

---

FINAL

Office of River Protection  
Tri-Party Agreement  
Report  
March<sup>1</sup> 2018



---

<sup>1</sup> The narrative descriptions of progress in this report cover the period from February 1-28, 2018. Earned Value Management System data and descriptions cover the period of January 1-31, 2018.

1248288

| <b><u>TOPIC</u></b>  | <b><u>PAGE</u></b> |
|--|--------------------|
| Acronyms and Abbreviations .....   | 2                  |
| Administrative Items/Milestone Status.....                                       | 3                  |
| System Plan.....   | 5                  |
| Acquisition of New Facilities .....  | 6                  |
| Supplemental Treatment and Part B Permit Applications .....                      | 8                  |
| Direct Feed Low-Activity Waste Projects .....                                    | 10                 |
| 242-A Evaporator Status.....   | 12                 |
| Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility..... | 13                 |
| Tank System Update .....   | 15                 |
| Independent Qualified Registered Professional Engineer Activities.....           | 17                 |
| Single-Shell Tank Integrity Assurance .....                                      | 18                 |
| In-Tank Characterization and Summary .....                                       | 19                 |
| Single-Shell Tank Closure Program .....  | 21                 |
| Single-Shell Tank Retrieval Program .....  | 26                 |
| Tank Operations Contract Overview .....  | 27                 |

### Acronyms and Abbreviations

---

|               |  |
|---------------|--|
| CV .....      | cost variance  |
| DOE .....     | U.S. Department of Energy                              |
| Ecology ..... | Washington State Department of Ecology                 |
| FY .....      | fiscal year  |
| IQRPE .....   | independent qualified registered professional engineer |
| LAWPS .....   | Low-Activity Waste Pretreatment System                 |
| LERF .....    | Liquid Effluent Retention Facility                     |
| ORP .....     | U.S. Department of Energy, Office of River Protection  |
| SST.....      | single-shell tank                                      |
| SV .....      | schedule variance                                      |
| TPA .....     | Tri-Party Agreement                                    |
| TSCR.....     | tank-side cesium removal                               |
| WMA .....     | waste management area                                  |
| WMA-C .....   | C Tank Farm waste management area                      |
| WRPS.....     | Washington River Protection Solutions LLC              |
| WTP .....     | Waste Treatment and Immobilization Plant               |
| DFLAW .....   | direct feed Low Activity Waste                         |

### Administrative Items/Milestone Status

| Milestone               | Title   | Due Date         | TPA Project Manager | Status/<br>Completion Date |
|-------------------------|---|------------------|---------------------|----------------------------|
| <b>Prior Years</b>      |   |                  |                     |                            |
| M-062-45-T01            | Complete Negotiations 6-Months After Last Issuance of System Plan                                       | 04/30/2015       | Pfaff, Stephen H    | In<br>Abeance              |
| M-062-45-ZZ             | Negotiate a One Time Supplemental Treatment Selection   | 04/30/2015       | Pfaff, Stephen H    | In<br>Abeance              |
| M-062-45-ZZ-A           | Convert the M-062-31-T01 Through M-062-34-T01 to Interim Milestones                                     | 04/30/2015       | Pfaff, Stephen H    | In<br>Abeance              |
| M-047-07                | CD-1 for Secondary Liquid Waste Treatment and CR for CD-2 to Ecology                                    | 03/31/2016       | Diediker, Janet A   | In<br>Abeance              |
| M-090-13                | CD-1 for Interim Hanford Storage Project and CR for CD-2 to Ecology                                     | 03/31/2016       | Diediker, Janet A   | In<br>Abeance              |
| M-062-31-T01            | Complete Final Design & Submit RCRA Part B Permit Mod Request for Enhanced WTP & Supplemental Treatment | 04/30/2016       | Pfaff, Stephen H    | In<br>Abeance              |
| M-045-62                | Submit to Ecology the draft Tier 3 closure plans to implement corrective measures                       | TBD <sup>1</sup> | Bovier, Jan B       | On<br>Schedule             |
| M-045-83                | Complete the Closure of WMA-C   | TBD <sup>1</sup> | Bovier, Jan B       | On<br>Schedule             |
| <b>Fiscal Year 2018</b> |   |                  |                     |                            |
| M-062-40F               | Submit System Plan  | 10/31/2017       | Burnett, Kaylin W   | Completed<br>10/31/2017    |
| M-062-32-T01            | Start Construction of Supplemental Vitrification Treatment Facility and/or WTP Enhancements             | 04/20/2018       | Pfaff, Stephen H    | In<br>Abeance              |

| Milestone               | Title  | Due Date   | TPA Project Manager | Status/Completion Date |
|-------------------------|--|------------|---------------------|------------------------|
| M-045-92O               | Barrier 3 Design/Monitoring Plan Submitted to Ecology              | 06/30/2018 | Bovier, Jan B       | At Risk                |
| M-045-56N               | Ecology and DOE Agree, at a Minimum, to Meet Yearly (by July)      | 07/31/2018 | Bovier, Jan B       | On Schedule            |
| M-045-91I               | Provide IQRPE Certification of SSTs Structural Integrity           | 09/30/2018 | Stewart, Dustin M   | On Schedule            |
| M-045-92T               | Barrier 3 Design/Monitoring Plan Approved by Ecology               | 09/30/2018 | Bovier, Jan B       | At Risk                |
| <b>Fiscal Year 2019</b> |  |            |                     |                        |
| M-045-92N               | Complete Construction of Barriers 1 and 2 in 241-SX Farm           | 10/31/2018 | Bovier, Jan B       | On Schedule            |
| M-045-92Q               | Barrier 4 Design/Monitoring Plan Submitted to Ecology              | 06/30/2019 | Bovier, Jan B       | At Risk                |
| M-045-56O               | Ecology and DOE Agree, at a Minimum, to Meet Yearly (by July)      | 07/31/2019 | Bovier, Jan B       | On Schedule            |
| M-045-91E3              | Provide SST Farms Dome Deflection Surveys Every 2 Years to Ecology | 09/30/2019 | Johnson, Jeremy M   | On Schedule            |
| M-045-92U               | Barrier 4 Design/Monitoring Plan Approved by Ecology               | 09/30/2019 | Bovier, Jan B       | At Risk                |

<sup>1</sup> To be established in accordance with the date identified in the M-045-82 Tier 2 closure plan.

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

CR = change request.

DOE = U.S. Department of Energy.

Ecology = Washington State Department of Ecology.

IQRPE = independent qualified registered professional engineer.

RCRA = *Resource Conservation and Recovery Act.*

SST = single-shell tank.

TBD = to be determined.

TPA = Tri-Party Agreement.

WTP = Waste Treatment and Immobilization Plant.

WMA-C = C Tank Farm waste management area.

## System Plan

---

**One System Division Director:** Jon Peschong

**Federal Program Manager:** Kaylin Burnett

**Ecology Project Manager:** Dan McDonald, Jeff Lyon

### Significant Past Accomplishments

- None.

### Significant Planned Actions in the Next Six Months

- Continue negotiations of the M-062-45 milestone and related milestones with intent to utilize information from the *River Protection Project System Plan, Rev. 8*.

### Issues

- None.

