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**FINAL**

**Office of River Protection**

**Tri-Party Agreement**

**Report**

**April<sup>1</sup> 2017**



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<sup>1</sup> The narrative descriptions of progress in this report cover the period from March 01–31, 2017. Earned Value Management System data and descriptions cover the period of February 01–28, 2017.

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

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## 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	Submit Comp. Permit Modification Request for Tiers 1,2,3	09/30/2015		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-045-62	Phase 2 Corrective Measures Implementation Work Plan For WMA-C	6 mo after CMS appr. (M-045-61A)		On Schedule
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-045-56M	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
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.

CMS corrective measures study.

CR change request.

DOE U.S. Department of Energy.

Ecology Washington State Department of Ecology.

HFFACO Hanford Federal Facility Agreement and Consent Order.

IQRPE independent qualified registered professional engineer.

RCRA *Resource Conservation and Recovery Act.*

RFI RCRA Facility Investigation.

SST single-shell tank.

WTP Waste Treatment and Immobilization Plant.

WMA waste management area.

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 cases 2 and 9 was completed and the results were reviewed by the U.S. Department of Energy, Office of River Protection (ORP) and the Washington State Department of Ecology (Ecology), in March.
- Draft baseline case analysis 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.
- Complete scenario modeling and life-cycle cost modeling by April 10, 2017.

### **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 immediately follow EC-06.
FY 2018	EC-08	AP 106/107 Blend	AP-103	Will require blending of waste in 102-AW, sampling, and sampling 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
- Extend vessel vent stack height.

**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)
Volume (as of April 2, 2017)	~ 5.78 Mgal	~ 1.01 Mgal	~ 7.59 Mgal
AZ-301 Tanker Shipments	-	-	-
MWT-31 and 34 Leachate	~ 126,000 gal	-	~ 98,000 gal
Other (e.g., 325 Building Totes)	-	-	-
242-A Evaporator Campaigns	-	-	-

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

### Significant Past Accomplishments:

- Total FY 2017 volume processed (as of April 2, 2017): 2,699,000 gallons.
- LERF Basin 43 waste transfer pump replaced; testing completed on March 16, 2017.

### 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
- Initiate LERF Basin 42 waste processing through the ETF
- LERF basin cover procurement (e.g., issue request for proposal, award contract, etc.).

### Issues:

- None.

## Tank System Update

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Dusty Stewart

### Significant Past Accomplishments

Double-Shell Tank (DST) Integrity:

- Enhanced annulus video inspections:
  - Completed the inspection of AY-101.

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; Meier Architecture Engineering (Meier) was provided with the 242-A Project B-534 and 242-S Certified Vendor Information files containing major process equipment nominal wall thickness data to use for their estimated remaining useful life projection; and documentation of the functional operability checks for instrumentation used to maintain compliance with environmental regulations. Meier participated in the coating and liner inspection of the condenser room and the evaporator room; the inspections included followup on status of the remaining open observations from the 2007 IQRPE report. The E-A-1 reboiler fluorescein dye 24-hour leak test and C-A-1 vapor-liquid separator 24-hour static leak test are scheduled for completion prior to introducing Evaporator Campaign EC-06 hot feed to the facility. Work started 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.
- The initial planning for the IQRPE report for the 219-S facility at the 222-S Laboratory is continuing.
- The strategy for the 2018 IQRPE report for the SSTs has been laid out.

### 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 (complete)
  - 241-AY-101 (complete)
  - 241-AZ-101 (complete)
  - 241-AZ-102 (complete).
- 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 being drafted)
  - 241-AY-101
  - 241-AZ-101.

#### SST Integrity:

- The FY 2016 SST Visual Inspection Report (RPP-RPT-59272) is in review at Washington River Protection Solutions LLC (WRPS). 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-BX-107
  - 241-BY-109
  - 241-S-104
  - 241-SX-110
  - 241-T-104
  - 241-T-106
  - 241-T-109
  - 241-TX-105
  - 241-TX-106
  - 241-TX-109
  - 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.
  - A report has been drafted to document the exhauster operation and currently in the WRPS review process.

**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:**

- Prepare an integrity assessment plan for the SST IQRPE assessment
- Award a contract to an IQRPE.

### **Issues:**

- None.

