50 ft taller.

**Issues:**

- None.

## Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Richard Valle

The Liquid Effluent Retention Facility (LERF) liquid levels, inventory, and received waste is shown in the table below. Volumes in this table are estimated. Tanker shipment volumes are estimated by multiplying the number of shipments by the capacity of the tanker being used.

	242AL-42 (Basin 42)	242AL-43 (Basin 43)	242AL-44 (Basin 44)
<b>Total Volume (as of April 30, 2017)</b>	~ 5.78 Mgal	~ 0.49 Mgal	~ 7.57 Mgal

<b>Waste Received</b>			
AZ-301 Tanker Shipments	-	-	-
MWT-31 and 34 Leachate	~ 84,000 gal	-	-
Other (e.g., Modutank Purgewater)	-	~ 122,000 gal	-
242-A Evaporator Campaigns	-	-	-

gal           gallon.  
Mgal       million gallons.  
MWT       mixed waste trench.

### Significant Past Accomplishments:

- Total FY 2017 volume processed (as of April 30, 2017): ~ 3,485,000 gallons.

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

- Continue to empty LERF Basin 43 by processing waste through the Effluent Treatment Facility (ETF)
- Enter maintenance outage at the ETF to clean out plant
- Begin LERF Basin 43 cover replacement fieldwork.
- Initiate LERF Basin 42 waste processing through the ETF

### Issues:

- None.

## Tank System Update

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Dusty Stewart

### Significant Past Accomplishments

#### Double-Shell Tank (DST) Integrity:

- RPP-ASMT-61313, "Tank Integrity Expert Panel Corrosion Subgroup August 2016 Meeting Outcomes" was issued documenting expert panel review of the FY 2016 corrosion testing and providing guidance for FY 2017 activities.

#### Single-Shell Tank (SST) Integrity:

- None.

### Independent Qualified Registered Professional Engineer Activities

#### Planned Actions:

- Preparation of the independent qualified registered professional engineer (IQRPE) report for the 242-A Evaporator is ongoing. A video probe inspection of the steam side of the E-A-1 reboiler was successfully completed and video was provided to the IQRPE. Meier Architecture Engineering (Meier) completed a tour/walkdown of readily accessible areas of the facility. Remaining fieldwork includes the E-A-1 reboiler fluorescein dye 24-hour leak test and C-A-1 vapor-liquid separator 24-hour static leak test. These tests are scheduled for completion prior to introducing Evaporator Campaign EC-06 hot feed to the facility.
- Work continues on RPP-RPT-61349, the ETF integrity program plan. The plan is expected to be released in May to support the FY 2019 IQRPE integrity assessment. Ultrasonic thickness scanning of ETF tanks is scheduled to begin in June.
- Initial planning continues for the IQRPE report for the 219-S facility at the 222-S Laboratory
- The Integrity Assessment plan is being drafted for the 2018 SST IQRPE report and will be the basis for a statement of work later this fiscal year.

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

#### DST Integrity:

- Continuing bi-weekly inspections of AY-102 waste accumulation site.
- Continuing bi-monthly comprehensive inspection of AY-102 annulus.
- Continuing annual comprehensive inspection of AY-101 annulus.

- FY 2017 enhanced annulus visual inspections are in progress. The following tanks will be inspected in FY 2017:
  - 241-AN-102 (complete)
  - 241-AN-107 (complete)
  - 241-AP-101
  - 241-AP-107
  - 241-AW-105 (RPP-RPT-42147, Rev. 5 issued)
  - 241-AY-101 (complete, report in external clearance process)
  - 241-AZ-101 (complete, report in external clearance process)
  - 241-AZ-102 (complete, report in external clearance process)
- Work planning and execution for FY 2017 ultrasonic testing inspections has begun. The following tanks will be inspected in FY 2017:
  - 241-AN-106 (field work complete; report in review)
  - 241-AY-101 (field preparations underway)
  - 241-AZ-101

#### SST Integrity:

- The FY 2016 SST Visual Inspection Report (RPP-RPT-59272) has been issued and is going through the clearance process for external release. This report documents the results of 14 SST video inspections.
- Work planning for FY 2017 in-tank video inspections has already begun. The following tanks will be inspected in FY 2017 (note SX-113 was deleted and S-104 was added):
 

- 241-BX-102	- 241-T-106
- 241-BX-107	- 241-T-109
- 241-BY-109	- 241-TX-105
- 241-S-104 (complete)	- 241-TX-106
- 241-SX-110	- 241-TX-109
- 241-T-104	- 241-U-107.
- Intrusion mitigation (M-045-56):
  - The POR-006 exhauster remains out of service at T-111. Parts were ordered to repair the malfunctioning instrument cabinet heater. Data collection and reporting software are still not working. The total volume of water evaporated from T-111 since mid-July 2015 was very roughly estimated at 7,100 gal.
  - The exhauster will continue operation as resource availability permits, but the evaporation is no longer being tracked. Periodic video inspections may be

conducted to visually observe changes to the liquid pool in the tank if the  
exhauster is able to operate for a sufficiently long period.

