

Office of River Protection



Monthly Reporting Period September 1–September 30, 2020¹

¹ The narrative descriptions of progress in this report cover the reporting period. Information outside the reporting period may also be included for purposes of providing continuity or useful context. Information may be repeated in multiple sections of this report for continuity and clarity. Earned Value Management System data and descriptions cover the period through August 2020.

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Acronyms and Abbreviations

COVID-19	coronavirus disease 2019
CV	cost variance
DFLAW	direct-feed low-activity waste
DOE	U.S. Department of Energy
DSA	documented safety analysis
DST	double-shell tank
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
ETF	Effluent Treatment Facility
FY	fiscal year
HFFACO	<i>Hanford Federal Facility Agreement and Consent Order</i> (HFFACO and TPA are used interchangeably throughout this report)
IQRPE	independent, qualified, registered, professional engineer
LERF	Liquid Effluent Retention Facility
MCS	monitoring and control system
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
WTP	Waste Treatment and Immobilization Plant

Administrative Items/Milestone Status

Milestone	Title	Due Date	DOE PM	Status
Prior Years				
M-062-45-T01	Complete Negotiations 6-Months After Last Issuance of System Plan	04/30/2015	B. Harkins	In Dispute
M-062-45-ZZ	Negotiate a One-Time Supplemental Treatment Selection	04/30/2015	B. Harkins	In Dispute
M-062-45-ZZ-A	Convert M-062-31-T01 through M-062-34-T01 to Interim Milestones	04/30/2015	B. Harkins	In Dispute
M-062-31-T01	Complete Final Design & Submit RCRA Part B Permit Mod Request for Enhanced WTP & Supplemental Treatment	04/30/2016	B. Harkins	In Dispute
M-062-32-T01	Start Construction of Supplemental Vitrification Facility and/or WTP Enhancements	04/30/2018	B. Harkins	In Dispute
Fiscal Year 2020 (October 1, 2019–September 30, 2020)				
M-062-40G	Select a Minimum of 3 Scenarios	10/31/2019	B. Harkins	Completed
M-045-92V	Complete Construction of Barriers 1 (North) and 2 (South) and Expansion Barrier in 241-SX Farm	10/31/2019	B. Harkins	Completed
M-045-92W	Submit to Ecology Design for Barrier 3 in 241-TX Farm	10/31/2019	B. Harkins	Completed
M-045-92AC	Submit to Ecology for Approval a Maintenance and Performance Monitoring Plan for Interim Barriers	10/31/2019	B. Harkins	Completed
M-045-92X	Barrier 3 in 241-TX Farm Design Approved by Ecology	01/31/2020	B. Harkins	Completed

Milestone	Title	Due Date	DOE PM	Status
M-062-01AN	Submit Semi-Annual Project Compliance Report to Ecology	01/31/2020	G. Trenchard	Completed
M-045-93	Submit Report for Description, Analysis and Technology for Removing Drainable Liquids from SSTs	06/30/2020	B. Harkins	Completed
M-062-54A	Submit Permit Application for AP Tank Farm Mods and Operation Necessary to Support TSCR	07/15/2020	B. Harkins	Completed
M-062-01AO	Submit Semi-Annual Project Compliance Report to Ecology	07/31/2020	G. Trenchard	Completed
M-045-56P	Ecology and DOE Agree, at a Minimum, to Meet Yearly (by July)	07/31/2020	B. Harkins	Completed
M-045-99	Submit to Ecology the Preliminary Performance Assessment/Closure Analysis (<i>refers to WMA A/AX</i>)	09/30/2020	B. Harkins	Completed
M-045-59	Control Surface Water Infiltration Pathways as Needed	TBD ¹	B. Harkins	On Schedule
M-045-62	Submit the Draft Tier 3 Closure Plan with Corrective Measures in Phase 2 CMIP for WMA-C	TBD ¹	B. Harkins	On Schedule
M-045-83	Complete the Closure of WMA-C by Completing Closure Activities Specified in the Tier 2 Closure Plan	TBD ¹	B. Harkins	On Schedule
Fiscal Year 2021 (October 1, 2020 – September 30, 2021)				
M-045-92AD	Submit Yearly Reports Summarizing the Results of Maintenance and Performance Monitoring Activities	10/31/2020	B. Harkins	On Schedule
M-062-40H	Submit System Plan to Ecology	10/31/2020	M. Irwin	On Schedule

