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Office of River Protection

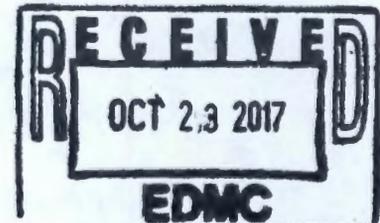
Tri-Party Agreement

Report

October¹ 2017



Tri-Party Agreement



¹ The narrative descriptions of progress in this report cover the period from September 1 -30, 2017.
Earned Value Management System data and descriptions cover the period of August 1 -31 2017.

7000481

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Acronyms and Abbreviations

CD-3A	Critical Decision 3A
CR	change request
CV	cost variance
DOE	U.S. Department of Energy.
DST	double-shell tank
Ecology	Washington State Department of Ecology
ETF	Effluent Treatment Facility
FY	fiscal year
GRS	Gas Removal System
IQRPE	independent qualified registered professional engineer
LERF	Liquid Effluent Retention Facility
ORP	U.S. Department of Energy, Office of River Protection
RCRA	<i>Resource Conservation and Recovery Act</i>
SRNL	Savannah River National Laboratory
SST	single-shell tank
SV	schedule variance
System Plan 8	<i>River Protection Project System Plan, Rev. 8</i>
TBD	to be determined
TPA	Tri-Party Agreement
WMA-C	C Tank Farm waste management area
WRPS	Washington River Protection Solutions LLC
WTP	Waste Treatment and Immobilization Plant

Administrative Items/Milestone Status

Milestone	Title	Due Date	TPA Project Manager	Status/ Completion Date
Fiscal Year 2015				
M-062-45-T01	Complete Negotiations 6-Mo After Last Issuance of System Plan	04/30/2015	Pfaff, Stephen H	In Abeyance
M-062-45-ZZ	Negotiate a One Time Supplemental Treatment Selection	04/30/2015	Pfaff, Stephen H	In Abeyance
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 Abeyance
Fiscal Year 2016				
M-047-07	CD-1 for Secondary Liquid Waste Treatment and CR for CD-2 to Ecology	03/31/2016	Diediker, Janet A	In Abeyance
M-090-13	CD-1 for Interim Hanford Storage Project and CR for CD-2 to Ecology	03/31/2016	Diediker, Janet A	In Abeyance
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 Abeyance
Fiscal Year 2017				
M-045-82	Submit to Ecology the draft Tier 2 closure plan for WMA-C	05/15/2017	Bovier, Jan B	Complete (05/15/2017)
M-045-82A	Submit to Ecology the draft Tier 3 closure plans for the C-200 tanks	05/15/2017	Bovier, Jan B	Complete (05/15/2017)
M-045-62	Submit to Ecology the draft Tier 3 closure plans to implement corrective measures	TBD ¹	Bovier, Jan B	On Schedule

Milestone	Title	Due Date	TPA Project Manager	Status/ Completion Date
M-045-83	Complete the Closure of WMA-C	TBD ²	Bovier, Jan B	On Schedule
M-045-56M	Ecology and DOE Agree, at a Minimum, to Meet Yearly (by July)	07/31/2017	Bovier, Jan B	Complete (07/11/2017)
M-062-01AI	Submit Semi-Annual Project Compliance Report	07/31/2017	Trimberger, Bryan	Complete (07/31/2017)
M-045-91E2	Provide SST Farms Dome Deflection Surveys Every Two Years	09/30/2017	Stewart,	Complete (09/29/2017)
M-045-92S	DOE and Ecology Will Agree on Locations for Barriers 3 And 4	09/30/2017	Bovier, Jan B	Complete (09/28/2017)
Fiscal Year 2018				
M-062-40F	Submit System Plan	10/31/2017	Burnett, Kaylin W	On Schedule
M-062-32-T01	Start Construction of Supplemental Vitrification Treatment Facility and/or WTP Enhancements	04/20/2018	Pfaff, Stephen H	In Abeyance
M-045-92O	Barrier 3 Design/Monitoring Plan Submitted to Ecology	06/30/2018	Bovier, Jan B	On Schedule
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	On Schedule

DOE – U. S. Department of Energy

² To be established in accordance with the date identified in the M-045-82 Tier 2 closure plan

System Plan

One System Division Director: Jon Peschong

Federal Program Manager: Kaylin Burnett

Significant Past Accomplishments:

- Washington River Protection Services LLC (WRPS) transmitted the draft *River Protection Project System Plan, Rev. 8 (System Plan 8)* document to the U.S. Department of Energy, Office of River Protection (ORP) on August 9, 2017.

Significant Planned Actions in the Next Six Months:

- Continue negotiations of the M-062-45 and related milestones with intent to utilize information from System Plan 8.
- ORP will transmit the System Plan 8 document to the Washington Department of Ecology (Ecology) on or before October 31, 2017.

Issues:

- None.

Acquisition of New Facilities

Tank Farms Assistant Manager: Glyn Trenchard

Deputy Federal Project Director: Janet Diediker

- 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 Integrity 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

- 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.

Low-Activity Waste Pretreatment System

Tank Farms Assistant Manager: Glyn Trenchard

Federal Project Director: Steve Pfaff

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

Significant Past Accomplishments:

- Submitted Critical Decision 3A (CD-3A) to U.S. Department of Energy Headquarters, completed July 31, 2017.
- Conducted on-site visit with CD-3A Independent Cost Estimate Review Team, completed August 4, 2017.
- ORP issued to WRPS via letter 17-NSD-0031, "Contract No DE-AC27-08RV14800 - Approval of Low-Activity Waste Pretreatment System (Project T5LOI) Preliminary Safety Design Report (RPP-RPT-59412)" on September 21, 2017. ORP's basis for approval is documented in the Preliminary Safety Validation Report (PSVR) attached to the letter.