- RPP-RPT-59273 Rev. 0, *Evaporation of Water from Single-Shell Tank 241-T-111  
with 500 CFM Portable Exhauster POR06*, was cleared for public release on  
April 13, 2017.

**Issues:**

DST Integrity:

- None.

SST Integrity:

- None.

## Single-Shell Tank Integrity Assurance

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Dusty Stewart

**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:**

- None.

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

- The Integrity Assessment Plan is being drafted for 2018 SST IQRPE report and will be the basis for a Statement of Work (SOW) later this fiscal year.

### **Issues:**

- None.

## In-Tank Characterization and Summary

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Dusty Stewart

### Accomplishments:

For the period from April 01 through April 30, the following reports were completed or issued:

- Completed RPP-RPT-59887, *Derivation of Best-Basis Inventory for Tank 241-BX-107 as of April 1, 2017*, Rev 0.
- Completed RPP-RPT-59981, *Derivation of Best-Basis Inventory for Tank 241-AP-108 as of April 1, 2017*, Rev 0.
- Completed RPP-PLAN-60361, *Tank 241-AP-107 Grab Sampling and Analysis Plan in FY2017*, Rev. 1.
- Completed HNF-EP-0182, *Waste Tank Summary Report for Month Ending February 28, 2017*, Rev 350.
- Completed HNF-EP-0182, *Waste Tank Summary Report for Month Ending March 31, 2017*, Rev 351.
- WRPS-1500668, [241-C-111] *Solid Phase Characterization of Solids Recovered from Failed Sluicer Arm*, Rev 1, has been released.
- Completed 241-AP-105 liquid grab sampling on April 28, 2017. Thirty-six samples were received at PNNL for analysis.
- Completed 241-AZ-101 Leak Detection Pit sampling on April 20, 2017. Four samples were received at the lab.

### Planned Action within the Next Six Months:

Tank sampling:

- Tank 241-AW-104 grab sampling is planned for May 2017.
- Tank 241-AY-102 solids grab sampling is planned for June 2017.
- Tank 241-AP-107 grab sampling is planned for June 2017.
- Tank 241-AN-107 grab sampling is planned for August 2017.
- Tank 241-C-105 grab sampling is planned for September 2017.

### Best-Basis Inventory updates:

Best-basis inventory updates for the following tanks were completed in April 2017:

- 241-AP-108

- 241-BX-107

Best-basis inventory updates for the following tanks currently are planned to be completed in May 2017:

- 241-AN-102
- 241-AP-102
- 241-AP-103
- 241-AY-101
- 241-AY-102
- 241-B-106
- 241-C-105
- 241-C-111
- 241-S-105
- 241-TX-113
- 241-TX-116.

**Data Quality Objectives updates:**

- None.

**Issues:**

- None.

**Single-Shell Tank Closure Program**

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Jan Bovier

- 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: To be determined.
- M-045-82**      **Submit to Ecology for review, in accordance with HFFACO Action Section 9.2.2, the draft Tier 2 closure plan for WMA C. The Tier 2 plan shall include a proposed TPA milestone change control form identifying all Tier 3 submittal dates for WMA C and proposed target dates to initiate Tier 3 closure activities. Target dates will be converted to enforceable schedules through permit modification to incorporate Tier 3 closure plans**  
Due: May 15, 2017  
Status: On schedule.
- M-045-82A**      **Submit to Ecology for review, in accordance with HFFACO Action Section 9.2.2, the draft Tier 3 closure plans for the C-200 tanks (C-201, C-202, C-203, and C-204) including schedules.**  
Due: May 15, 2017  
Status: On schedule.
- M-045-62**      **Submit to Ecology for review, in accordance with HFFACO Action Section 9.2.2, the draft Tier 3 closure plan to implement corrective measures identified in the approved Phase 2 Corrective Measures Implementation Work Plan (CMIP) for WMA C.**  
Due: To be established in accordance with the date identified in the M-45-82 Tier 2 closure plan  
Status: On schedule.

Status: On schedule. This milestone will be modified through resolution of the dispute on M-045-82. Phase 2 Corrective Measures Study, and Rev. 0 update to the *Resource Conservation and Recovery Act (RCRA) Facility Investigation Report (RFI)* for WMA-C were submitted to Ecology on December 29, 2016, via letter 16-TF-0142, "The U.S. Department of Energy, Office of River Protection Submittal of Reports for the Resource Conservation and Recovery Act Facility Investigation and Corrective Measures Study for Waste Management Area C in Completion of HFFACO Milestone M-045-61A." Per Ecology letter 17-NWP-033, "Department of Ecology's (Ecology) Request for an Extension in Providing Comments on *Phase 2 RCRA Facility Investigation Report for Waste Management Area C, RPP-RPT-58339, Rev.0 (RFI) and Waste Management Area C Phase 2 Corrective Measures Study Report, RP-RPT-59379, Rev. 0 (CMS)*," dated March 29, 2017, Ecology requested an extension in providing comments for the RFI/Corrective Measures Study until after the WMA-C Appendix I performance assessment is discussed and evaluated by Ecology.