## In-Tank Characterization and Summary

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Dusty Stewart

### Accomplishments:

For the period from March 01 through March 31, 2017, the following reports were completed or issued:

- Completed RPP-RPT-59918, *Derivation of Best-Basis Inventory for Tank 241-BX-104 as of January 1, 2017*, Rev 0.
- Completed RPP-RPT-59906, *Derivation of Best-Basis Inventory for Tank 241-U-103 as of February 1, 2017*, Rev 0.
- Completed RPP-RPT-59892, *Derivation of Best-Basis Inventory for Tank 241-A-101 as of January 1, 2017*, Rev 0.
- Completed RPP-RPT-59933, *Derivation of Best-Basis Inventory for Tank 241-U-109 as of February 1, 2017*, Rev 0.
- Completed RPP-RPT-59896, *Derivation of Best-Basis Inventory for Tank 241-U-102 as of January 1, 2017*, Rev 0.
- Completed RPP-RPT-48025, *Derivation of Best-Basis Inventory for Tank 241-S-102 as of January 1, 2017*, Rev 1.
- Completed RPP-RPT-59955, *Derivation of Best-Basis Inventory for Tank 241-BX-105 as of February 1, 2017*, Rev 0.
- Completed RPP-RPT-59923, *Derivation of Best-Basis Inventory for Tank 241-TX-104 as of February 1, 2017*, Rev 0.
- Completed RPP-RPT-59837, *Derivation of Best-Basis Inventory for Tank 241-B-111 as of January 1, 2017*, Rev 0.
- Completed RPP-RPT-59973, *Derivation of Best-Basis Inventory for Tank 241-C-103 as of March 1, 2017*, Rev 0.
- Completed RPP-RPT-59897, *Derivation of Best-Basis Inventory for Tank 241-U-105 as of March 1, 2017*, Rev 0.
- Completed RPP-PLAN-55317, *Sampling and Analysis Plan for Tank 241-AZ-301 Liquid*, Rev. 4.
- Completed RPP-PLAN-61419, *Grab Sampling and Analysis Plan for the 241-AZ-101 Leak Detection Pit*, Rev. 0.
- Completed HNF-EP-0182, *Waste Tank Summary Report for Month Ending January 31, 2017*, Rev 349.

- RPP-RPT-59865, *Final Report for AZ-301 Catch Tank Liquid Samples Taken December 2016*, Rev 0, has been released to ORP for review.
- RPP-RPT-59115, *Final Analytical Report for Tank 241-C-105 Solid Waste Samples in Support of Retrieval Operations*, Rev 2, has been released to ORP for review.

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

**Tank sampling:**

- Tank 241-AW-104 grab sampling is planned for April 2017.
- Tank 241-AP-105 grab sampling is planned to for April 2017.
- 241-AZ-101 Leak Detection Pit grab sampling is planned for April 2017.
- Tank 241-AY-102 solids grab sampling is planned for May 2017.
- Tank 241-AP-107 grab sampling is planned for June 2017.
- Tank 241-C-105 grab sampling is planned for August 2017.
- Tank 241-AN-107 grab sampling is planned for August 2017.

**Best-Basis Inventory updates:**

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

- |              |              |
|--------------|--------------|
| • 241-A-101  | • 241-TX-104 |
| • 241-B-111  | • 241-U-102  |
| • 241-BX-104 | • 241-U-103  |
| • 241-BX-105 | • 241-U-105  |
| • 241-C-103  | • 241-U-109. |
| • 241-S-102  |              |

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

- |              |               |
|--------------|---------------|
| • 241-AP-108 | • 241-BX-107. |
|--------------|---------------|

**Data Quality Objectives updates:**

- 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 and is planned to be completed in April 2017.