Significant Planned Actions in the Next Six Months:

- Following up on a conversation from August 15, 2017, Acting Assistant Secretary, James Owendoff sent a letter to the Director of Ecology, Maia Bellon, dated September 20, 2017. The letter noted items discussed during their August 15, 2017 conversation which for LAWPS included use of Tank Closure and Cesium Removal technology. That letter requested a meeting, at Ecology's earliest convenience, in order to continue the conversation and hear more about Ecology's perspective and priorities regarding Hanford cleanup activities.
- In response to U.S. Department of Energy Headquarters concerns about LAWPS cost growth and risks to the delivery schedule, ORP issued a letter, 17-CPM-0145, "Contract Number DE-AC27-08RV14800 - Washington River Protection Solutions LLC - Conduct External Expert Review on Low-Activity Waste Pretreatment System, September 25-28, 2017", dated September 18, 2017, to conduct an external expert review of the LAWPS project. The external expert review team, comprised of contractor members from the DOE Complex and National Laboratories, met September 25-28, 2017, to develop an alternative approach to the LAWPS project.

Issues:

- None.

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) 2017 and early FY 2018 is in the following table:

Fiscal Year	Campaign No.	Feed Source	Slurry Tank	Comments
FY 2017	EC-06	AY-101	AP-104	Completed on July 15, 2017. WVR = 210 kgal
FY 2017	EC-07	AW-106	AP-104	Completed on September 7, 2017. WVR = 315 kgal
FY 2018	EC-08	Blend of AP-106 AP-107	AP-103	242-A Evaporator campaign EC-08 will require blending of waste in Tank AW-102, sampling, and sample analysis prior to campaign start. The Tank AP-107 portion of waste was transferred to Tank AW-102 during September 2017.
FY 2018	EC-09	Blend of AP-106 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. In addition, the waste will need to be transferred from Tank AW-106 to Tank AW-102 after EC-08 completes.

FY = fiscal year.
kgal = thousand gallons.
WVR = waste volume reduction.

Significant Past Accomplishments:

- Completed 242-A Evaporator campaign EC-07.
- Initiated required annual electrical preventive maintenance activities.

Significant Planned Actions in the Next Six Months:

- Establish the future campaign and outage scheduling.

- Replace control room air conditioning units.
- Install new effluent sampling station.
- Replace outdated fire alarm control panel.
- Clear flammable gas air purge line.

Issues:

- The flammable gas purge air line for the safety instrumented system began to plug slightly during and following the EC-06 Evaporator campaign. Efforts to unplug the line are ongoing.

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 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.

	242AL-42 (Basin 42)	242AL-43 (Basin 43)	242AL-44 (Basin 44)
Total Volume (as of Sep. 30, 2017)	~ 6.87 Mgal	~ 0 Mgal ³	~ 7.31 Mgal

Waste Received			
AZ-301 Tanker Shipments	~ 6,500 gal	-	-
MWT-31 and 34 Leachate	~ 14,000 gal	-	7,000 gal
Other (e.g., Totes, Modutank, etc.)	~ 3,000 gal	-	~ 21,000 gal
242-A Evaporator Campaigns	~ 237,000 gal	-	-

gal = gallon.

Mgal = million gallons.

MWT = mixed waste trench.

Significant Past Accomplishments:

- Total FY 2017 volume processed (as of September 30, 2017): ~4,000,000 gallons.
- Completed processing of remaining concentrate waste from the previous Liquid Effluent Retention Facility Basin 43 operations through the thin film dryer.
- Initiated Liquid Effluent Retention Facility Basin 42 waste processing through the Effluent Treatment Facility (ETF).
- Replaced the ETF primary air compressor heat exchanger and brought system back on line.

Significant Planned Actions in the Next Six Months:

- Establish the future campaign and outage scheduling.

³ Basin 43 was placed out-of-service on May 8, 2017.

- Replace the failed LERF Basin 44 transfer pump (see Issues below).
- Process and/or move the contents from LERF Basin 42 to allow cover replacement in Spring 2018.
- Begin second LERF Basin cover replacement project (project support and design).

Issues:

- During testing of LERF Basin 44 Pump (60M-P44-4), the pump motor was pulling high amperage (75 Amps) with no pump operation, indicating pump failure. The pump/motor combination will be replaced.

Tank System Update

Tank Farms Assistant Manager: Glyn Trenchard

Federal Program Manager: Dusty Stewart

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

Significant Past Accomplishments

Double-Shell Tank (DST) Integrity:

- The corrosion testing subgroup of the Tank Integrity Expert Panel met at DNV-GL laboratories on August 23 and 24, 2017. The subgroup discussed corrosion testing from FY 2017 and developed plans for FY 2018 corrosion testing. After the subgroup finalizes its comments, WRPS will prepare a report.

Single-Shell Tank (SST) Integrity:

- 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 kickoff meetings were completed on September 11, 2017.
- Report RPP-RPT-55202, *Dome Survey for Hanford Single-Shell Tanks*, Rev. 2, which satisfies Milestone M-045-91E2, was released on September 20, 2017. ORP transmitted the report to Ecology under letter 17-TPD-0023 "Completion of Hanford Federal Facility Agreement and Consent Order Interim Milestone M-045-91 E2 Deliverable" on September 29, 2017.