- M-045-83**      **Complete the Closure of WMA C - by completing all closure activities specified in the Tier 2 closure plan not including activities specifically described in the Tier 2 closure plan as requiring integration with closure of other WMAs**  
 Due: To be established in accordance with the date identified in the M-45-82 Tier 2 closure plan  
 Status: On Schedule
- M-045-84**      **Initiate negotiations to establish HFFACO interim milestones for closure of second SST WMA**  
 Due: April 3, 2017  
 Status: Completed on March 14, 2017.
- M-045-56M**      **Complete Implementation of Agreed to Interim Measures**  
 Due: July 28, 2017  
 Status: On schedule. An annual meeting is held between ORP and Ecology to discuss the prior FY accomplishments and the next FY proposed interim measures to be scheduled in July 2017.
- M-045-92S**      **DOE and Ecology agree on locations for Barriers 3 and 4**  
 Due: September 30, 2017  
 Status: On schedule.
- M-045-92O**      **Barrier 3 Design and Monitoring Plan submitted to Ecology**  
 Due: June 30, 2018  
 Status: On schedule.
- M-045-92T**      **Barrier 3 Design and Monitoring Plan approved by Ecology**  
 Due: September 30, 2018  
 Status: On schedule.

- M-045-92N Complete construction of Barriers 1 and 2 in SX Farm**  
Due: October 31, 2018  
Status: On schedule.
- M-045-83 Complete the closure of WMA-C**  
Due: June 30, 2019  
Status: To be missed. Please see status explanation under M-045-82.
- M-045-92Q Barrier 4 Design and Monitoring Plan submitted to Ecology**  
Due: June 30, 2019  
Status: On schedule.
- M-045-92U Barrier 4 Design and Monitoring Plan approved by Ecology**  
Due: September 30, 2019  
Status: On schedule.
- M-045-92P Complete construction of Barrier 3**  
Due: October 31, 2019  
Status: On schedule.
- M-045-92R Complete construction of Barrier 4**  
Due: October 31, 2020  
Status: On schedule.
- M-045-85 Initiate negotiations to establish HFFACO interim milestones for closure of remaining SST WMAs**  
Due: January 31, 2022  
Status: On schedule.
- M-045-00 Complete Closure of all SST Farms**  
Due: January 31, 2043  
Status: At risk. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45.

**Significant Past Accomplishments:**

- Working with Ecology on review of the WMA-C Performance Assessment.
- Submitted RPP-RPT-58339, *Phase 2 RCRA Facility Investigation Report for Waste Management Area C*, and RPP-RPT-59379, *Waste Management Area C Phase 2 Corrective Measures Study Report*, to complete HFFACO Milestone M-045-61 A.

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

- Continue data collection for T Farm and TY Farm interim surface barrier monitoring and develop the annual interim barrier monitoring report for FY 2016.
- Begin resolution of Ecology's comments on the RCRA Tier 1 Closure Plan.

- Submit the draft Tier 2 Closure Plan for WMA-C, and a draft Tier 3 Closure Plan for the C-200 Series Tanks to Ecology for review.
- Begin discussions on locations for barriers 3 and 4.

**Issues:**

- Developing path forward for resolving Ecology's comments on the RCRA Tier 1 Closure Plan was elevated to ORP and Nuclear Waste Program managers in March 2017.

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

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Jeff Rambo

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

**M-045-70**      **Complete waste retrieval from all remaining SSTs**  
Due: December 31, 2040  
Status: At risk. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations have begun.

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

- Refer to Consent Decree monthly report for ongoing retrieval activities.

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

- The C-111 RDR is expected to be ready in September 2017.
- Refer to Consent Decree monthly report for ongoing retrieval activities.

#### **Issues:**

- Refer to Consent Decree monthly report for ongoing retrieval issues.

### **Tank Waste Retrieval Work Plan Status**

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Jeff Rambo

#### **Significant Accomplishments:**

- None.

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

- Finalize AX Farm tank retrieval work plans.