**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 complete permit modification requests for Tiers 1, 2, and 3 of the SST System**  
Due: September 30, 2015  
Status: A tentative agreement between Ecology and DOE-ORP to resolve this dispute was signed November 22, 2016 (16-TF-0127, "Transmittal of Tentative Agreement on Negotiations of Hanford Federal Facility and Consent Order Revisions on Interim Milestone M-045-82, Submit Complete Permit Modification Requests for Tiers 2 & 3 of the Single-Shell Tank System to Support Final Closure Requirements for Waste Management Area C"). The tentative agreement is to implement *Hanford Federal Facility Agreement and Consent Order* (HFFACO) Change Control Form M-45-16-01 to (1) modify the M-045-82 milestone for submittal of the draft Tier 2 closure plan, (2) create a new milestone (M-045-82A) to submit the draft Tier 3 closure plans for the C-200 tanks, (3) modify the M-045-62 milestone to require submittal of a Tier 3 closure plan for corrective measures agreed upon through a corrective measures implementation work plan, and (4) modify the M-045-83 milestone for completion of closure of Waste Management Area C (WMA-C). Public review of the tentative agreement was completed on March 17, 2017, and a responsiveness summary is being prepared.
- M-045-62**      **Submit to Ecology for review and approval as an agreement primary document, a Phase 2 Corrective Measures Implementation Work Plan for WMA-C**  
Due: Six months after the approval of the corrective measures study submitted under milestone M-045-61A.

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-045-84**      **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.
- The 45-day public comment period for the M-045-82 HFFACO Change Control Form (M-45-16-01) will end on March 17, 2017.
- 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:

- 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.

February-17										
	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
CM	52,366	47,088	45,690	(5,278)	1,398	0.90	1.05			
FYTD	233,363	212,975	201,699	(20,388)	11,276	0.91	1.06	633,158		
CTD	3,689,313	3,648,110	3,610,562	(41,203)	37,548	0.99	1.01	4,757,986	4,769,373	(11,388)

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        contract 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.

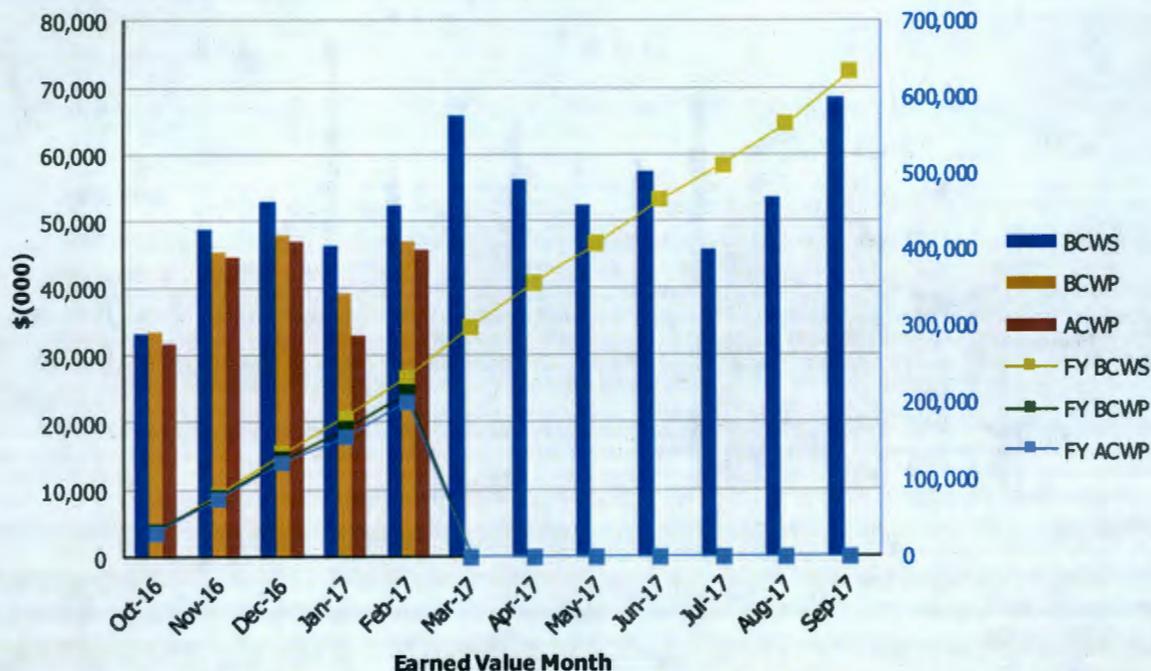
### EXC-01a: Fiscal Year Cost and Schedule Report