Significant Planned Actions in the Next Six Months:

DST Integrity:

- Continuing bi-weekly inspections of Tank AY-102 waste accumulation site.
- Continuing bi-monthly comprehensive inspection of Tank 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 (released RPP-RPT-31599, *Double-Shell Tank Integrity Inspection Report for 241-AN Tank Farm*, Rev. 8)
 - 241-AN-107 (released RPP-RPT-31599, Rev. 8)
 - 241-AP-101 (released, RPP-RPT-38738, *Double-Shell Tank Integrity Inspection Report for 241-AP Tank Farm*, Rev. 5)
 - 241-AP-107 (released, RPP-RPT-38738, Rev. 5)

- 241-AW-105 (released, RPP-RPT-42147, *Double-Shell Tank Integrity Inspection Report for 241-AW Tank Farm, Rev. 5*)
- 241-AY-101 (released, RPP-RPT-34311, *Double-Shell Tank Integrity Inspection Report for 241-AY Tank Farm, Rev. 3*)
- 241-AZ-101 (released, RPP-RPT-34310, *Double-Shell Tank Integrity Inspection Report for 241-AZ Tank Farm, Rev. 2a*)
- 241-AZ-102 (released, RPP-RPT-34310, Rev. 2a).
- Work planning and execution for FY 2017 ultrasonic testing inspections is ongoing. The following tanks will be inspected in FY 2017:
 - 241-AN-106 (released, RPP-RPT-60114, *Ultrasonic Inspection Results for Double-Shell Tank 241-AN-106 – FY 2017, Rev. 0*)
 - 241-SY-101 (floor scans of secondary liner complete)
 - 241-SY-102 (floor scans of secondary liner complete)
 - 241-SY-103 (floor scans of secondary liner complete)
 - 241-AZ-101 (field work halted due to annulus contamination event – delayed until FY 2018)
 - 241-AY-101 (delayed to early FY 2018).

SST Integrity:

- Work planning for FY 2018 in-tank video inspections is in process. The following tank inspections were completed in FY 2017:
 - 241-A-104 (complete)
 - 241-A-105 (complete)
 - 241-BX-107 (complete)
 - 241-BY-109 (complete)
 - 241-S-104 (complete)
 - 241-SX-110 (complete)
 - 241-T-104 (complete)
 - 241-T-105 (complete)
 - 241-T-106 (complete).
- Intrusion mitigation (M-045-56):
 - The POR-006 exhauster at Tank T-111 was restarted on July 12, 2017, and has been operating satisfactorily. The data collection and reporting software is still not

working. The volume of water evaporated from Tank T-111 between mid-July 2015 and December 2016 was roughly estimated at 7,100 gallons.

Independent Qualified Registered Professional Engineer Activities

- Preparation of the IQRPE report for the 242-A Evaporator is ongoing. The E-A-1 reboiler fluorescein dye 24-hour leak test was completed.
- Work continues on RPP-PLAN-61349, *Effluent Treatment Facility Integrity Program Plan*. The plan will support the FY 2019 IQRPE integrity assessment.
- Ultrasonic thickness scanning of ETF tanks is in progress and initial corrosion testing on ETF materials and chemistries is underway.
- Initial planning continues for the integrity assessment for the 219-S facility at the 222-S Laboratory. The RPP-PLAN-61634, *219-S Integrity Assessment Plan*, is complete. WRPS has issued the request for proposal for an IQRPE.
- WRPS awarded the contract for the SST integrity assessment project as described in M-045-911 (assessment of structural integrity) to Meier Architecture Engineering. The integrity assessment kickoff meetings were completed on September 11, 2017.

Issues:

DST Integrity:

- None.

SST Integrity:

- None.

Single-Shell Tank Integrity Assurance

Tank Farms Assistant Manager: Glyn Trenchard

Federal Program Manager: Dusty Stewart

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:

- The 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. The integrity assessment kickoff meetings were completed on September 11, 2017.

Significant Planned Actions in the Next Six Months:

- IQRPE to continue development of the SST integrity assessment.

Issues:

- None.

In-Tank Characterization and Summary

Tank Farms Assistant Manager: Glyn Trenchard

Federal Program Manager: Dusty Stewart

Significant Past Accomplishments:

For the period from September 1 through September 30, the following reports were completed (internal access only) or released (external access):

- Released RPP-RPT-60349, Derivation of Best-Basis Inventory for Tank 241-S-103 as of August 1, 2017, Rev. 0.
- Released RPP-RPT-60233, Derivation of Best-Basis Inventory for Tank 241-S-106 as of August 1, 2017, Rev. 0.
- Released RPP-RPT-60185, Derivation of Best-Basis Inventory for Tank 241-B-108 as of August 1, 2017, Rev. 0.
- Released RPP-RPT-60346, Derivation of Best-Basis Inventory for Tank 241-S-101 as of August 1, 2017, Rev. 0.
- Released RPP-RPT-60377, Derivation of Best-Basis Inventory for Tank 241-S-112 as of September 1, 2017, Rev. 0.
- Released RPP-RPT-47139, Derivation of Best-Basis Inventory for Tank 241-T-112 as of August 8, 2017, Rev. 2.
- Completed RPP-PLAN-61706, Tank 241-SY-102 Grab Sampling and Analysis Plan, Rev. 0.
- Released HNF-EP-0182, Waste Tank Summary Report for Month August 31, 2017, Rev. 356.
- Completed 241-C-105 in-process liquid grab sampling performed September 6, 2017, through September 27, 2017. The laboratory received ten samples.
- Completed 241-SY-102 liquid grab sampling on September 14, 2017. The laboratory received ten samples.

Significant Planned Actions in the Next Six Months:

Tank sampling:

- Tank 241-C-105 in-process liquid grab sampling is planned for October 2017.
- Tank 241-AP-107 liquid grab sampling is planned for October 2017.
- Tank 241-AY-102 solids grab sampling is planned for November 2017.
- Tank 241-C-105 in-process liquid grab sampling is planned for November 2017.
- Tank 241-AW-102 liquid grab sampling is planned for November 2017.