Milestone	Title	Due Date	DOE PM	Status
M-062-50	Submit to Ecology as a Secondary Document, a Mass Balance Flow	01/30/2021	B. Harkins	On Schedule
M-062-01AP	Submit Semi-Annual Project Compliance Report to Ecology	01/31/2021	G. Trenchard	On Schedule
M-090-14	Submit CD-1 for Facility to Store Spent Ion Exchange Columns Prior to DFLAW	3/31/2021	B. Harkins	On Schedule
M-062-45-A	Complete Negotiations 6-Months After Last Issuance of System Plan	4/30/2021	B. Harkins	On Schedule
M-062-33-T01	Complete Construction of Supplemental Treatment Vitrification Facility and/or WTP Enhancements	4/30/2021	B. Harkins	In Dispute
M-062-01AQ	Submit Semi-Annual Project Compliance Report to Ecology	07/31/2021	G. Trenchard	On Schedule
M-045-56Q	Ecology and DOE Agree, at a Minimum, to Meet Yearly (by July)	07/31/2021	B. Harkins	On Schedule
M-045-91E4	Provide SST Farms Dome Deflection Surveys Every 2 Years to Ecology	09/30/2021	B. Harkins	On Schedule
M-045-97	Submit to Ecology a WMA Integration Study for WMA A/AX as a Primary Document	09/30/2021	B. Harkins	On Schedule

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

CD = critical decision.

CMIP = corrective measures implementation work plan.

DFLAW = direct-feed low-activity waste.

DOE = U.S. Department of Energy.

Ecology = Washington State Department of Ecology.

Mod = modification.

PM = project manager.

RCRA = *Resource Conservation and Recovery Act*.

SST = single-shell tank.

TBD = to be determined.

TSCR = tank-side cesium removal.

WMA-C = C Tank Farm waste management area.

WTP = Waste Treatment and Immobilization Plant.

System Plan

Responsible Assistant Manager: Mat Irwin
Technical Lead: Kaylin Burnett
Ecology Project Manager: Dan McDonald, Jeff Lyon

M-062-40H Submit System Plan to Ecology

Due: October 31, 2020.

Status: On schedule.

M-062-45-A Complete Negotiations 6-Months after Last Issuance of System Plan

Due: April 30, 2021.

Status: On schedule.

Significant Past Accomplishments

- The selected scenarios for the *River Protection System Plan, Rev. 9*, were agreed upon by the U.S. Department of Energy (DOE), Office of River Protection (ORP) and the Washington State Department of Ecology (Ecology). ORP documented the agreement and transmitted letter 19-MIO-0020, “Request for Concurrence on Selected Scenarios for the River Protection Project System Plan, Revision 9,” dated September 25, 2019, to Ecology for concurrence. Ecology concurred on October 2, 2019, via letter 19-NWP-158, “Transmittal of Signed Concurrence for *Selected Scenarios for the River Protection Project System Plan, Revision 9*, RPP-RPT-61707, Rev. 0.”
- As of May 2020, cost and schedule development of the selected scenarios was completed, and the results were presented to Ecology representatives. Development of the *River Protection Project System Plan, Rev. 9*, document is ongoing.
- As of August 2020, the draft of the *River Protection Project System Plan, Rev. 9*, was completed and sent out for review and all comments were dispositioned.
- Washington River Protection Solutions LLC has formally transmitted the *River Protection System Plan, Rev. 9* to ORP for acceptance.
- The U.S. Environmental Protection Agency (EPA), DOE, and Ecology met in the first mediated session of the “Holistic Negotiations” on June 25, 2020. Negotiations are continuing.

Significant Planned Actions in the Next Six Months

- Discuss disputes with regard to milestone M-062-45 and its associated milestones during “Holistic Negotiations.”
- ORP will transmit *River Protection System Plan, Rev. 9*, by the due date of October 31, 2020.