## Acquisition of New Facilities

---

**Tank Farms Assistant Manager:** Glyn Trenchard  
**Deputy Federal Project Director:** Janet Diediker  
**Ecology Project Manager:** Dan McDonald, Jeff Lyon

- M-047-07**      **CD-1 for Secondary Liquid Waste Treatment and CR for CD-2 to Ecology**  
Due: March 31, 2016.  
Status: In Abeyance. Decision document 2016-005, *Hanford Federal Facility Agreement and Consent Order Interagency Management Integration Team (IAMIT) Decision / Determination / Action Agreement*, 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**      **CD-1 for Interim Hanford Storage Project and CR for CD-2 to ECY**  
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**

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

## Supplemental Treatment and Part B Permit Applications

---

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Project Director:** Steve Pfaff

**Ecology Project Manager:** Dan McDonald

**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, in accordance with a decision by the Interagency Management Integration Team.

## **Direct Feed Low-Activity Waste Projects**

---

**Tank Farms Assistant Manager:** Glyn Trenchard  
**LAWPS Federal Manager:** Steve Pfaff  
**TSCR Federal Manager:** Sahid Smith  
**Ecology Project Manager:** Dan McDonald, Jeff Lyon

This section only covers the Tank Farm scope of the direct feed Law Activity Waste (DFLAW) mission. Please refer to the Consent Decree Monthly Report for the Waste Treatment and Immobilization Plant scope pertaining to DFLAW.

### **Significant Past Accomplishments**

#### Low-Activity Waste Pretreatment System:

- Washington River Protection Solutions LLC (WRPS) continued work activities/proposal development for the optimized Low-Activity Waste Pretreatment System (LAWPS) facility, using a non-elutable ion exchange media.

#### Tank-Side Cesium Removal:

- On January 4, 2018, WRPS submitted a proposal to the U.S. Department of Energy, Office of River Protection (ORP) for the tank-side cesium removal (TSCR) technology demonstration. A technical evaluation of the proposal is underway at ORP.
- On January 17, 2018, WRPS issued a request for proposals for design and fabrication of the TSCR.

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

#### Low-Activity Waste Pretreatment System:

- WRPS to continue design development of the optimized LAWPS facility with a nonelutable ion exchange media
- WRPS to submit contract change proposal for the optimized LAWPS facility with nonelutable ion exchange media

#### Tank-Side Cesium Removal:

- WRPS to complete the engineering procurement specification for the TSCR capability
- WRPS to receive subcontractor proposals for the design and fabrication of TSCR

**Issues**

Low-Activity Waste Pretreatment System:

- None

Tank-Side Cesium Removal:

- None

## 242-A Evaporator Status

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Paul Hernandez

**Ecology Project Manager:** Jeff Lyon

The 242-A Evaporator campaign strategy for fiscal year (FY) 2018 is in the following table:

| Fiscal Year | Campaign No. | Feed Source               | Slurry Tank | Comments  |
|-------------|--------------|---------------------------|-------------|---|
| 2018        | EC-08        | Blend of AP-106<br>AP-107 | AP-103      | 222-S Laboratory analysis is underway. Process Engineering has initiated Process Control Plan development. Activities are on target to allow an April 2018 campaign.  |
| 2018        | EC-09        | Blend of AP-106<br>AP-108 | AP-104      | 242-A Evaporator campaign EC-09 will require blending of waste in Tank AW-106, sampling, and sample analysis prior to campaign start. Waste staging in Tank AW-106 has begun and is on schedule to complete in early March so samples may be obtained. In addition, the waste will need to be transferred from Tank AW-106 to Tank AW-102 (242-A Evaporator feed tank) after EC-08 completes. |

### Significant Past Accomplishments

- Continued sample analysis at 222-S Laboratory in support of EC-08
- Continued replacement of control room air conditioning units.
- Completed effluent sampling station installation.

### Significant Planned Actions in the Next Six Months

- Establish the future campaign and outage scheduling
- Initiated vessel vent continuous air monitor replacement

### Issues

- None

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

**Tank Farms Assistant Manager:** Glyn Trenchard  
**Federal Program Manager:** Richard Valle  
**Ecology Project Manager:** Stephanie Schleif

The Liquid Effluent Retention Facility (LERF) liquid levels, inventory, and received waste are 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.

|   | <b>242AL-42<br/>(Basin 42)</b> | <b>242AL-43<br/>(Basin 43)</b> | <b>242AL-44<br/>(Basin 44)</b> |
|---|--------------------------------|--------------------------------|--------------------------------|
| <b>Total Volume (as of Feb. 28, 2018)</b> | ~ 2.93 Mgal                    | ~ 4.09 Mgal                    | ~ 7.50 Mgal                    |

| <b>Waste Received</b>               |              |   |   |
|-------------------------------------|--------------|---|---|
| AZ-301 Tanker Shipments             | -            | - | - |
| MWT-31 and 34 Leachate              | ~ 35,000 gal | - |   |
| Other (e.g., Totes, Modutank, SWLL) | ~ 22,800 gal | - |   |
| 242-A Evaporator Campaigns          | -            | - | - |

gal = gallon.

Mgal = million gallons.

MWT = mixed waste trench.

SWLL = solid waste landfill lysimeter

### Significant Past Accomplishments

- Total FY 2018 volume processed (as of February 28, 2018): approximately 600,000 gallons
- Initiated waste processing from Basin 43 through the main treatment train and secondary treatment train.

### Significant Planned Actions in the Next Six Months

- Continue processing LERF Basin 43 waste at Effluent Treatment Facility.
- Continue inter-basin transfer of LERF Basin 42 to LERF Basin 43.
- Enter plant clean-out/outage before initiating LERF Basin 44 waste processing.
- Continue work planning of camera visual inspections in support of the Effluent Treatment Facility Integrity Assessment.

- Begin design, procurement/fabrication, and work planning for the second cover replacement project at LERF Basin 42. Begin subcontractor training before mobilizing to LERF Basin 42.

#### **Issues**

- The inter-basin transfer from LERF Basin 42 to LERF Basin 43 was halted in late CY 2017 due to investigation of increased leachate level at LERF Basin 43. Additional response actions were implemented to continue pumping the leachate, monitor the leachate sump in-leakage rate, and maintain equipment as needed. In speaking with the vendor who installed the leachate collection system, it is anticipated the leachate rate will not stabilize for several months following the pumping of the excess leachate. Leachate pumping rates in February continued to decrease.

## Tank System Update

---

**Tank Farms Assistant Manager:** Glyn Trenchard  
**Federal Program Manager:** Dusty Stewart  
**Ecology Project Manager:** Jeff Lyon, Cheryl Whalen

Reports are identified as completed (internal access only) or released (external access).

### Significant Past Accomplishments

#### Double-Shell Tank Integrity:

- Corrosion testing contracts with DNV-GL Laboratory and Savannah River National Laboratory are in place and ORP has received a test plan for FY 2018. Emphasis this year is on new specification development to accommodate DFLAW returns and secondary liner testing.
- Tank AY-101 enhanced annulus visual inspections were performed. Videos were reviewed by WRPS Engineering and no evidence of a primary tank leak was observed.

#### Single-Shell Tank Integrity:

- WRPS awarded the contract for the single-shell tank (SST) integrity assessment project as described in M-045-91I (assessment of structural integrity) to Meier Architecture Engineering. The integrity assessment activities are underway.
- Completed in-tank video inspections for the tanks B-104, B-105, TX-105, TX-106, TX-109, TX-118, S-107, SX-101, SX-103, SX-105, SX-113, and U-103. Videos are currently being reviewed by WRPS Engineering.