Best-Basis Inventory updates:

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

- 241-B-108
- 241-S-101
- 241-S-106
- 241-S-112
- 241-S-103
- 241-T-112.

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

- 241-AW-106
- 241-AZ-101
- 241-AZ-102

Data Quality Objectives updates:

- None.

Issues:

- None.

Single-Shell Tank Closure Program

Tank Farms Assistant Manager: Glyn Trenchard

Federal Program Manager: Jan Bovier

- M-045-59** **Control surface water infiltration pathways as needed to control or significantly reduce the likelihood of migration of subsurface contamination to groundwater at the SST Waste Management Areas (WMA) (pending the Corrective Measures Study report, Milestone M-45-58, and implementation of other interim corrective measures)**
Due: To be determined.
Status: To be determined.
- M-045-62** **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-045-56M** **Complete Implementation of Agreed to Interim Measures**
Due: July 28, 2017.
Status: Complete. The annual meeting between ORP and Ecology to discuss the prior FY accomplishments and the next FY proposed interim measures was held on July 11. Action items from the meeting are being tracked by WRPS.
- M-045-92S** **DOE and Ecology agree on locations for Barriers 3 and 4**
Due: September 30, 2017.
Status: Complete. A TPA Administrative Record Documentation (Administration Record Accession Number 0068306H) was signed on September 28, 2017.
- 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-045-92Q** **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 to be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.

Significant Past Accomplishments:

- Working on the resolution of Ecology's review comments on the Waste Management Area C performance assessment.
- Released RPP-RPT-60134, *T-TY Tank Farm Interim Surface Barrier Demonstration – Vadose Zone Monitoring FY 2016*.
- Began training and mobilization of construction forces for the SX Tank Farm interim surface barriers. The initial construction effort will address the evapotranspiration basin and water conveyance systems.
- Agreed to locations for Interim Barriers 3 (TX Farm) and 4 (U Farm) (Milestone M-045-92S).

Significant Planned Activities in the Next Six Months:

- Following up on a conversation from August 15, 2017, Acting Assistant Secretary, James Owendoff, sent a letter to the Director of Ecology, Maia Bellon, dated September 20, 2017. The letter noted items discussed during their August 15, 2017 conversation which for the SST Closure Program included the potential to close C Farm waste tanks using a streamlined Resource Conservation and Recovery Act process, and the potential for treating and shipping some tank waste to the Waste Isolation Pilot Plant. This letter requested a meeting, at Ecology's earliest convenience, in order to continue the conversation and hear more about Ecology's perspective and priorities regarding Hanford cleanup activities.
- Begin actual construction field activities for the SX Tank Farm interim surface barriers.
- Begin resolution of Ecology's comments on the *Resource Conservation and Recovery Act (RCRA)* Tier 1, 2, and 3 closure plans.
- Begin resolution of Ecology's comments on the RCRA Facility Investigation report and Corrective Measures Study report for Waste Management Area C.

Issues:

- Report DOE/ORP-2014-02, *Clean Closure Practicability Demonstration for the Single-Shell Tanks*, submitted to Ecology July 24, 2014. Received partial comments on August 3, 2016. ORP will meet with Ecology to discuss the Ecology approach to finishing the "practicability" decision.
- RCRA Tier 1 Closure Plan 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.
- RCRA Facility Investigation RPP-RPT-58339, *Phase 2 RCRA Facility Investigation Report for Waste Management Area C*. Submitted to Ecology February 13, 2017. Awaiting Ecology comments.
- Corrective Measures Study RPP-RPT-59379, *Waste Management Area C Phase 2 Corrective Measures Study Report*, to complete milestone M-045-61A. Submitted to Ecology on February 13, 2017. Awaiting Ecology comments.
- RCRA Tier 2 Closure Plan 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 (M-045-82).
- RCRA Tier 3 Closure Plan 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 (M-045-82A).

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 began on September 8, 2016.

Significant Past Accomplishments:

- Report RPP-RPT-60173, *Retrieval Data Report for Single-Shell Tank 241-C-111*, was completed and submitted to Ecology via letter 17-TPD-0018, "The U.S. Department of Energy Office of River Protection Submits the Retrieval Data Report for Tank 241-C-111," on August 11, 2017.
- 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

August-17										
	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
CM	61,230	61,467	55,825	238	5,642	1.00	1.10			
FYTD	563,239	550,827	543,002	(12,412)	7,825	0.99	1.00	642,615	633,040	9,575
CTD	4,019,188	3,985,962	3,951,865	(33,226)	34,097	0.99	1.00	4,832,303	4,809,724	22,579

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 Tri-Party Agreement (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, fiscal year to-date, as well as for the contract-to-date value. The monthly variances can fluctuate significantly (for reasons noted earlier), so the 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.