Issues

- Ecology and ORP have ended negotiations related to the M-062-45 Milestone and have initiated dispute. “Holistic Negotiation” mediated sessions began in June, 2020 to resolve these disputes.
- On March 24, 2020, the Hanford Site moved to an essential mission-critical operations posture in recognition of increasing Coronavirus Disease 2019 (COVID-19) concerns. During this time, the majority of the Hanford Site workforce transitioned to telework, and a limited number of workers reported to the site to perform activities necessary to maintain the site in a safe condition, protective of the community, the region, and the environment.
- On May 20, 2020, DOE authorized the Hanford Site to move to Phase 1. Hanford Site operations began Phase 1 on May 26, 2020. During Phase 1, essential mission-critical operations were continued and targeted mobilization and low-risk workscope, such as implementation of COVID-19 protocols to infrastructure and facilities, required training, medical evaluations, and limited construction activities were added.
- The Hanford Site transitioned to Phase 2 beginning August 31, 2020. In Phase 2, the workforce that has been performing portable work via telework will generally continue to telework. The majority of the workforce performing nonportable work will return to the site to progress work activities, leveraging established COVID-19 controls.
- DOE and its contractors are engaged in ongoing analysis of work schedule impacts. DOE is continuing to evaluate the information and COVID-19 potential impacts on the Tri-Party Agreement (TPA), and if other actions may be necessary.

Acquisition of New Facilities

Tank Farms Assistant Manager: Rob Hastings
Technical Lead: Janet Diediker
Ecology Project Manager: Dan McDonald, Jeff Lyon

- M-090-14** **Submit CD-1² for Facility to Store Spent Ion Exchange Columns Prior to DFLAW³**
 Due: March 31, 2021.
 Status: On schedule.
- M-090-13** **CD-1 for Interim Hanford Storage Project and CR for CD-2 to ECY⁴**
 Due: September 30, 2025.
 Status: On schedule.
- M-090-00** **Acquire/Modify Facilities for Storage of First Two Years of IHLW⁵ from the WTP⁶ Operations**
 Due: December 31, 2036.
 Status: On schedule.
- M-047-00** **Completion of Work for Management of Secondary Waste from the WTP**
 Due: To be determined.
 Status: On schedule.

Significant Past Accomplishments

- None.

Significant Planned Actions in the Next Six Months

- None.

Issues

- On March 24, 2020, the Hanford Site moved to an essential mission-critical operations posture in recognition of increasing COVID-19 concerns. During this time, the majority of the Hanford Site workforce transitioned to telework, and a limited number of workers reported to the site to perform activities necessary to maintain the site in a safe condition, protective of the community, the region, and the environment.
- On May 20, 2020, DOE authorized the Hanford Site to move to Phase 1. Hanford Site operations began Phase 1 on May 26, 2020. During Phase 1, essential mission-critical

² CD denotes critical decision.

³ DFLAW denotes direct-feed low-activity waste.

⁴ ECY denotes Washington State Department of Ecology.

⁵ IHLW denotes immobilized high-level waste.

⁶ WTP denotes Waste Treatment and Immobilization Plant.

operations were continued and targeted mobilization and low-risk workscope, such as implementation of COVID-19 protocols to infrastructure and facilities, required training, medical evaluations, and limited construction activities were added.

- The Hanford Site transitioned to Phase 2 beginning August 31, 2020. In Phase 2, the workforce that has been performing portable work via telework will generally continue to telework. The majority of the workforce performing nonportable work will return to the site to progress work activities, leveraging established COVID-19 controls.
- DOE and its contractors are engaged in ongoing analysis of work schedule impacts. DOE is continuing to evaluate the information and COVID-19 potential impacts on the TPA, and if other actions may be necessary.

Supplemental Treatment and Resource Conservation and Recovery Act Part B Permit Applications

Tank Farms Assistant Manager: Rob Hastings
Technical Lead: Ricky Bang
Ecology Project Manager: Dan McDonald

The current status for each of the projects listed below, unless noted differently, is:

- In Dispute. Ecology and ORP have ended negotiations related to the M-062-45 Milestone and have initiated dispute. Therefore, the status of the milestones below has changed to “In Dispute.”