#### **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.

March-17										
	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
CM	49,127	55,701	60,510	6,574	(4,810)	1.13	0.92			
FYTD	282,490	268,676	262,209	(13,814)	6,467	0.95	1.02	593,538		
CTD	3,738,439	3,703,811	3,671,072	(34,629)	32,739	0.99	1.01	4,744,966	4,779,644	(34,678)

ACWP	actual cost of work performed	CV	cost variance
BAC	budget at completion	EAC	estimate at completion
BCWP	budgeted cost of work performed	FYTD	fiscal year to date
BCWS	budgeted cost of work scheduled	SPI	schedule performance index
CM	current month	SV	schedule variance
CPI	cost performance index	VAC	variance at completion
CTD	contract to date		

The Earned Value Management System is intended to provide a status of how the contractor is progressing against its planned work (i.e., schedule), and whether it is costing more or less to complete the work than planned. The project plan is measured by expressing the schedule in terms of dollars spread over the anticipated project duration, and then for each month, determining how much of the planned work was accomplished or “earned,” as measured in equivalent dollars. If more work is accomplished than planned, then the project is ahead of schedule and has a favorable SV. Similarly, if less work is accomplished, the project is behind schedule and has an unfavorable SV. Accomplished work is reported in the month it was completed, which may not be when it was planned. For example, work completed in a month earlier than planned would be reported as a favorable SV for the month in which it was completed, but would be reported as an unfavorable SV in the month it was planned. The end result would be a net zero overall cumulative SV over these months. Likewise, work completed late will recover an earlier reported unfavorable SV.

The CV measures the actual cost of work performed against the earned dollar value of that performed work. As an example, assume \$10K of work was planned to-date, \$8K was reported as being performed (earned), at an actual cost of \$9K. This work would be reported as being \$2K behind schedule [a negative or unfavorable SV:  $\$8K - \$10K = (\$2K)$ ], and has cost \$1K more [a negative or unfavorable CV:  $\$8K - \$9K = (\$1K)$ ] than was planned for completing that work scope. Likewise, a favorable or positive CV would be reported if it cost less to complete the work than the performed dollar value of the work. The SV and CV are reported for each monthly period, fiscal year to-date, as well as for the contract-to-date value. The monthly variances can fluctuate significantly (for reasons noted earlier), so the fiscal year or contract-to-date report provides a better indicator of the overall project completion status, and can give a reasonable projection of how the project will finish, based on the progress-to-date.

Earned Value Data: Fiscal Year 2017

March-17

**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 2016	\$33,051	\$33,501	\$31,798	1.01	1.05	\$33,051	\$33,501	\$31,798	1.01	1.05
Nov 2016	\$48,628	\$45,386	\$44,614	0.93	1.02	\$81,679	\$78,887	\$76,412	0.97	1.03
Dec 2016	\$52,841	\$47,972	\$46,833	0.91	1.02	\$134,520	\$126,859	\$123,246	0.94	1.03
Jan 2017	\$46,477	\$39,027	\$32,764	0.84	1.19	\$180,997	\$165,886	\$156,009	0.92	1.06
Feb 2017	\$52,366	\$47,088	\$45,690	0.90	1.03	\$233,363	\$212,974	\$201,699	0.91	1.06
Mar 2017	\$49,127	\$55,701	\$60,510	1.13	0.92	\$282,490	\$268,674	\$262,209	0.95	1.02
Apr 2017	\$50,433			0.00	0.00	\$332,923			0.00	0.00
May 2017	\$47,279			0.00	0.00	\$380,202			0.00	0.00
Jun 2017	\$54,378			0.00	0.00	\$434,580			0.00	0.00
Jul 2017	\$44,684			0.00	0.00	\$479,264			0.00	0.00
Aug 2017	\$47,326			0.00	0.00	\$526,590			0.00	0.00
Sep 2017	\$66,948			0.00	0.00	\$593,538			0.00	0.00