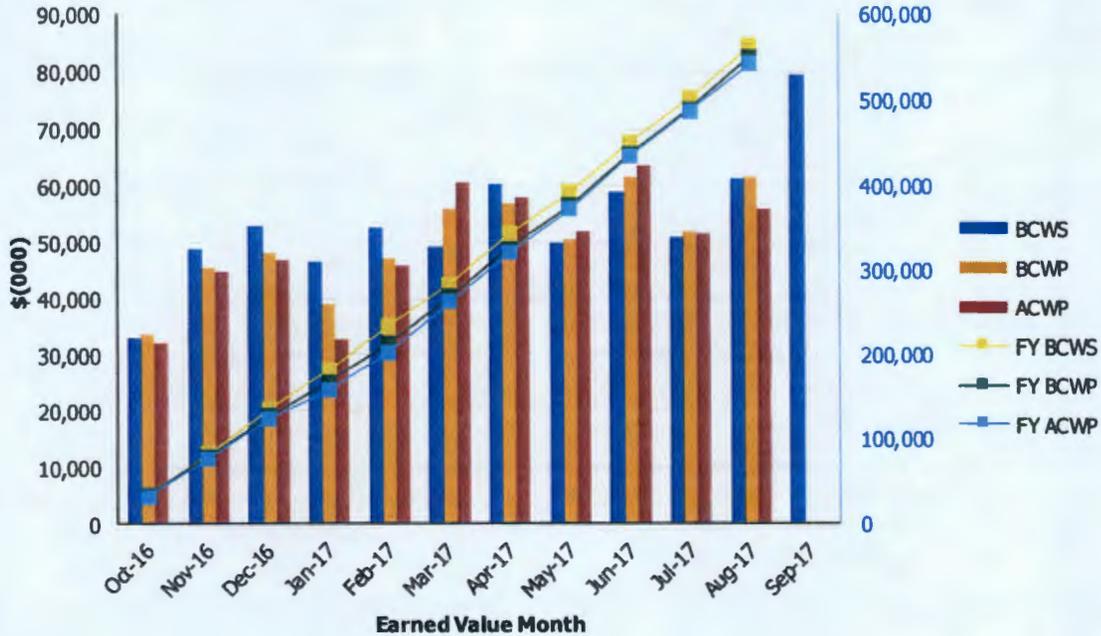
EXC-01a: Fiscal Year Cost and Schedule Report

Earned Value Data: Fiscal Year 2017

August-17

Tank Farms ORP-0014

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2016	\$33,051	\$33,501	\$31,798	1.01	1.05	\$33,051	\$33,501	\$31,798	1.01	1.05
Nov 2016	\$48,628	\$45,386	\$44,614	0.93	1.02	\$81,679	\$78,887	\$76,412	0.97	1.03
Dec 2016	\$52,841	\$47,972	\$46,833	0.91	1.02	\$134,520	\$126,859	\$123,246	0.94	1.03
Jan 2017	\$46,477	\$39,027	\$32,764	0.84	1.19	\$180,997	\$165,886	\$156,009	0.92	1.06
Feb 2017	\$52,366	\$47,088	\$45,690	0.90	1.03	\$233,363	\$212,974	\$201,699	0.91	1.06
Mar 2017	\$49,127	\$55,701	\$60,510	1.13	0.92	\$282,490	\$268,674	\$262,209	0.95	1.02
Apr 2017	\$60,228	\$56,852	\$57,746	0.94	0.98	\$342,718	\$325,526	\$319,955	0.95	1.02
May 2017	\$49,776	\$50,468	\$51,897	1.01	0.97	\$392,494	\$375,995	\$371,853	0.96	1.01
Jun 2017	\$58,859	\$61,714	\$63,685	1.05	0.97	\$451,353	\$437,709	\$435,538	0.97	1.00
Jul 2017	\$50,656	\$51,650	\$51,639	1.02	1.00	\$502,009	\$489,359	\$487,177	0.97	1.00
Aug 2017	\$61,230	\$61,467	\$55,825	1.00	1.10	\$563,239	\$550,826	\$543,002	0.98	1.01
Sep 2017	\$79,376									

CTD \$4,019,188 \$3,985,962 \$3,951,865 0.99 1.01

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.

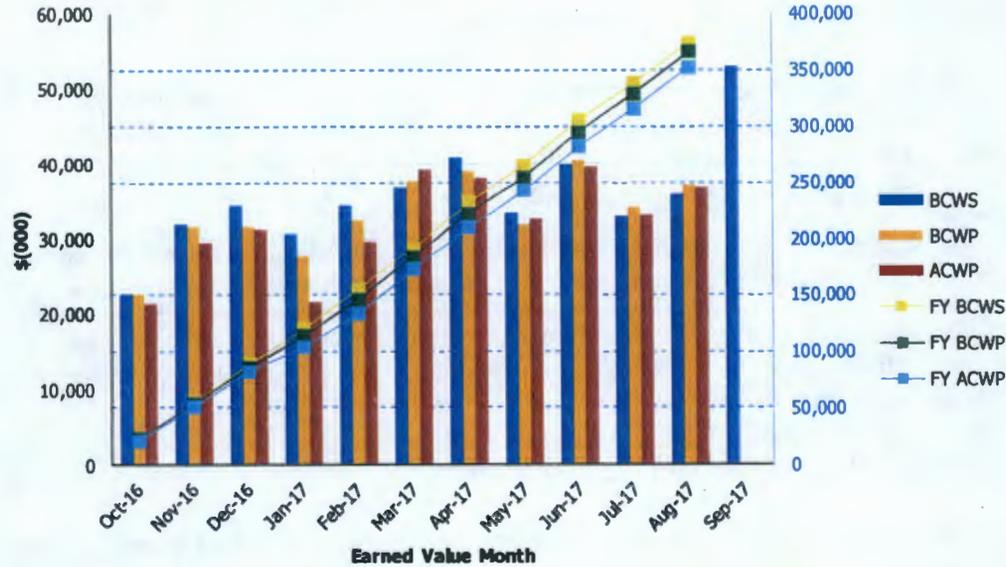
EXC-01a: Fiscal Year Cost and Schedule Report