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

#### Double-Shell Tank Integrity:

- Enhanced annulus visual inspections are planned for these tanks in FY 2018:
 

|              |               |
|--------------|---------------|
| – 241-AP-102 | – 241-AP-108  |
| – 241-AP-103 | – 241-AW-101  |
| – 241-AP-104 | – 241-AW-102  |
| – 241-AP-105 | – 241-AW-104. |
| – 241-AP-106 |               |
- Ultrasonic testing inspections are planned for these tanks in FY 2018:
 

|                        |               |
|------------------------|---------------|
| – 241-AY-101 (ongoing) | – 241-AP-107. |
| – 241-AZ-101           |               |

- In response to receipt of the Ecology letter 18-NWP-015, “Transmittal of Fourth Mutual Letter of Agreement for 241-AY-102 for Signatures” dated January 29, 2018, the Settlement Agreement driven video inspections of the Tank AY-102 annulus have been discontinued. Periodic monitoring of the waste accumulation in the annulus will continue on a schedule to be determined by WRPS Engineering.
- Continuing annual comprehensive inspection of Tank AY-101 annulus.
- Secondary liners:
  - Perform laboratory testing of secondary liners for corrosion from moisture in the soil and for use of corrosion inhibitors. Both are methods that could be used to protect the secondary liner.
  - Model potential water ingress routes into the annulus systems: ongoing.
  - Perform a visual inspection of the Tank 241-AP-102 annulus floor; scheduled for FY 2018.
  - Perform another ultrasonic test scan of the area in question and additional areas in all four quadrants of the Tank 241-AP-102 annulus: scheduled for FY 2019.<sup>2</sup>
  - Investigate and develop nondestructive examination methods, in particular long-range, guided wave ultrasonic testing to support more comprehensive examination capability for double-shell tank bottoms. Field testing could begin as early as FY 2019.<sup>3</sup>

Single-Shell Tank Integrity:

The following in-tank video inspections have been performed in FY 2018:

- |              |             |              |              |
|--------------|-------------|--------------|--------------|
| • 241-B-104  | (completed) | • 241-SX-113 | (completed)  |
| • 241-B-105  | (completed) | • 241-TX-105 | (completed)  |
| • 241-S-107  | (completed) | • 241-TX-106 | (completed)  |
| • 241-SX-101 | (completed) | • 241-TX-109 | (completed)  |
| • 241-SX-103 | (completed) | • 241-TX-118 | (completed)  |
| • 241-SX-105 | (completed) | • 241-U-103  | (completed). |

<sup>2</sup> Will not occur in the next six months, included for information only.

<sup>3</sup> Will not occur in the next six months, included for information only.

## **Independent Qualified Registered Professional Engineer Activities**

---

- Work continues on RPP-PLAN-61349, *Effluent Treatment Facility Integrity Program Plan*. The plan will support the FY 2019 IQRPE Effluent Treatment Facility integrity assessment.
- WRPS awarded the contract for the 219-S integrity assessment project to Meier Architecture Engineering. Planning is underway for conducting visual, ultrasonic, and leak tests in the facility. RPP-PLAN-61634, *219-S Integrity Assessment Plan*, has been released and will serve as a guide for conducting these inspections.
- WRPS awarded the contract for the SST integrity assessment project as described in M-045-91I (assessment of structural integrity) to Meier Architecture Engineering. The integrity assessment activities are underway.

### **Issues:**

#### Double-Shell Tank Integrity:

- None

#### Single-Shell Tank Integrity:

- None

## Single-Shell Tank Integrity Assurance

---

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Dusty Stewart

**Ecology Project Manager:** Jeff Lyon

Reports are identified as completed (internal access only) or released (external access).

**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

- Document RPP-PLAN-61510, *Single-Shell Tank Structural Integrity Assessment Plan*, for the 2018 SST IQRPE report was released. WRPS awarded the contract for the SST integrity assessment project as described in M-045-91I (assessment of structural integrity) to Meier Architecture Engineering.

### Significant Planned Actions in the Next Six Months

- Support IQRPE with continued development of the SST integrity assessment.

### Issues:

- None.

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

---

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Dusty Stewart

**Ecology Project Manager:** Jeff Lyon

### **Significant Past Accomplishments**

For the period from February 1 through February 28, 2018, the following reports were completed (internal access only) or released (external access):

- Released RPP-RPT-44630, *Derivation of Best-Basis Inventory for Tank 241-AY-102 as of January 1, 2018*, Rev. 14
- Released RPP-RPT-49535, *Derivation of Best-Basis Inventory for Tank 241-TX-117 as of January 1, 2018*, Rev. 1
- Released RPP-PLAN-61887, *Tank 241-AW-106 Grab Sampling and Analysis Plan in Support of Evaporator Campaign EC-09*, Rev 0
- Released RPP-RPT-60541, *Tank Core Profile Report for 241-AX Tank Farm*, Rev. 0
- Released HNF-EP-0182, *Waste Tank Summary Report for Month Ending January 31, 2018*, Rev. 361
- Released RPP-RPT-60613, *Solid Phase Characterization of Tank 241-AP-106*, Rev. 0
- Released RPP-RPT-60671, *Final Analytical Report for Tank 241-AP-107 DFLAW Grab Sampling and Analysis Plan – Fiscal Year 2018*, Rev. 0.

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

#### Tank sampling:

- Tank 241-AW-106 liquid grab sampling is planned for March 2018.
- Tank 241-AW-105 liquid grab sampling is planned for March 2018.
- Tank 241-C-105 post-retrieval solids grab sampling is planned for April 2018.
- Tank 241-A-104 solids grab sampling is planned for May 2018.
- Tank 241-A-105 solids grab sampling is planned for June 2018.
- Tank 241-AY-102 solids grab sampling is planned for August 2018.

#### Best-Basis Inventory Updates

Best-basis inventory updates for the following tanks were completed in February 2018:

- 241-AY-102
- 241-TX-117

Best-basis inventory updates for the following tanks are currently planned to be completed in March 2018:

- 241-AN-106
- 241-AN-107
- 241-AP-102
- 241-AP-103
- 241-AP-106
- 241-AW-102
- 241-AX-101
- 241-C-105
- 241-SY-103
- 241-TX-105.

Data Quality Objectives Updates

- None.

**Issues**

- None.

## Single-Shell Tank Closure Program

---

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Jan Bovier

**Ecology Project Manager:** Jeff Lyon

**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-045-62**      **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.

**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 2<sup>nd</sup> SST WMA**  
Due: April 3, 2017.  
Status: Complete (March 14, 2017). Negotiations initiated on March 14, 2017.  
Note: Decision on location of next waste management area (WMA) to be closed needs to be finalized.