CTD	\$3,738,439	\$3,703,811	\$3,671,072	0.99	1.01
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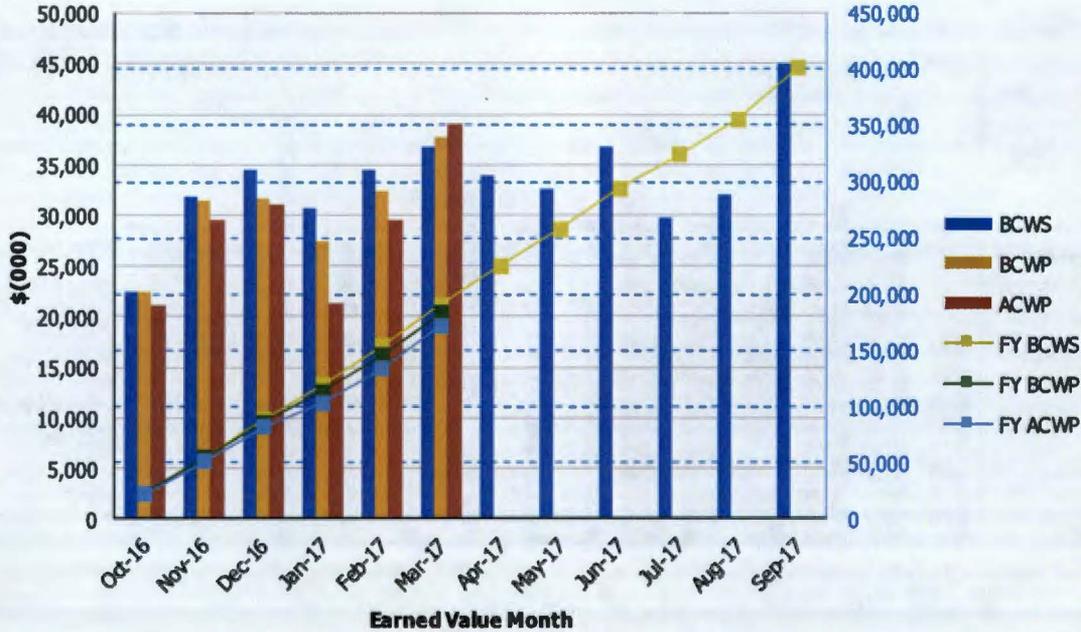
- ACWP      actual cost of work performed                      CTD      contract to date
- BCWP      budgeted cost of work performed                      EVMS      Earned Value Management System
- BCWS      budgeted cost of work scheduled                      FY      fiscal year
- CPI      cost performance index                                      SPI      schedule performance index

Earned Value Data: Fiscal Year 2017

March-17

**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 2016	\$22,507	\$22,546	\$21,216	1.00	1.06	\$22,507	\$22,546	\$21,216	1.00	1.06
Nov 2016	\$31,885	\$31,496	\$29,527	0.99	1.07	\$54,392	\$54,042	\$50,743	0.99	1.07
Dec 2016	\$34,394	\$31,547	\$31,032	0.92	1.02	\$88,786	\$85,589	\$81,775	0.96	1.05
Jan 2017	\$30,657	\$27,462	\$21,370	0.90	1.29	\$119,443	\$113,051	\$103,146	0.95	1.10
Feb 2017	\$34,475	\$32,418	\$29,588	0.94	1.10	\$153,918	\$145,468	\$132,734	0.95	1.10
Mar 2017	\$36,780	\$37,769	\$39,127	1.03	0.97	\$190,698	\$183,237	\$171,861	0.96	1.07
Apr 2017	\$33,988			0.00	0.00	\$224,685			0.00	0.00
May 2017	\$32,532			0.00	0.00	\$257,217			0.00	0.00
Jun 2017	\$36,732			0.00	0.00	\$293,949			0.00	0.00
Jul 2017	\$29,626			0.00	0.00	\$323,575			0.00	0.00
Aug 2017	\$31,967			0.00	0.00	\$355,542			0.00	0.00
Sep 2017	\$45,007			0.00	0.00	\$400,549			0.00	0.00
<b>CTD</b>	<b>\$2,489,376</b>	<b>\$2,475,560</b>	<b>\$2,439,286</b>	<b>0.99</b>	<b>1.01</b>					

ACWP	actual cost of work performed	CTD	contract to date
BCWP	budgeted cost of work performed	EVMS	Earned Value Management System
BCWS	budgeted cost of work scheduled	FY	fiscal year
CPI	cost performance index	SPI	schedule performance index

***Federal Project Director:*** Ellen Mattlin

**Base Operations and Tank Farm Projects (5.01)**

The March 2017 variances below do not impact or delay TPA milestones.

The **favorable** schedule variance (SV) of \$988K is primarily due to the following:

- Schedule recovery in April for the AP-102A Long Length Pump Disposal and the AP Farm mechanical installation of SS Air Flow instrumentation. Also acceleration of the AN Farm installation work package planning and mechanical installation of the SS flow instrumentation.

The **unfavorable** cost variance (CV) of (\$1,358K) is primarily due to the following:

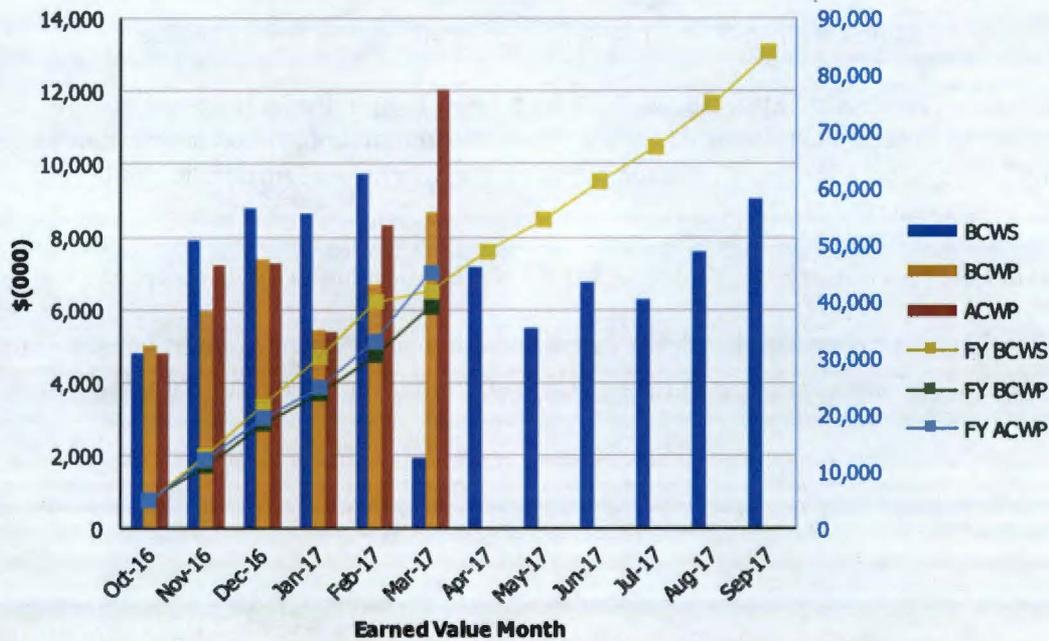
- Additional cost associated with the installation of a bottle change tent in the AW Farm to increase worker safety supporting the AW-106 Pump Replacement field work activities.

Earned Value Data: Fiscal Year 2017

March-17

**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 2016	\$4,816	\$4,996	\$4,822	1.04	1.04	\$4,816	\$4,996	\$4,822	1.04	1.04
Nov 2016	\$7,924	\$5,969	\$7,241	0.75	0.82	\$12,740	\$10,965	\$12,063	0.86	0.91
Dec 2016	\$8,772	\$7,401	\$7,262	0.84	1.02	\$21,512	\$18,365	\$19,325	0.85	0.95
Jan 2017	\$8,646	\$5,422	\$5,360	0.63	1.01	\$30,158	\$23,787	\$24,685	0.79	0.96
Feb 2017	\$9,716	\$6,707	\$8,341	0.69	0.80	\$39,874	\$30,495	\$33,026	0.76	0.92
Mar 2017	\$1,903	\$8,675	\$12,056	4.56	0.72	\$41,777	\$39,170	\$45,082	0.94	0.87
Apr 2017	\$7,156			0.00	0.00	\$48,933			0.00	0.00
May 2017	\$5,499			0.00	0.00	\$54,432			0.00	0.00
Jun 2017	\$6,758			0.00	0.00	\$61,191			0.00	0.00
Jul 2017	\$6,258			0.00	0.00	\$67,449			0.00	0.00
Aug 2017	\$7,579			0.00	0.00	\$75,028			0.00	0.00
Sep 2017	\$9,072			0.00	0.00	\$84,100			0.00	0.00
<b>CTD</b>	<b>\$750,945</b>	<b>\$737,219</b>	<b>\$765,756</b>	<b>0.98</b>	<b>0.96</b>					

ACWP	actual cost of work performed	CTD	contract to date
BCWP	budgeted cost of work performed	EVMS	Earned Value Management System
BCWS	budgeted cost of work scheduled	FY	fiscal year
CPI	cost performance index	SPI	schedule performance index

**Federal Program Manager:** Jeff Rambo

**Retrieve and Close Single-Shell Tanks (5.02)**

The March 2017 variances below have a no impact on TPA milestones for tank retrieval.

The **favorable** schedule variance (SV) of \$6,772K is due to:

- A baseline change request was processed in March that resulted in a point adjustment in the FY 2017 budget as a result of the Continuing Resolution. Adjustments included field work within AX Tank Farm that was originally planned to be performed this year but was constrained due to SCBA inefficiencies, beryllium precautions, limited personnel, and funding restrictions.

The **unfavorable** cost variance (CV) of (\$3,381K) is due to:

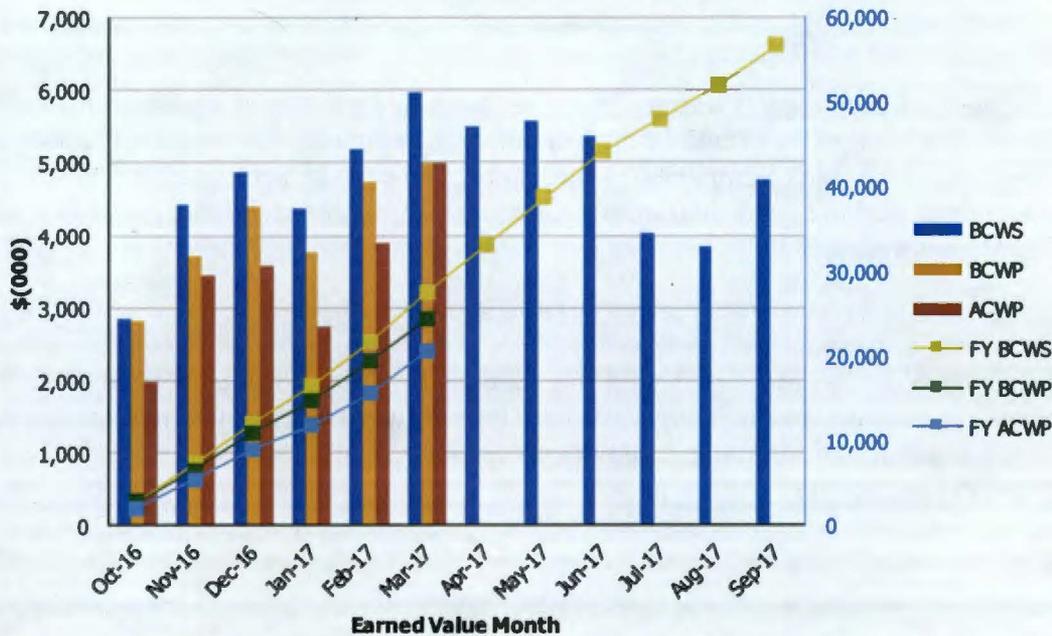
- Increased costs are associated with the continued inefficiencies associated with SCBA usage. In addition, unanticipated costs have been incurred as a result of possible beryllium contamination, and sampling requirements in A/AX Tank Farms and C Tank Farm for personnel protection.

Earned Value Data: Fiscal Year 2017

March-17

**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 2016	\$2,840	\$2,829	\$1,990	1.00	1.42	\$2,840	\$2,829	\$1,990	1.00	1.42
Nov 2016	\$4,428	\$3,728	\$3,446	0.84	1.08	\$7,267	\$6,557	\$5,436	0.90	1.21
Dec 2016	\$4,878	\$4,404	\$3,589	0.90	1.23	\$12,146	\$10,961	\$9,026	0.90	1.21
Jan 2017	\$4,371	\$3,773	\$2,737	0.86	1.38	\$16,516	\$14,734	\$11,762	0.89	1.25
Feb 2017	\$5,176	\$4,743	\$3,893	0.92	1.22	\$21,692	\$19,477	\$15,656	0.90	1.24
Mar 2017	\$5,981	\$4,992	\$4,999	0.83	1.00	\$27,673	\$24,469	\$20,654	0.88	1.18
Apr 2017	\$5,496			0.00	0.00	\$33,169			0.00	0.00
May 2017	\$5,564			0.00	0.00	\$38,733			0.00	0.00
Jun 2017	\$5,357			0.00	0.00	\$44,090			0.00	0.00
Jul 2017	\$4,034			0.00	0.00	\$48,124			0.00	0.00
Aug 2017	\$3,836			0.00	0.00	\$51,960			0.00	0.00
Sep 2017	\$4,770			0.00	0.00	\$56,730			0.00	0.00
<b>CTD</b>	<b>\$400,058</b>	<b>\$395,488</b>	<b>\$365,509</b>	<b>0.99</b>	<b>1.08</b>					

ACWP	actual cost of work performed	CTD	contract to date
BCWP	budgeted cost of work performed	EVMS	Earned Value Management System
BCWS	budgeted cost of work scheduled	FY	fiscal year
CPI	cost performance index	SPI	schedule performance index

**Federal Program Manager:** Kaylin Burnett

**Waste Feed Delivery/Treatment (5.03)**

The March 2017 variances below have no impacts on the TPA milestones.

The **unfavorable** schedule variance (SV) of (\$989K) is primarily due to:

- Prolonged procurement strategy discussions and late agreement with procurement on path forward for subcontract resulted in a delay to the initiation of AP-105 Tank Farm upgrades design.
- The Single Pass Flow-Through (SPFT) testing being performed by the Vitreous State Lab (VSL) is making less progress than planned. The original plan assumed that the testing for Glass #1 and Glass #2 would run concurrently; however, due to VSL resource limitations the tests will now be run in series with the testing of Glass #2 completing at the end of the fiscal year.
- The Single Pass Flow-Through (SPFT) and Flow through Coupon Analysis (FTCA) testing being performed by the Pacific Northwest National Lab (PNNL) started approximately two months later than planned due to delayed glass selection at the beginning of the fiscal year as well as prolonged test set-up and glass preparation.
- A delayed start to the fabrication of the Hanford Waste End Effector (HWEE).