Earned Value Data: Fiscal Year 2017

August-17

**Tank Farms ORP-0014
Base Operations 5.01**

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2016	\$22,507	\$22,546	\$21,216	1.00	1.06	\$22,507	\$22,546	\$21,216	1.00	1.06
Nov 2016	\$31,885	\$31,496	\$29,527	0.99	1.07	\$54,392	\$54,042	\$50,743	0.99	1.07
Dec 2016	\$34,394	\$31,547	\$31,032	0.92	1.02	\$88,786	\$85,589	\$81,775	0.96	1.05
Jan 2017	\$30,657	\$27,462	\$21,370	0.90	1.29	\$119,443	\$113,051	\$103,146	0.95	1.10
Feb 2017	\$34,475	\$32,418	\$29,588	0.94	1.10	\$153,918	\$145,468	\$132,734	0.95	1.10
Mar 2017	\$36,780	\$37,769	\$39,127	1.03	0.97	\$190,698	\$183,237	\$171,861	0.96	1.07
Apr 2017	\$40,813	\$38,964	\$38,001	0.95	1.03	\$231,511	\$222,201	\$209,862	0.96	1.06
May 2017	\$33,508	\$31,770	\$32,519	0.95	0.98	\$265,020	\$253,971	\$242,381	0.96	1.05
Jun 2017	\$39,894	\$40,552	\$39,497	1.02	1.03	\$304,914	\$294,522	\$281,878	0.97	1.04
Jul 2017	\$32,896	\$34,159	\$33,101	1.04	1.03	\$337,810	\$328,682	\$314,979	0.97	1.04
Aug 2017	\$35,970	\$37,247	\$36,885	1.04	1.01	\$373,780	\$365,929	\$351,864	0.98	1.04
Sep 2017	\$52,881									
CTD	\$2,672,458	\$2,658,252	\$2,619,289	0.99	1.01					

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: Vanessa Turner

Base Operations and Tank Farm Projects (5.01)

The August 2017 variances below do not impact TPA milestones.

The **favorable** SV of \$1,277,000 is primarily due to:

- The 222-S Secondary Transformer Replacement project was completed ahead of schedule. A decision was made to accelerate this scope, which included an electrical outage at the 222-S facility, in an effort to minimize the impact to the 222-S Laboratory supporting other high priority projects.
- The contractors received three spare transfer pumps from the fabrication contractor ahead of schedule. Efficiencies were realized in testing three transfer pumps in succession.
- The contractor recovered schedule performance for the Public Address System Installation project by completing nearly all the excavation and mounting of the speaker poles in A Tank Farm in August. .

The **favorable** CV of \$362,000 is primarily due to:

- Less resources were required to complete the 222-S Laboratory Secondary Transformer project. The contractor and operations were able to accelerate the electrical outage and complete it in one weekend versus the two weekends as originally planned.

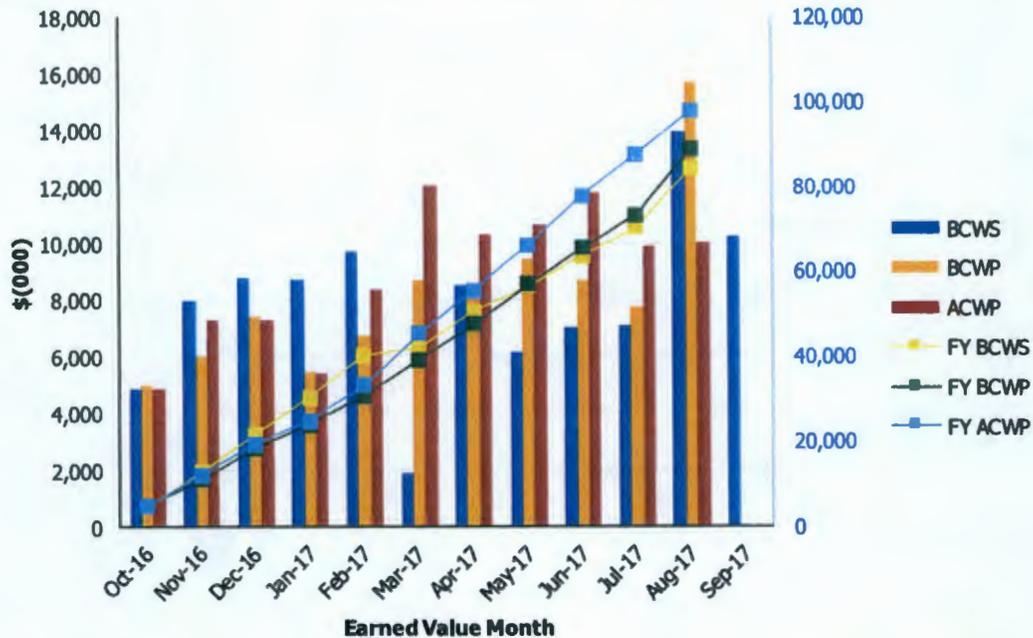
EXC-01a: Fiscal Year Cost and Schedule Report