**M-045-920**      **Barrier 3 Design and Monitoring Plan submitted to Ecology**  
Due: June 30, 2018.

Status: At Risk. A joint decision between ORP and Ecology regarding the size of the barrier needs to be made to allow the design to progress. ORP sent draft Tri-Party Agreement (TPA) Change Control Form M-45-17-03 to Ecology via email on December 14, 2017. This change control form proposes to modify milestone M-045-92 to incorporate an expansion of barrier design and construction of barriers 1 and 2 in SX Tank Farm; proposes to establish dates for agreement of the surface area to be covered by barrier 3 in TX Tank Farm and barrier 4 in U Tank Farm; and proposes to modify the schedule dates for design and construction of barriers 3 and 4. This change control form would refine and detail the interim surface barrier work to be performed under M-045-92 in order to allow the work to progress in an orderly and timely fashion. Some of the interim dates will need to be adjusted and the entire package will need to be negotiated with Ecology.

**M-045-92T****Barrier 3 Design and Monitoring Plan approved by Ecology**

Due: September 30, 2018.

Status: At Risk. A joint decision between ORP and Ecology regarding the size of the barrier needs to be made to allow the design to progress. ORP sent draft TPA Change Control Form M-45-17-03 to Ecology via email on December 14, 2017. This change control form proposes to modify milestone M-045-92 to incorporate an expansion of barrier design and construction of barriers 1 and 2 in SX Tank Farm; proposes to establish dates for agreement of the surface area to be covered by barrier 3 in TX Tank Farm and barrier 4 in U Tank Farm; and proposes to modify the schedule dates for design and construction of barriers 3 and 4. This change control form would refine and detail the interim surface barrier work to be performed under M-045-92 in order to allow the work to progress in an orderly and timely fashion. Some of the interim dates will need to be adjusted and the entire package will need to be negotiated with Ecology.

**M-045-92N****Complete construction of Barriers 1 and 2 in SX Farm**

Due: October 31, 2018.

Status: On schedule.

**M-045-92Q****Barrier 4 Design and Monitoring Plan submitted to Ecology**

Due: June 30, 2019.

Status: At Risk. A joint decision between ORP and Ecology regarding the size of the barrier needs to be made to allow the design to progress. ORP sent draft TPA Change Control Form M-45-17-03 to Ecology via email on December 14, 2017. This change control form proposes to modify milestone M-045-92 to incorporate an expansion of barrier design and construction of barriers 1 and 2 in SX Tank Farm; proposes to establish dates for agreement of the surface area to be covered by barrier 3 in TX Tank Farm and barrier 4 in U Tank Farm; and proposes to modify the schedule dates for design and construction of barriers 3 and 4. This change control form would refine and detail the interim surface barrier work to be performed under M-045-92 in order to allow the work to progress in an orderly and timely fashion. Some of the interim dates will need to be adjusted and the entire package will need to be negotiated with Ecology.

**M-045-92U****Barrier 4 Design and Monitoring Plan approved by Ecology**

Due: September 30, 2019.

Status: At Risk. A joint decision between ORP and Ecology regarding the size of the barrier needs to be made to allow the design to progress. ORP sent draft TPA Change Control Form M-45-17-03 to Ecology via email on December 14, 2017. This change control form proposes to modify milestone M-045-92 to incorporate an expansion of barrier design and construction of barriers 1 and 2 in SX Tank Farm; proposes to establish dates for agreement of the surface area to be covered by barrier 3 in TX Tank Farm and barrier 4 in U Tank Farm; and proposes to modify the schedule dates for design and construction of barriers 3 and 4. This change control form would refine and detail the interim surface barrier work to be performed under M-045-92 in order to allow the work to progress in an orderly and timely fashion. Some of the interim dates will need to be adjusted and the entire package will need to be negotiated with Ecology.

**M-045-92P****Complete construction of Barrier 3**

Due: October 31, 2019.

Status: At Risk. A joint decision between ORP and Ecology regarding the size of the barrier needs to be made to allow the design to progress. ORP sent draft TPA Change Control Form M-45-17-03 to Ecology via email on December 14, 2017. This change control form proposes to modify milestone M-045-92 to incorporate an expansion of barrier design and construction of barriers 1 and 2 in SX Tank Farm; proposes to establish dates for agreement of the surface area to be covered by barrier 3 in TX Tank Farm and barrier 4 in U Tank Farm; and proposes to modify the schedule dates for design and construction of barriers 3 and 4. This change control form would refine and detail the interim surface barrier work to be performed under M-045-92 in order to allow the work to progress in an orderly and timely fashion. Some of the interim dates will need to be adjusted and the entire package will need to be negotiated with Ecology.

**M-045-92R****Complete construction of Barrier 4**

Due: October 31, 2020.

Status: At Risk. A joint decision between ORP and Ecology regarding the size of the barrier needs to be made to allow the design to progress. ORP sent draft TPA Change Control Form M-45-17-03 to Ecology via email on December 14, 2017. This change control form proposes to modify milestone M-045-92 to incorporate an expansion of barrier design and construction of barriers 1 and 2 in SX Tank Farm; proposes to establish dates for agreement of the surface area to be covered by barrier 3 in TX Tank Farm and barrier 4 in U Tank Farm; and proposes to modify the schedule dates for design and construction of barriers 3 and 4. This change control form would refine and detail the interim surface barrier work to be performed under M-045-92 in order to allow the work to progress in an orderly and timely fashion. Some of the interim dates will need to be adjusted and the entire package will need to be negotiated with Ecology.

**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 to be addressed with the negotiations supporting M-062-45.

Negotiations began on September 8, 2016.

### **Significant Past Accomplishments**

- Began construction of the evapotranspiration basin and associated piping for the SX Tank Farm interim surface barriers. Ecology toured the construction site on December 19, 2017.
- ORP and Ecology agreed to locations for interim barrier 3 (TX Tank Farm) and interim barrier 4 (U Tank Farm) (Milestone M-045-92S) and ORP submitted the proposed change control form (M-45-17-03) for related activities.
- Ecology approved the SX Tank Farm expansion barrier design for construction on January 18, 2018, based on Ecology's review of the 60 percent and 90 percent designs.

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

- Begin resolution of Ecology's comments on the *Resource Conservation and Recovery Act* tier 1, 2, and 3 closure plans.
- Begin resolution of Ecology's comments on the *Resource Conservation and Recovery Act* Facility Investigation report and Corrective Measures Study report for C Tank Farm WMA (WMA-C).

**Issues**

- DOE/ORP-2014-02, *Clean Closure Practicality Demonstration for the Single-Shell Tanks*, Rev. 1 dated July 23, 2014. ORP received Ecology letter 15-NWP-149, "Department of Ecology's Response Comments Regarding Review of the *Clean Closure Practicality Demonstration for the Single-Shell Tanks*, DOE/ORP-2014-02," dated August 3, 2015. Ecology provided partial comments on the document, ORP met with Ecology in November 2017 to discuss path forward. Awaiting final Ecology comments.
- ORP and Ecology need to agree on the area to be covered by an interim surface barrier at TX Tank Farm to support M-045-92O. ORP provided a draft TPA Change Package via email to Ecology on December 14, 2017. ORP received Ecology comments on the draft Change Control Form on February 22, 2018 via email. Need to negotiate.
- Document RPP-RPT-58858, *Tier 1 Closure Plan Single-Shell Tank System*. Submitted to Ecology September 30, 2015. Received partial comments on April 11, 2016. Awaiting final Ecology comments.
- Document RPP-RPT-58339, *Phase 2 RCRA Facility Investigation Report for Waste Management Area C*. Submitted to Ecology on December 29, 2016. Awaiting Ecology comments.
- Document RPP-RPT-59379, *Waste Management Area C Phase 2 Corrective Measures Study Report*, to complete milestone M-045-61A. Submitted to Ecology on December 29, 2016. Awaiting Ecology comments.
- Document RPP-RPT-59389, *Tier 2 Resource Conservation and Recovery Act (RCRA) Closure Action Plan for Waste Management Area C*. Submitted to Ecology on May 15, 2017. Ecology requested a continuing extension on September 12, 2017, to provide comments by October 16, 2017. Ecology subsequently extended their response comments due date to November 22, 2017, to January 16, 2018, and then to February 28, 2018. (M-045-82). Awaiting Ecology comments.
- Document RPP-RPT-59390, *Tier 3 Resource Conservation and Recovery Act (RCRA) Component Closure Action Plan for 241-C-200 Series Tanks*. Submitted to Ecology on May 15, 2017. Ecology requested a continuing extension on September 12, 2017, to provide comments by October 16, 2017. Ecology subsequently extended their response comments due date to November 22, 2017, to January 16, 2018, and then to February 28, 2018 (M-045-82A). Awaiting Ecology comments.