M-062-45-T01	Complete Negotiations 6-Months after Last Issuance of System Plan
Due:	April 30, 2015.
M-062-45-ZZ	Negotiate a One-Time Supplemental Treatment Selection
Due:	April 30, 2015.
M-062-45-ZZ-A	Convert M-062-31-T01 through M-062-34-T01 to Interim Milestones
Due:	April 30, 2015.
M-062-31-T01	Complete Final Design and Submit RCRA⁷ Part B Permit Modification Request for Enhanced WTP & Supplemental Treatment
Due:	April 30, 2016.
M-062-32-T01	Start Construction of Supplemental Vitrification Facility and/or WTP Enhancements
Due:	April 30, 2018.
M-062-33-T01	Complete Construction of Supplemental Treatment Vitrification Facility and/or WTP Enhancements
Due:	April 30, 2021.
M-062-45-XX	Complete Negotiations to Resolve Future Disputes M-062-45, Paragraphs 4 and 5
Due:	December 31, 2021.
Status:	On schedule.
M-062-34-T01	Complete Hot Commissioning of Supplemental Treatment Vitrification Facility and/or WTP Enhancements
Due:	December 30, 2022.

⁷ RCRA denotes *Resource Conservation and Recovery Act*.

M-062-21 Annually Submit Data Which Demonstrates Operation of the WTP at a Rate Sufficient to Meet M-062-00

Due: February 28, 2023.

Status: At risk.

M-062-00 Complete Pretreatment Processing and Vitrification of HLW⁸ and LAW⁹ Tank Wastes

Due: December 31, 2047.

Status: At risk.

Significant Past Accomplishments

- None.

Significant Planned Actions in the Next Six Months

- See the “System Plan” section, above, for updates related to the M-062-45 Milestone negotiations.

Issues

- Ecology and ORP have ended negotiations related to the M-062-45 Milestone and have initiated dispute. “Holistic Negotiation” mediated sessions began in June, 2020 to resolve these disputes.
- On March 24, 2020, the Hanford Site moved to an essential mission-critical operations posture in recognition of increasing COVID-19 concerns. During this time, the majority of the Hanford Site workforce transitioned to telework, and a limited number of workers reported to the site to perform activities necessary to maintain the site in a safe condition, protective of the community, the region, and the environment.
- On May 20, 2020, DOE authorized the Hanford Site to move to Phase 1. Hanford Site operations began Phase 1 on May 26, 2020. During Phase 1, essential mission-critical operations were continued and targeted mobilization and low-risk workscope, such as implementation of COVID-19 protocols to infrastructure and facilities, required training, medical evaluations, and limited construction activities were added.
- The Hanford Site transitioned to Phase 2 beginning August 31, 2020. In Phase 2, the workforce that has been performing portable work via telework will generally continue to telework. The majority of the workforce performing nonportable work will return to the site to progress work activities, leveraging established COVID-19 controls.
- DOE and its contractors are engaged in ongoing analysis of work schedule impacts. DOE is continuing to evaluate the information and COVID-19 potential impacts on the TPA, and if other actions may be necessary.

⁸ HLW denotes high-level waste.

⁹ LAW denotes low-activity waste.

Low-Activity Waste Pretreatment System

Tank Farms Assistant Manager: Rob Hastings
Technical Lead: Janet Diediker
Ecology Project Manager: Dan McDonald

M-062-50 **Submit to Ecology as a Secondary Document, a Mass Balance Flow**
Due: January 30, 2021.
Status: On schedule.

Significant Past Accomplishments

- None.

Significant Planned Actions in the Next Six Months

- None.

Issues

- On March 24, 2020, the Hanford Site moved to an essential mission-critical operations posture in recognition of increasing COVID-19 concerns. During this time, the majority of the Hanford Site workforce transitioned to telework, and a limited number of workers reported to the site to perform activities necessary to maintain the site in a safe condition, protective of the community, the region, and the environment.
- On May 20, 2020, DOE authorized the Hanford Site to move to Phase 1. Hanford Site operations began Phase 1 on May 26, 2020. During Phase 1, essential mission-critical operations were continued and targeted mobilization and low-risk workscope, such as implementation of COVID-19 protocols to infrastructure and facilities, required training, medical evaluations, and limited construction activities were added.
- The Hanford Site transitioned to Phase 2 beginning August 31, 2020. In Phase 2, the workforce that has been performing portable work via telework will generally continue to telework. The majority of the workforce performing nonportable work will return to the site to progress work activities, leveraging established COVID-19 controls.
- DOE and its contractors are engaged in ongoing analysis of work schedule impacts. DOE is continuing to evaluate the information and COVID-19 potential impacts on the TPA, and if other actions may be necessary.