Earned Value Data: Fiscal Year 2017

August-17

Tank Farms ORP-0014
Retrieve and Close SST's 5.02

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2016	\$4,816	\$4,996	\$4,822	1.04	1.04	\$4,816	\$4,996	\$4,822	1.04	1.04
Nov 2016	\$7,924	\$5,969	\$7,241	0.75	0.82	\$12,740	\$10,965	\$12,063	0.86	0.91
Dec 2016	\$8,772	\$7,401	\$7,262	0.84	1.02	\$21,512	\$18,365	\$19,325	0.85	0.95
Jan 2017	\$8,646	\$5,422	\$5,360	0.63	1.01	\$30,158	\$23,787	\$24,685	0.79	0.96
Feb 2017	\$9,716	\$6,707	\$8,341	0.69	0.80	\$39,874	\$30,495	\$33,026	0.76	0.92
Mar 2017	\$1,903	\$8,675	\$12,056	4.56	0.72	\$41,777	\$39,170	\$45,082	0.94	0.87
Apr 2017	\$8,477	\$8,214	\$10,268	0.97	0.80	\$50,254	\$47,384	\$55,350	0.94	0.86
May 2017	\$6,110	\$9,406	\$10,604	1.54	0.89	\$56,364	\$56,790	\$65,953	1.01	0.86
Jun 2017	\$6,982	\$8,684	\$11,807	1.24	0.74	\$63,345	\$65,474	\$77,761	1.03	0.84
Jul 2017	\$7,043	\$7,702	\$9,910	1.09	0.78	\$70,388	\$73,176	\$87,670	1.04	0.83
Aug 2017	\$13,912	\$15,660	\$10,002	1.13	1.57	\$84,301	\$88,836	\$97,672	1.05	0.91
Sep 2017	\$10,232									
CTD	\$793,468	\$786,886	\$818,346	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

Retrieve and Close Single-Shell Tanks (5.02)

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

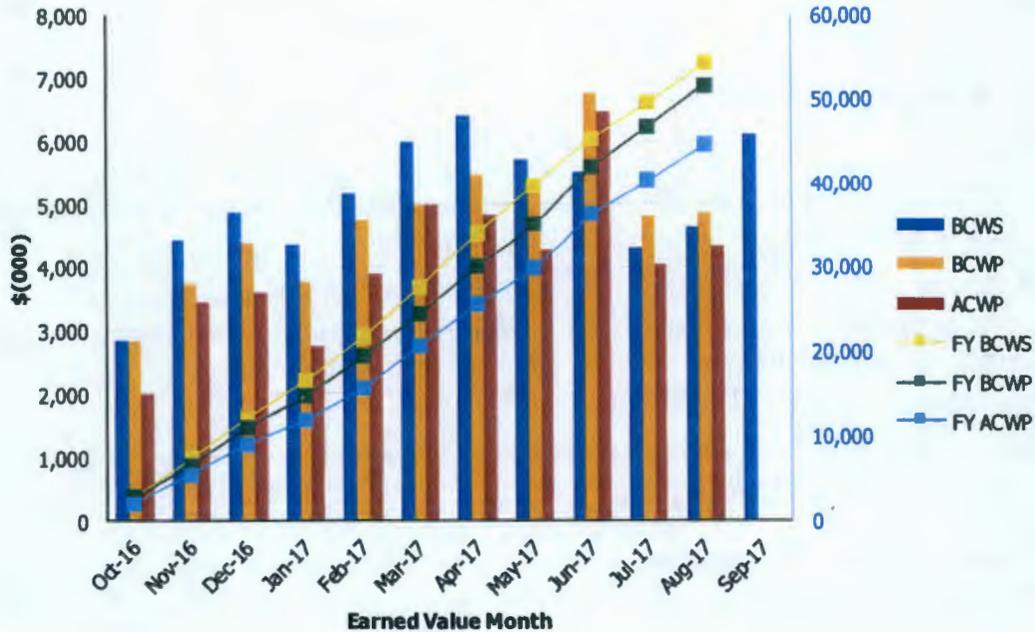
EXC-01a: Fiscal Year Cost and Schedule Report

Earned Value Data: Fiscal Year 2017

August-17

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

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2016	\$2,840	\$2,829	\$1,990	1.00	1.42	\$2,840	\$2,829	\$1,990	1.00	1.42
Nov 2016	\$4,428	\$3,728	\$3,446	0.84	1.08	\$7,267	\$6,557	\$5,436	0.90	1.21
Dec 2016	\$4,878	\$4,404	\$3,589	0.90	1.23	\$12,146	\$10,961	\$9,026	0.90	1.21
Jan 2017	\$4,371	\$3,773	\$2,737	0.86	1.38	\$16,516	\$14,734	\$11,762	0.89	1.25
Feb 2017	\$5,176	\$4,743	\$3,893	0.92	1.22	\$21,692	\$19,477	\$15,656	0.90	1.24
Mar 2017	\$5,981	\$4,992	\$4,999	0.83	1.00	\$27,673	\$24,469	\$20,654	0.88	1.18
Apr 2017	\$6,391	\$5,473	\$4,858	0.86	1.13	\$34,064	\$29,942	\$25,512	0.88	1.17
May 2017	\$5,713	\$5,236	\$4,285	0.92	1.22	\$39,776	\$35,178	\$29,798	0.88	1.18
Jun 2017	\$5,506	\$6,773	\$6,463	1.23	1.05	\$45,282	\$41,950	\$36,261	0.93	1.16
Jul 2017	\$4,292	\$4,822	\$4,039	1.12	1.19	\$49,574	\$46,773	\$40,300	0.94	1.16
Aug 2017	\$4,640	\$4,863	\$4,348	1.05	1.12	\$54,214	\$51,636	\$44,648	0.95	1.16
Sep 2017	\$6,097									
CTD	\$426,599	\$422,655	\$389,502	0.99	1.09					

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

Waste Feed Delivery/Treatment (5.03)

The August 2017 variances below do not impact TPA milestones.

The **favorable** SV of \$223,000 is primarily due to:

- Performance recovery from earlier periods for the completion of the Direct Feed Low Activity Waste Feed Qualification Maturation - Conducting Hot Cell Testing activities. This activity completed two months later than planned.
- Performance recovery from earlier periods in the AP-105 Tank Upgrades project. The design was to be completed by April FY 2017. The 30 percent and a significant portion of the 60 percent design effort was completed in the current period.