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

---

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Jeff Rambo

**Ecology Project Manager:** Jeff Lyon

**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 began on September 8, 2016.

### **Significant Past Accomplishments**

- Refer to the Consent Decree monthly report for retrieval accomplishments.

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

- Refer to the Consent Decree monthly report for planned activities.

### **Issues**

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

## Tank Operations Contract Overview

Earned Value Data: Fiscal Year 2018

January-18

| Tank Farms ORP-0014              |           |           |           |          |         |      |      |           |           |     |
|----------------------------------|-----------|-----------|-----------|----------|---------|------|------|-----------|-----------|-----|
| WBS 5 - River Protection Project |           |           |           |          |         |      |      |           |           |     |
|                                  | BCWS      | BCWP      | ACWP      | SV       | CV      | SPI  | CPI  | BAC       | EAC       | VAC |
| CM                               | 46,168    | 39,864    | 41,402    | (6,305)  | (1,538) | 0.86 | 0.96 |           |           |     |
| FYTD                             | 202,896   | 189,124   | 190,601   | (13,772) | (1,478) | 0.93 | 0.99 | 688,177   |           |     |
| CTD                              | 4,295,686 | 4,257,787 | 4,234,404 | (37,899) | 23,383  | 0.99 | 1.01 | 4,780,967 | 4,780,393 | 574 |

|      |   |                                  |      |   |                             |
|------|---|----------------------------------|------|---|-----------------------------|
| 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 monthly planned work (i.e., schedule), and whether it is costing more or less to complete the work than planned. The earned value analysis is not intended to be a measurement of performance against existing TPA milestones.

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 schedule variance (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 cost variance (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.

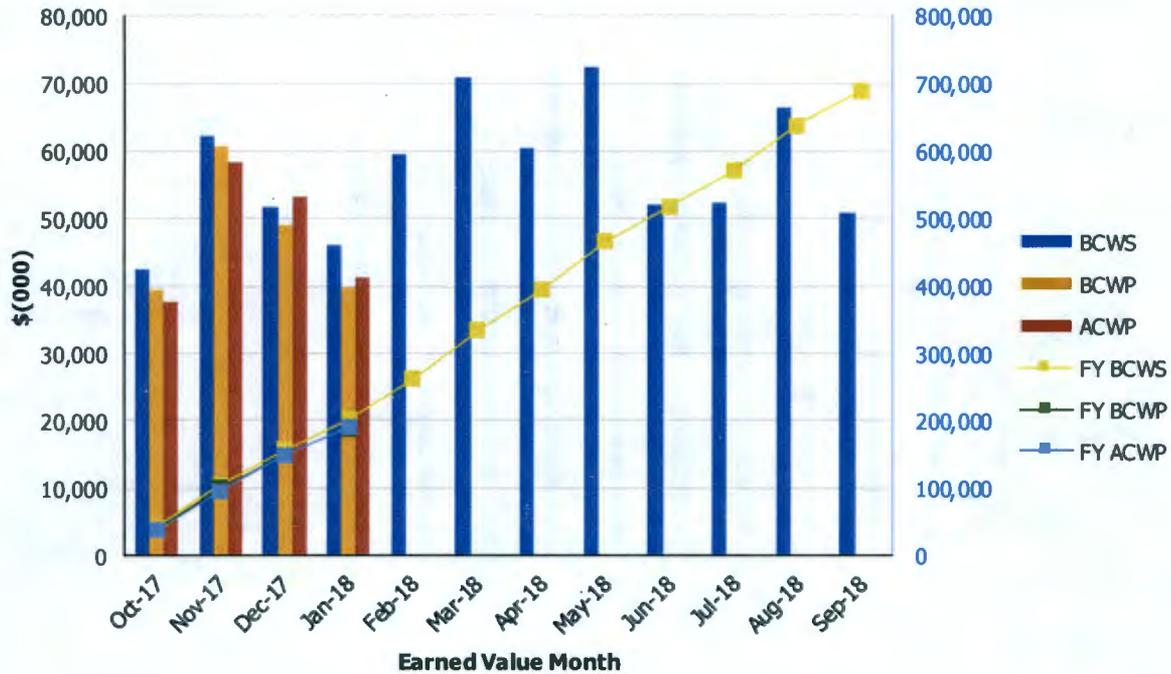
The SV and CV are reported for each monthly period, FY-to-date, as well as for the contract-to-date value. The monthly variances can fluctuate significantly (for reasons noted earlier), so the FY or contract-to-date report provides a better indicator of the overall project completion status and can give a reasonable projection of how the project will finish, based on the progress-to-date.

Earned Value Data: Fiscal Year 2018

January-18

**Tank Farms ORP-0014**  
**WBS 5 - River Protection Project**

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 2017           | \$42,505           | \$39,501           | \$37,634           | 0.93        | 1.05        | \$42,505  | \$39,501  | \$37,634  | 0.93   | 1.05   |
| Nov 2017           | \$62,362           | \$60,635           | \$58,396           | 0.97        | 1.04        | \$104,867 | \$100,136 | \$96,029  | 0.95   | 1.04   |
| Dec 2017           | \$51,860           | \$49,124           | \$53,170           | 0.95        | 0.92        | \$156,727 | \$149,260 | \$149,199 | 0.95   | 1.00   |
| Jan 2018           | \$46,168           | \$39,864           | \$41,402           | 0.86        | 0.96        | \$202,896 | \$189,124 | \$190,601 | 0.93   | 0.99   |
| Feb 2018           | \$59,629           |                    |                    |             |             | \$262,525 |           |           |        |        |
| Mar 2018           | \$70,942           |                    |                    |             |             | \$333,467 |           |           |        |        |
| Apr 2018           | \$60,440           |                    |                    |             |             | \$393,906 |           |           |        |        |
| May 2018           | \$72,421           |                    |                    |             |             | \$466,328 |           |           |        |        |
| Jun 2018           | \$52,032           |                    |                    |             |             | \$518,360 |           |           |        |        |
| Jul 2018           | \$52,375           |                    |                    |             |             | \$570,735 |           |           |        |        |
| Aug 2018           | \$66,563           |                    |                    |             |             | \$637,298 |           |           |        |        |
| Sep 2018           | \$50,879           |                    |                    |             |             | \$688,177 |           |           |        |        |
| <b>CTD</b>         | <b>\$4,295,686</b> | <b>\$4,257,787</b> | <b>\$4,234,404</b> | <b>0.99</b> | <b>1.01</b> |           |           |           |        |        |