Earned Value Data: Fiscal Year 2017

February-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	\$65,718	\$0	\$0	0.00	0.00	\$299,082	\$0	\$0	0.00	0.00
Apr 2017	\$56,239	\$0	\$0	0.00	0.00	\$355,321	\$0	\$0	0.00	0.00
May 2017	\$52,368	\$0	\$0	0.00	0.00	\$407,688	\$0	\$0	0.00	0.00
Jun 2017	\$57,513	\$0	\$0	0.00	0.00	\$465,202	\$0	\$0	0.00	0.00
Jul 2017	\$45,745	\$0	\$0	0.00	0.00	\$510,947	\$0	\$0	0.00	0.00
Aug 2017	\$53,659	\$0	\$0	0.00	0.00	\$564,606	\$0	\$0	0.00	0.00
Sep 2017	\$68,551	\$0	\$0	0.00	0.00	\$633,158	\$0	\$0	0.00	0.00

CTD	\$3,689,313	\$3,648,110	\$3,610,562	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

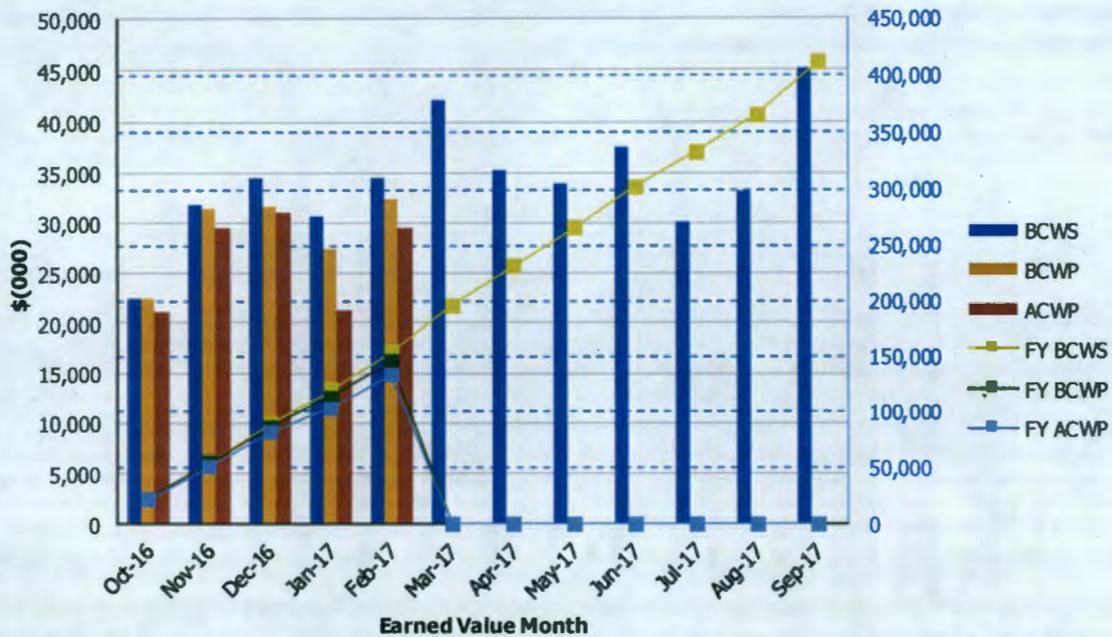
**EXC-01a: Fiscal Year Cost and Schedule Report**

Earned Value Data: Fiscal Year 2017

February-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	\$42,094	\$0	\$0	0.00	0.00	\$196,012	\$0	\$0	0.00	0.00
Apr 2017	\$35,240	\$0	\$0	0.00	0.00	\$231,252	\$0	\$0	0.00	0.00
May 2017	\$33,844	\$0	\$0	0.00	0.00	\$265,095	\$0	\$0	0.00	0.00
Jun 2017	\$37,494	\$0	\$0	0.00	0.00	\$302,589	\$0	\$0	0.00	0.00
Jul 2017	\$30,122	\$0	\$0	0.00	0.00	\$332,711	\$0	\$0	0.00	0.00
Aug 2017	\$33,095	\$0	\$0	0.00	0.00	\$365,806	\$0	\$0	0.00	0.00
Sep 2017	\$45,246	\$0	\$0	0.00	0.00	\$411,052	\$0	\$0	0.00	0.00
<b>CTD</b>	<b>\$2,452,596</b>	<b>\$2,437,791</b>	<b>\$2,400,159</b>	<b>0.99</b>	<b>1.02</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

**Federal Project Director:** Ellen Mattlin

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

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

The **unfavorable** schedule variance (SV) of (\$2,057K) is primarily due to the following:

- Delayed start of ultrasonic testing at SST 241-AN-106 and DST in-pit heating installation in the AP Farm due to adverse weather conditions.
- Delay of contract award for design modifications for the tank farms public announcement system for event notification. Additional considerations and coordination efforts were required to develop the scope.