The **favorable** CV of \$515,000 is primarily due to:

There were many small favorable cost variances across the projects but two of the larger favorable variances were:

- Resource usage efficiencies in the Technology Maturation and Analysis Project were realized because less management support was required than was originally planned.
- Performance of the Effluent Management Facility Bottoms Simulant Evaporation tests and Solid Secondary Waste Form testing by the Savannah River National Laboratory (SRNL). As DOE provides direct funding to SRNL to perform this work, SRNL actual costs are not processed through the Tank Operations Contractor financial systems, resulting in a favorable cost variance. However, the laboratory activities are planned and estimated within the Tank Operations Contractor baseline so the EVMS performance is captured by WRPS. That said, cost data reported from DOE indicates that costs being expended by SRNL are approximately equivalent to the reported performance.

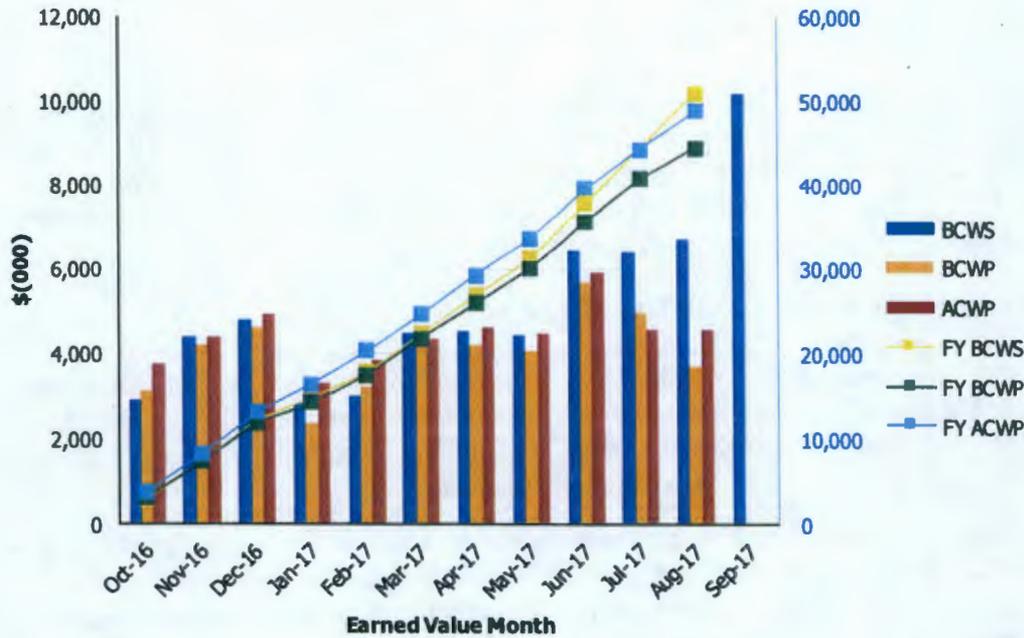
EXC-01a: Fiscal Year Cost and Schedule Report

Earned Value Data: Fiscal Year 2017

August-17

Tank Farms ORP-0014
Treat Waste 5.5

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2016	\$2,889	\$3,131	\$3,770	1.08	0.83	\$2,889	\$3,131	\$3,770	1.08	0.83
Nov 2016	\$4,391	\$4,193	\$4,400	0.95	0.95	\$7,280	\$7,324	\$8,170	1.01	0.90
Dec 2016	\$4,796	\$4,620	\$4,950	0.96	0.93	\$12,076	\$11,944	\$13,119	0.99	0.91
Jan 2017	\$2,804	\$2,370	\$3,297	0.85	0.72	\$14,880	\$14,314	\$16,417	0.96	0.87
Feb 2017	\$2,999	\$3,220	\$3,867	1.07	0.83	\$17,879	\$17,534	\$20,284	0.98	0.86
Mar 2017	\$4,462	\$4,265	\$4,328	0.96	0.99	\$22,342	\$21,799	\$24,612	0.98	0.89
Apr 2017	\$4,547	\$4,201	\$4,620	0.92	0.91	\$26,889	\$26,000	\$29,232	0.97	0.89
May 2017	\$4,446	\$4,056	\$4,490	0.91	0.90	\$31,335	\$30,056	\$33,721	0.96	0.89
Jun 2017	\$6,477	\$5,705	\$5,917	0.88	0.96	\$37,812	\$35,762	\$39,639	0.95	0.90
Jul 2017	\$6,425	\$4,966	\$4,589	0.77	1.08	\$44,237	\$40,728	\$44,228	0.92	0.92
Aug 2017	\$6,707	\$3,697	\$4,591	0.55	0.81	\$50,945	\$44,425	\$48,819	0.87	0.91
Sep 2017	\$10,167									
CTD	\$106,553	\$98,059	\$105,567	0.92	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

Treat Waste (5.5)

The August 2017 variances below do not impact the TPA milestones.

The **unfavorable** SV of (\$3,010,000) is primarily due to:

- Integrated Scaled Testing results indicated that a change to the current flammable gas mitigation strategy was necessary. As a result, the current design is to be revised to replace the Gas Removal System (GRS) with a vented ion exchange (IX) system. Activities impacted by the design change have been placed on hold until the development of a revised execution strategy is complete.

The **unfavorable** CV of (\$893,000) is primarily due to:

- Resource usage inefficiencies were experienced by the subcontractor (Simpson Gumpertz & Heger (SGH)). Extended in-depth calculation reviews of building design changes to the Soil-Structure Interaction (SSI) calculation and weather enclosure calculations have utilized more resources than originally planned.
- Additional Project Engineering resources were required for the design efforts associated with removal of the GRS and the addition of a Vented Ion Exchange System. More labor effort than originally planned has also been required for design support and management oversight based on the changes.