Tank-Side Cesium Removal System

Tank Farms Assistant Manager: Rob Hastings
Technical Lead: Janet Diediker
Ecology Project Manager: Dan McDonald

This section only covers the Tank Farms Project scope of the direct-feed low-activity waste (DFLAW) mission. Please refer to the Consent Decree monthly report for the Waste Treatment and Immobilization Plant (WTP) project scope pertaining to DFLAW.

M-062-54A Submit Permit Application for AP Tank Farm Mods and Operation Necessary to Support TSCR¹⁰

Due: July 15, 2020.
 Status: Completed.

Significant Past Accomplishments

- TSCR enclosures were delivered, set on the balance of facilities pad, and anchored.
- Installation of the Ion Exchange Column storage pad and transfer path have been completed.
- Installation of the AP-06A wall nozzle that will connect the transfer line to the new transfer pump in Tank 241-AP-106 has been completed.

Significant Planned Actions in the Next Six Months

- ORP will review the Documented Safety Analysis (DSA) addendum, Technical Safety Requirements, and TSCR Readiness Plan of Action for approval.
- ORP will approve the TSCR DSA.
- TSCR construction activities will be completed and readiness activities will commence.

Issues

- On March 24, 2020, the Hanford Site moved to an essential mission-critical operations posture in recognition of increasing COVID-19 concerns. During this time, the majority of the Hanford Site workforce transitioned to telework, and a limited number of workers reported to the site to perform activities necessary to maintain the site in a safe condition, protective of the community, the region, and the environment.
- On May 20, 2020, DOE authorized the Hanford Site to move to Phase 1. Hanford Site operations began Phase 1 on May 26, 2020. During Phase 1, essential mission-critical operations were continued and targeted mobilization and low-risk workscope, such as implementation of COVID-19 protocols to infrastructure and facilities, required training, medical evaluations, and limited construction activities were added.

¹⁰ TSCR denotes Tank-Side Cesium Removal.

- The Hanford Site transitioned to Phase 2 beginning August 31, 2020. In Phase 2, the workforce that has been performing portable work via telework will generally continue to telework. The majority of the workforce performing nonportable work will return to the site to progress work activities, leveraging established COVID-19 controls.
- DOE and its contractors are engaged in ongoing analysis of work schedule impacts. DOE is continuing to evaluate the information and COVID-19 potential impacts on the TPA, and if other actions may be necessary.

242-A Evaporator Status

Tank Farms Assistant Manager: Rob Hastings
Technical Lead: Paul Hernandez
Ecology Project Manager: Jeff Lyon

The 242-A Evaporator campaign strategy is identified in the following table:

Fiscal Year	Campaign No.	Feed Source	Slurry Tank	Comments
TBD	EC-11	N/A	N/A	Per DOE direction, cold runs will not be used to maintain 242-A Evaporator readiness, staff proficiency, and cycle idle equipment while transfer lines are being replaced.

DOE = U.S. Department of Energy.

N/A = not applicable.

TBD = to be determined.

Significant Past Accomplishments

- Completed 242-A Evaporator annual electrical preventive maintenance.
- Completed power installation for the 242-A Evaporator proximity security entry system.
- Completed work to upgrade the 242-A Evaporator monitor control system.
- Completed 242-A Evaporator instrument air dryer tie-in and turnover.
- Completed 90-percent design for the 242-A Evaporator transfer line replacement.
- Continued wall nozzle fabrication for the 242-A Evaporator slurry and feed transfer line replacement.
- Completed actuator fabrication and functional testing.
- Completed work on the resolution of the universal joint potential inadequacy in the safety analysis. Universal joint testing has been completed, and the vendor is incorporating the new universal joints into the calculations, engineering change notices, and drawings.
- Completed work on the resolution of the buried pipe potential inadequacy in the safety analysis. The calculations for Nuclear Safety to perform the safety basis amendment were completed.
- Awarded 242-A Evaporator Documented Safety Analysis upgrades panel design and fire modeling contracts.
- Completed development of the 45 percent engineering design for the 242-A Evaporator DSA upgrades and initiated development of the 90 percent engineering design.