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

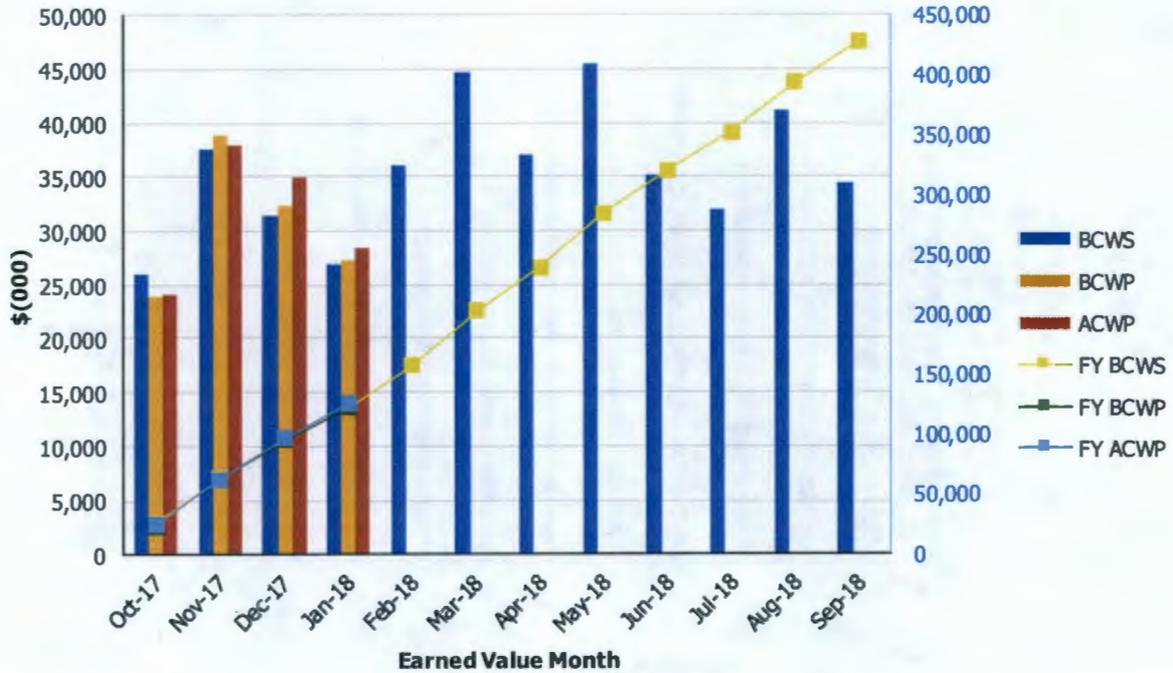
CM = current month.  
 CTD = contract to date.  
 FY = fiscal year.  
 SPI = schedule performance index.

Earned Value Data: Fiscal Year 2018

January-18

**Tank Farms ORP-0014  
WBS 5.1 - Base Operations**

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 2017           | \$25,995           | \$23,854           | \$24,021           | 0.92        | 0.99        | \$25,995  | \$23,854  | \$24,021  | 0.92   | 0.99   |
| Nov 2017           | \$37,542           | \$38,850           | \$37,961           | 1.03        | 1.02        | \$63,537  | \$62,704  | \$61,982  | 0.99   | 1.01   |
| Dec 2017           | \$31,376           | \$32,304           | \$35,027           | 1.03        | 0.92        | \$94,913  | \$95,008  | \$97,009  | 1.00   | 0.98   |
| Jan 2018           | \$26,992           | \$27,266           | \$28,456           | 1.01        | 0.96        | \$121,905 | \$122,274 | \$125,465 | 1.00   | 0.97   |
| Feb 2018           | \$36,028           |                    |                    |             |             | \$157,933 |           |           |        |        |
| Mar 2018           | \$44,670           |                    |                    |             |             | \$202,603 |           |           |        |        |
| Apr 2018           | \$36,955           |                    |                    |             |             | \$239,557 |           |           |        |        |
| May 2018           | \$45,408           |                    |                    |             |             | \$284,966 |           |           |        |        |
| Jun 2018           | \$35,209           |                    |                    |             |             | \$320,175 |           |           |        |        |
| Jul 2018           | \$31,900           |                    |                    |             |             | \$352,075 |           |           |        |        |
| Aug 2018           | \$41,216           |                    |                    |             |             | \$393,291 |           |           |        |        |
| Sep 2018           | \$34,410           |                    |                    |             |             | \$427,701 |           |           |        |        |
| <b>CTD</b>         | <b>\$2,847,109</b> | <b>\$2,829,019</b> | <b>\$2,799,850</b> | <b>0.99</b> | <b>1.01</b> |           |           |           |        |        |

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

CM = current month.  
 CTD = contract to date.  
 FY = fiscal year.  
 SPI = schedule performance index.

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Project Director:** Ellen Mattlin

### 5.01 – Base Operations

The January 2018 variances below do not impact TPA milestones.

The **favorable** SV of \$274,000 is primarily due to:

- Schedule performance recovery for completing the fabrication and receiving the Robotic Crawler supporting the Double Shell Tank Integrity Improvement Plan. This work was originally planned to be completed in August 2017.

The **unfavorable** CV of (\$1,190,000) is primarily due to:

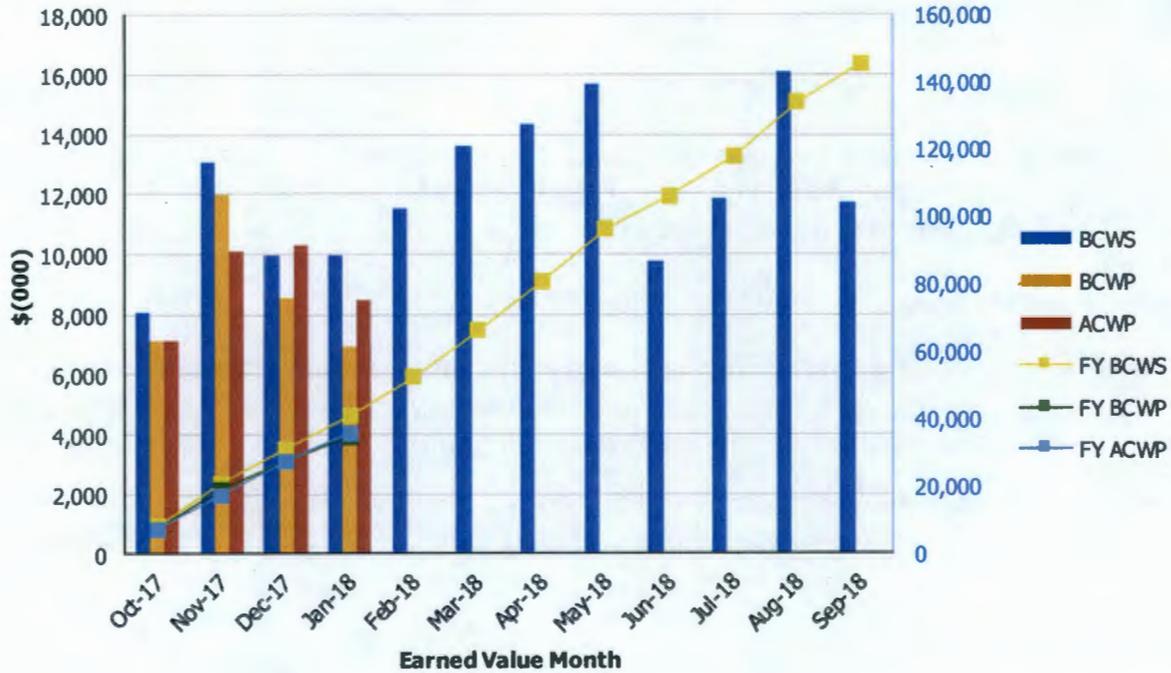
- Inaccurate accrual accounting for progress payments to fabricate and deliver spectroscopy equipment for the Vapor Monitoring & Detection System Upgrades. Costs will be corrected in the next reporting month.
- Increased use of labor and materials associated with troubleshooting plant issues and necessary facility repairs required to support re-start of Effluent Treatment Facility operations.