The **favorable** cost variance (CV) of \$2,830K is primarily due to the following:

- Less resources required than planned in retrieval as the operating periods were performed in February as a result of the limits of technology reached on February 15, 2017.

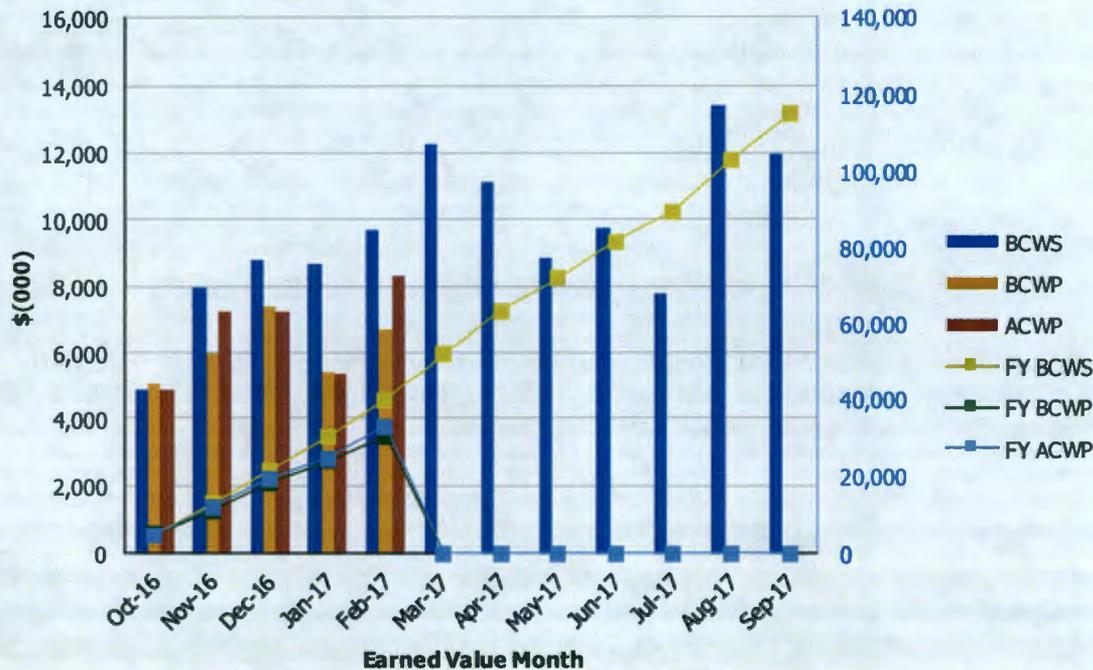
### EXC-01a: Fiscal Year Cost and Schedule Report

Earned Value Data: Fiscal Year 2017

February-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	\$12,286	\$0	\$0	0.00	0.00	\$52,160	\$0	\$0	0.00	0.00
Apr 2017	\$11,137	\$0	\$0	0.00	0.00	\$63,298	\$0	\$0	0.00	0.00
May 2017	\$8,865	\$0	\$0	0.00	0.00	\$72,163	\$0	\$0	0.00	0.00
Jun 2017	\$9,738	\$0	\$0	0.00	0.00	\$81,901	\$0	\$0	0.00	0.00
Jul 2017	\$7,769	\$0	\$0	0.00	0.00	\$89,670	\$0	\$0	0.00	0.00
Aug 2017	\$13,387	\$0	\$0	0.00	0.00	\$103,057	\$0	\$0	0.00	0.00
Sep 2017	\$11,973	\$0	\$0	0.00	0.00	\$115,030	\$0	\$0	0.00	0.00

CTD	\$749,042	\$728,544	\$753,700	0.97	0.97
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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.

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

**Federal Program Manager:** Jeff Rambo

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

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

The **unfavorable** SV of (\$3,009K) is due to:

- Winter weather and beryllium concerns continue to limit, and at times, suspend field activities within AX Farm and C Farm.
- In-tank equipment removals within AX Farm continue to be delayed as a result of the stop work prohibiting the operation of the ventilation system (as a waste disturbing activity).