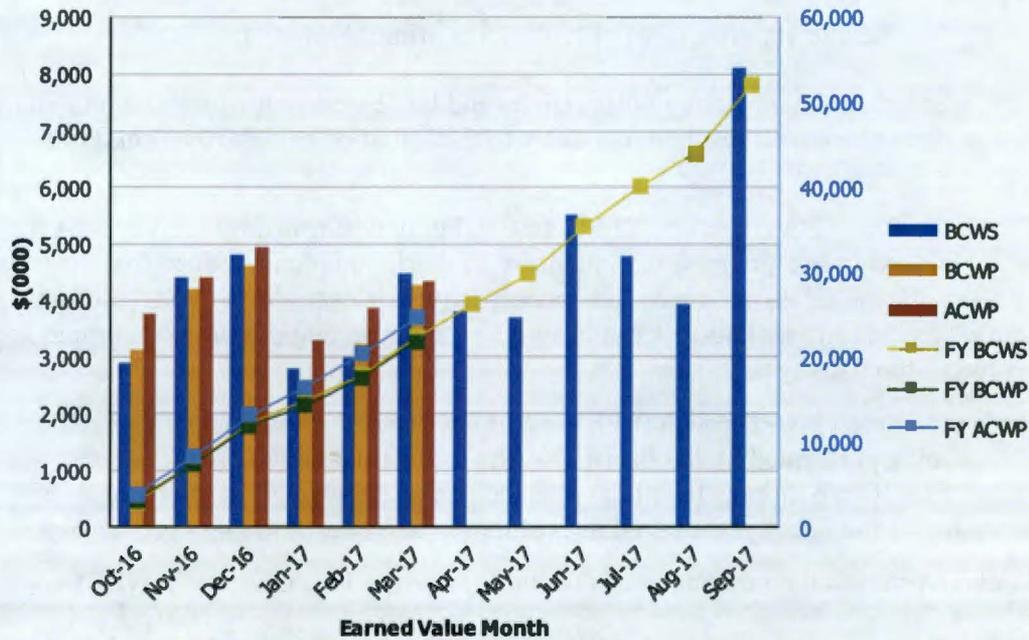
The **unfavorable** cost variance (CV) of (\$7K) is below the reporting threshold and does not require a variance narrative.

Earned Value Data: Fiscal Year 2017

March-17

**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 2016	\$2,889	\$3,131	\$3,770	1.08	0.83	\$2,889	\$3,131	\$3,770	1.08	0.83
Nov 2016	\$4,391	\$4,193	\$4,400	0.95	0.95	\$7,280	\$7,324	\$8,170	1.01	0.90
Dec 2016	\$4,796	\$4,620	\$4,950	0.96	0.93	\$12,076	\$11,944	\$13,119	0.99	0.91
Jan 2017	\$2,804	\$2,370	\$3,297	0.85	0.72	\$14,880	\$14,314	\$16,417	0.96	0.87
Feb 2017	\$2,999	\$3,220	\$3,867	1.07	0.83	\$17,879	\$17,534	\$20,284	0.98	0.86
Mar 2017	\$4,462	\$4,265	\$4,328	0.96	0.99	\$22,342	\$21,799	\$24,612	0.98	0.89
Apr 2017	\$3,794			0.00	0.00	\$26,136			0.00	0.00
May 2017	\$3,684			0.00	0.00	\$29,820			0.00	0.00
Jun 2017	\$5,531			0.00	0.00	\$35,350			0.00	0.00
Jul 2017	\$4,765			0.00	0.00	\$40,115			0.00	0.00
Aug 2017	\$3,945			0.00	0.00	\$44,060			0.00	0.00
Sep 2017	\$8,099			0.00	0.00	\$52,159			0.00	0.00
<b>CTD</b>	<b>\$77,951</b>	<b>\$75,433</b>	<b>\$81,360</b>	<b>0.97</b>	<b>0.93</b>					

ACWP actual cost of work performed  
 BCWP budgeted cost of work performed  
 BCWS budgeted cost of work scheduled  
 CPI cost performance index

CTD contract to date  
 EVMS Earned Value Management System  
 FY fiscal year  
 SPI schedule performance index

**Deputy Federal Project Director:** Janet Diediker

**Treat Waste (5.5)**

The March 2017 variances below have no impacts on TPA milestones.

The **unfavorable** schedule variance (SV) of (\$197K) is due to:

- The schedule for the waste transfer hydraulic transient analysis (HTA) was based on early review of the draft calculations with accelerated comment disposition and the selection of mitigation strategies. Due to the extent of the initial draft comments, the mitigation selection has taken longer than initially anticipated. This resulted in a delay to the scheduled completion of these calculations.

The **unfavorable** cost variance (CV) of (\$63K) is due to:

- The Preliminary Design and Design Project support work scope required additional resources to develop the extensive documentation required for the 60 percent Part B Design Review. The record comment dispositions required additional effort as well. The hourly rates for the review team were higher than estimated for these efforts which also included Project Technical Changes Notices, detailed schedules and evaluations relative to Build to Print (BTP) scope changes from the original strategy.