Earned Value Data: Fiscal Year 2018

January-18

**Tank Farms ORP-0014**  
**WBS 5.2 - Retrieve and Close SSTs**

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 2017           | \$8,053   | \$7,119   | \$7,127   | 0.88 | 1.00 | \$8,053   | \$7,119  | \$7,127  | 0.88   | 1.00   |
| Nov 2017           | \$13,058  | \$11,996  | \$10,119  | 0.92 | 1.19 | \$21,111  | \$19,115 | \$17,246 | 0.91   | 1.11   |
| Dec 2017           | \$9,964   | \$8,572   | \$10,318  | 0.86 | 0.83 | \$31,075  | \$27,686 | \$27,563 | 0.89   | 1.00   |
| Jan 2018           | \$9,940   | \$6,911   | \$8,464   | 0.70 | 0.82 | \$41,015  | \$34,597 | \$36,027 | 0.84   | 0.96   |
| Feb 2018           | \$11,507  |           |           |      |      | \$52,522  |          |          |        |        |
| Mar 2018           | \$13,593  |           |           |      |      | \$66,116  |          |          |        |        |
| Apr 2018           | \$14,308  |           |           |      |      | \$80,424  |          |          |        |        |
| May 2018           | \$15,706  |           |           |      |      | \$96,130  |          |          |        |        |
| Jun 2018           | \$9,782   |           |           |      |      | \$105,913 |          |          |        |        |
| Jul 2018           | \$11,814  |           |           |      |      | \$117,726 |          |          |        |        |
| Aug 2018           | \$16,107  |           |           |      |      | \$133,833 |          |          |        |        |
| Sep 2018           | \$11,689  |           |           |      |      | \$145,522 |          |          |        |        |
| CTD                | \$844,587 | \$839,260 | \$874,579 | 0.99 | 0.96 |           |          |          |        |        |

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

CM = current month.  
 CTD = contract to date.  
 FY = fiscal year.  
 SPI = schedule performance index.

*Tank Farms Assistant Manager:* Glyn Trenchard

*Federal Program Manager:* Jeff Rambo

**5.02 – Retrieve and Close Single-Shell Tanks**

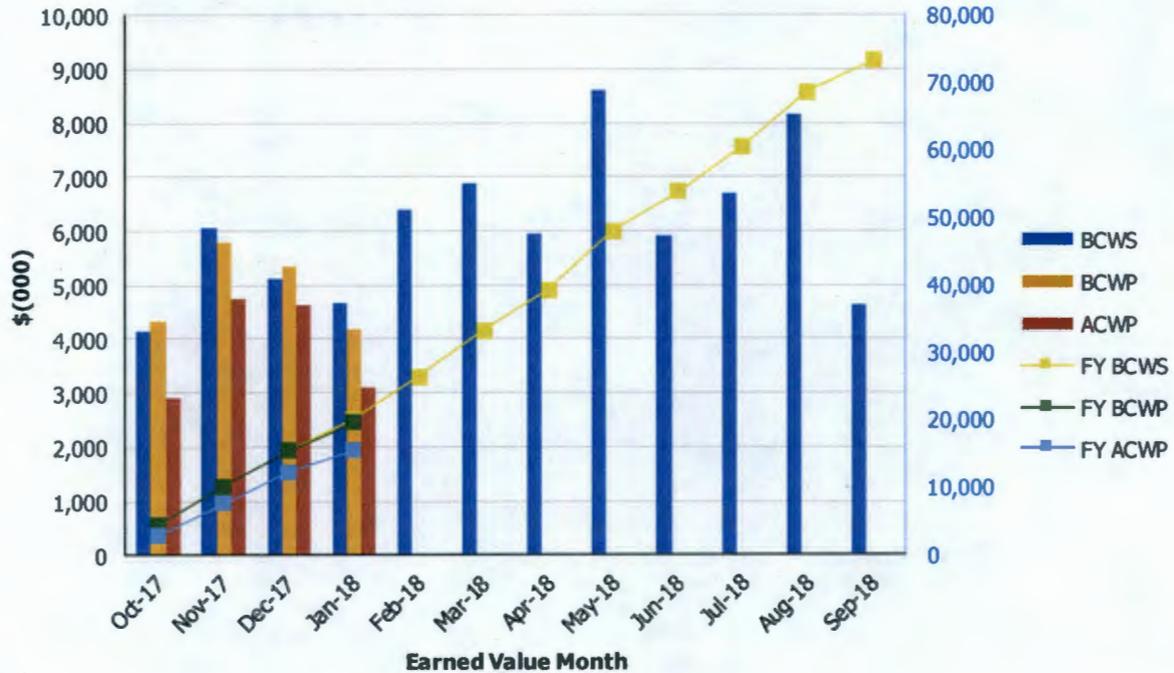
For the retrieval portion see the Consent Decree monthly report for cost and schedule status.

Earned Value Data: Fiscal Year 2018

January-18

**Tank Farms ORP-0014**  
**WBS 5.3 - WFD/Treatment Pmg/DST Retrieval/Closure**

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 2017           | \$4,163         | \$4,326         | \$2,909         | 1.04        | 1.49        | \$4,163  | \$4,326  | \$2,909  | 1.04   | 1.49   |
| Nov 2017           | \$6,068         | \$5,798         | \$4,754         | 0.96        | 1.22        | \$10,231 | \$10,124 | \$7,663  | 0.99   | 1.32   |
| Dec 2017           | \$5,132         | \$5,334         | \$4,651         | 1.04        | 1.15        | \$15,363 | \$15,458 | \$12,314 | 1.01   | 1.26   |
| Jan 2018           | \$4,660         | \$4,193         | \$3,092         | 0.90        | 1.36        | \$20,023 | \$19,651 | \$15,406 | 0.98   | 1.28   |
| Feb 2018           | \$6,383         |                 |                 |             |             | \$26,406 |          |          |        |        |
| Mar 2018           | \$6,868         |                 |                 |             |             | \$33,274 |          |          |        |        |
| Apr 2018           | \$5,958         |                 |                 |             |             | \$39,232 |          |          |        |        |
| May 2018           | \$8,617         |                 |                 |             |             | \$47,849 |          |          |        |        |
| Jun 2018           | \$5,904         |                 |                 |             |             | \$53,753 |          |          |        |        |
| Jul 2018           | \$6,702         |                 |                 |             |             | \$60,455 |          |          |        |        |
| Aug 2018           | \$8,137         |                 |                 |             |             | \$68,592 |          |          |        |        |
| Sep 2018           | \$4,629         |                 |                 |             |             | \$73,221 |          |          |        |        |
| <b>CTD</b>         | <b>\$20,110</b> | <b>\$20,110</b> | <b>\$19,161</b> | <b>1.00</b> | <b>1.05</b> |          |          |          |        |        |

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

CM = current month.  
 CTD = contract to date.  
 FY = fiscal year.  
 SPI = schedule performance index.