The **unfavorable** CV of (\$1,634K) is due to:

- Labor inefficiencies as a result of ice and snow removal. Crews spent a good portion of the month removing snow and ice to maintain surveillance and monitoring capabilities.
- Previously completed field work packages for AX Farm and C Farm required revisions as a result of beryllium concerns; these revisions required additional labor hours for work planners not originally budgeted.

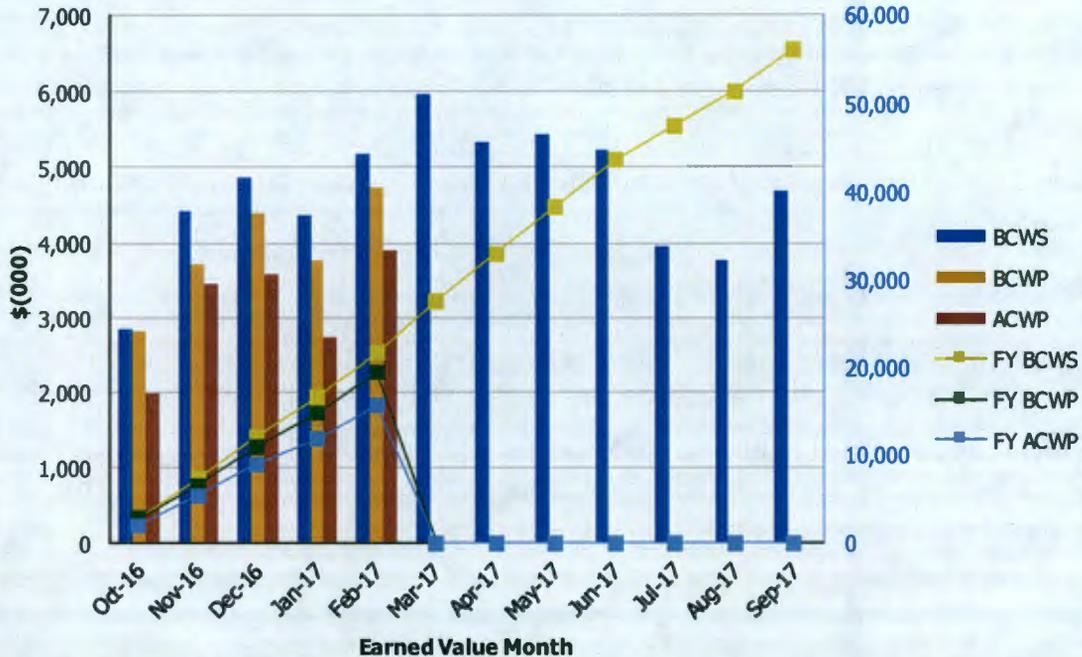
**EXC-01a: Fiscal Year Cost and Schedule Report**

Earned Value Data: Fiscal Year 2017

February-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	\$5,970	\$0	\$0	0.00	0.00	\$27,662	\$0	\$0	0.00	0.00
Apr 2017	\$5,352	\$0	\$0	0.00	0.00	\$33,014	\$0	\$0	0.00	0.00
May 2017	\$5,456	\$0	\$0	0.00	0.00	\$38,470	\$0	\$0	0.00	0.00
Jun 2017	\$5,246	\$0	\$0	0.00	0.00	\$43,716	\$0	\$0	0.00	0.00
Jul 2017	\$3,948	\$0	\$0	0.00	0.00	\$47,664	\$0	\$0	0.00	0.00
Aug 2017	\$3,768	\$0	\$0	0.00	0.00	\$51,432	\$0	\$0	0.00	0.00
Sep 2017	\$4,684	\$0	\$0	0.00	0.00	\$56,116	\$0	\$0	0.00	0.00

CTD	\$394,077	\$390,497	\$360,510	0.99	1.08
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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      |

**Federal Program Manager:** Kaylin Burnett

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

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

The **unfavorable** SV of (\$433K) 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 **favorable** CV of \$850K is primarily due to many small favorable variances across the projects but two of the larger positive variances were:

- Resource efficiencies realized by the Pacific Northwest National Lab (PNNL).
- Hanford Site Facility Closures due to adverse weather conditions.