**One System Division Director:** Jon Peschong  
**Federal Program Manager:** Kaylin Burnett

### 5.03 – Waste Feed Delivery/Treatment

The January 2018 variances below do not impact TPA milestones.

The **unfavorable** SV of (\$467,000) is primarily due to:

- Delays in three projects within the Waste Feed Delivery Technology Program:
  - The duration of the proof of principle testing for the Mechanical Waste Gathering System (MWGS) was longer than originally anticipated, resulting in a delay to start of design activities.
  - The Nondestructive Evaluation Functions and Requirements document was more complicated than anticipated and took longer than planned.
  - The start of the on-line monitoring activities were delayed to ensure there was not a duplication in other ongoing testing.
- Delay in the Direct-Feed Low-Activity Waste (DFLAW) Solid Secondary Waste Phase 3 testing due to contracting/procurement issues with Savannah River National Laboratory (SRNL).

The **favorable** CV of \$1,101,400 is primarily due to:

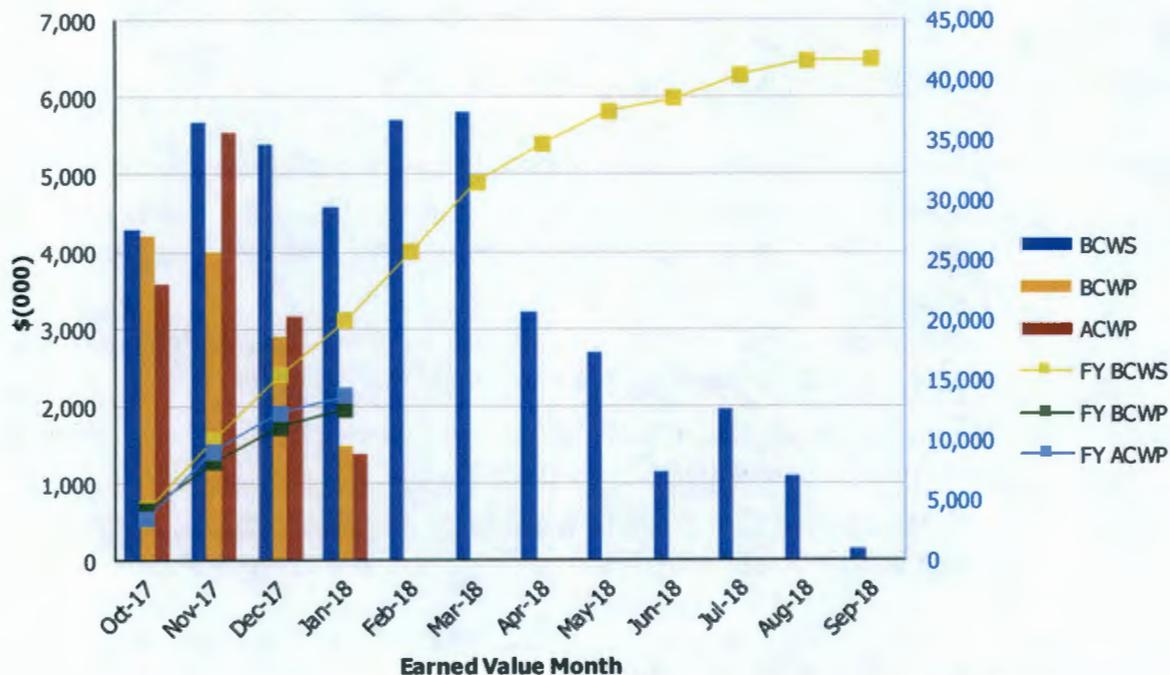
- The Waste Feed Delivery Technical Baseline Project has experienced delayed work in predictive maintenance due to a delay in receiving materials.
- Resource efficiencies in three projects:
  - The Immobilized Low-Activity Waste Transporter Project prototype fabrication was performed for less than expected.
  - The Integrated Disposal Facility Project Stage III test instructions and Lysimeter modeling was completed for less than expected.
  - The Technology Maturation and Analysis Project required less management oversight and support than was originally planned.

Earned Value Data: Fiscal Year 2018

January-18

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

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 2017           | \$4,294 | \$4,202 | \$3,576 | 0.98 | 1.17 | \$4,294  | \$4,202  | \$3,576  | 0.98   | 1.17   |
| Nov 2017           | \$5,693 | \$3,992 | \$5,562 | 0.70 | 0.72 | \$9,988  | \$8,193  | \$9,139  | 0.82   | 0.90   |
| Dec 2017           | \$5,389 | \$2,914 | \$3,174 | 0.54 | 0.92 | \$15,377 | \$11,108 | \$12,313 | 0.72   | 0.90   |
| Jan 2018           | \$4,576 | \$1,494 | \$1,391 | 0.33 | 1.07 | \$19,953 | \$12,601 | \$13,704 | 0.63   | 0.92   |
| Feb 2018           | \$5,711 |         |         |      |      | \$25,663 |          |          |        |        |
| Mar 2018           | \$5,811 |         |         |      |      | \$31,474 |          |          |        |        |
| Apr 2018           | \$3,219 |         |         |      |      | \$34,693 |          |          |        |        |
| May 2018           | \$2,689 |         |         |      |      | \$37,382 |          |          |        |        |
| Jun 2018           | \$1,137 |         |         |      |      | \$38,519 |          |          |        |        |
| Jul 2018           | \$1,959 |         |         |      |      | \$40,478 |          |          |        |        |
| Aug 2018           | \$1,104 |         |         |      |      | \$41,582 |          |          |        |        |
| Sep 2018           | \$152   |         |         |      |      | \$41,734 |          |          |        |        |

|     |           |           |           |      |      |
|-----|-----------|-----------|-----------|------|------|
| CTD | \$131,101 | \$119,427 | \$128,597 | 0.91 | 0.93 |
|-----|-----------|-----------|-----------|------|------|

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

CM = current month.  
 CTD = contract to date.  
 FY = fiscal year.  
 SPI = schedule performance index.

**Tank Farms Assistant Manager:** Glyn Trenchard

**Deputy Federal Project Director:** Janet Diediker

### **5.05 – Treat Waste**

The January 2018 variances below do not impact the TPA milestones.

The **unfavorable** SV of (\$3,082,000) is primarily due to:

- The schedule variance resulted primarily from U.S. Department of Energy direction to WRPS to cease certain aspects of the current LAWPS design strategy and submit a contract change proposal for an optimized LAWPS design strategy.

The **favorable** CV of \$103,000 is below the reporting threshold and does not require a variance narrative.