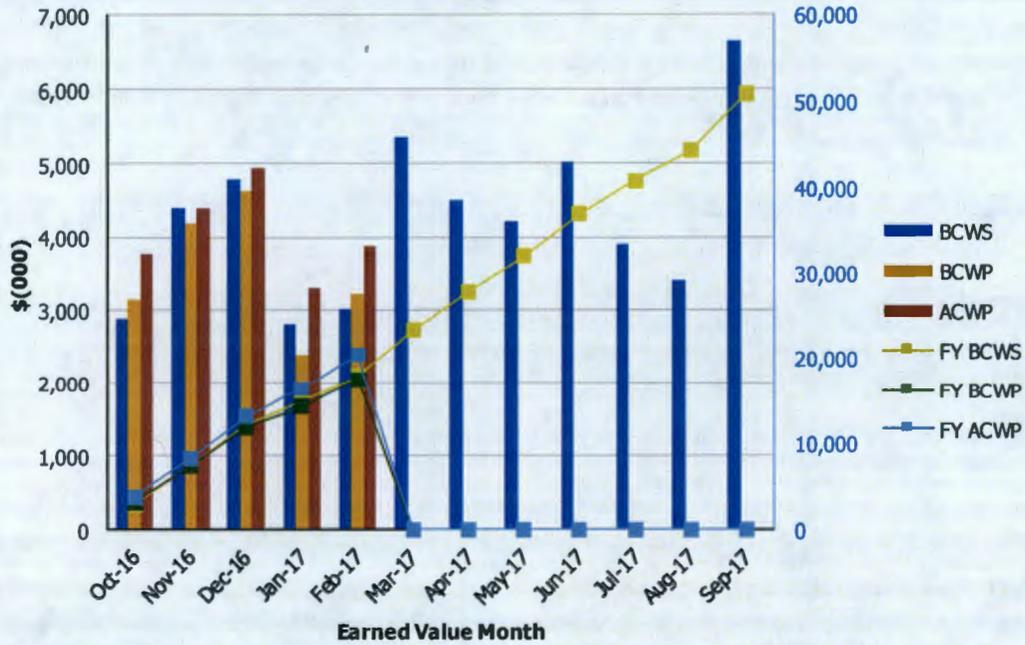
**EXC-01a: Fiscal Year Cost and Schedule Report**

Earned Value Data: Fiscal Year 2017

February-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	\$5,368	\$0	\$0	0.00	0.00	\$23,248	\$0	\$0	0.00	0.00
Apr 2017	\$4,509	\$0	\$0	0.00	0.00	\$27,757	\$0	\$0	0.00	0.00
May 2017	\$4,203	\$0	\$0	0.00	0.00	\$31,960	\$0	\$0	0.00	0.00
Jun 2017	\$5,036	\$0	\$0	0.00	0.00	\$36,996	\$0	\$0	0.00	0.00
Jul 2017	\$3,906	\$0	\$0	0.00	0.00	\$40,902	\$0	\$0	0.00	0.00
Aug 2017	\$3,410	\$0	\$0	0.00	0.00	\$44,312	\$0	\$0	0.00	0.00
Sep 2017	\$6,648	\$0	\$0	0.00	0.00	\$50,959	\$0	\$0	0.00	0.00
<b>CTD</b>	<b>\$73,488</b>	<b>\$71,168</b>	<b>\$77,032</b>	<b>0.97</b>	<b>0.92</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

**Deputy Federal Project Director:** Janet Diediker

**Treat Waste (5.5)**

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

The **favorable** SV of \$221K is due to:

- Long lead procurements work scope previously behind schedule was performed in the current period. The subcontract awards for the cross flow filter and ion exchange column were initially delayed due to extensive negotiations with the vendor. The contracts were awarded in February and the vendor is performing work scope planned in prior periods, primarily completion of the final work plan.

The **unfavorable** CV of (\$647K) is due to:

- Preliminary design and design project support work scope required additional resources to support and attend the 60 percent Part A design review. Subject matter experts throughout the company were asked to participate in and attend the review due to their knowledge and expertise of the Low-Activity Waste Pretreatment System design. Hourly rates for these experts exceeded the hourly rate used for planning/estimating the work scope. Additionally, revisions to architectural drawings have been required to ensure alignment with structural drawings for the 60 percent Part A design review.