Significant Planned Actions in the Next Six Months

- Complete Mission Support Alliance, LLC portion of the installation of the 242-A Evaporator proximity security entry system
- Procure new PB-1 and PB-2 replacement pumps
- Initiate pit work in support of 242-A Evaporator transfer line replacement
- Initiate DSA safety system upgrades construction phase
- Complete wall nozzle fabrication for the 242-A Evaporator slurry and feed transfer line replacement.

Issues

- Initial testing revealed an issue with the original universal joints on the actuators used to drive the tank farm double isolation valves. A potential inadequacy in the safety analysis was written. Testing of different universal joints has now been completed, and the vendor has incorporated the new universal joints into the calculations, engineering change notices, and drawings.
- Following universal joint determination, 92 u-joints/actuators will need to be replaced. Project team and facility are initiating phased planning of replacement to support tank transfer operations.
- On March 24, 2020, the Hanford Site moved to an essential mission-critical operations posture in recognition of increasing COVID-19 concerns. During this time, the majority of the Hanford Site workforce transitioned to telework, and a limited number of workers reported to the site to perform activities necessary to maintain the site in a safe condition, protective of the community, the region, and the environment.
- On May 20, 2020, DOE authorized the Hanford Site to move to Phase 1. Hanford Site operations began Phase 1 on May 26, 2020. During Phase 1, essential mission-critical operations were continued and targeted mobilization and low-risk workscope, such as implementation of COVID-19 protocols to infrastructure and facilities, required training, medical evaluations, and limited construction activities were added.
- The Hanford Site transitioned to Phase 2 beginning August 31, 2020. In Phase 2, the workforce that has been performing portable work via telework will generally continue to telework. The majority of the workforce performing nonportable work will return to the site to progress work activities, leveraging established COVID-19 controls.
- DOE and its contractors are engaged in ongoing analysis of work schedule impacts. DOE is continuing to evaluate the information and COVID-19 potential impacts on the TPA, and if other actions may be necessary.

Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility

Tank Farms Assistant Manager: Rob Hastings
Technical Lead: Richard Valle
Ecology Project Manager: John Temple, Dan McDonald (for milestones)

- M-062-51-T01** **Submit to Ecology, as a Primary Document for Approval a Secondary Liquid Waste Disposition Work Plan**
 Due: December 31, 2021.
 Status: On schedule.
- M-062-51-T02** **Submit Permit Modification Request for Redesign Upgrades And Operations to Support Volumes of Waste Types Expected**
 Due: May 15, 2022.
 Status: On schedule.
- M-062-51** **Achieve Substantial Completion of LERF¹¹/ETF¹² Construction Upgrades Necessary for LAW Hot Commissioning**
 Due: April 15, 2023.
 Status: On schedule.

Significant Past Accomplishments

- Total fiscal year (FY) 2020 processing volume: approximately 1 million gallons
- Completed the Effluent Treatment Facility (ETF) chiller upgrade to improve reliability and reduce system maintenance
- Completed the ETF verification tank repair (60H-TK-1C) to replace the interior protective epoxy coating
- Completed the ETF cooling tower system upgrade to improve reliability and reduce system maintenance
- Completed the ETF dilute caustic tank upgrade by replacing the existing tank with a new stainless steel tank, which is a compatible material to the system piping
- Completed the ETF Load-In Station drain and filter system upgrade to install a new sump tank system
- Completed design of the Liquid Effluent Retention Facility (LERF) Basin 41 installation for additional capacity
- Completed design of the ETF ultraviolet/oxidation system upgrade as the existing system is no longer supported by the manufacturer
- Completed design for the ETF monitoring and control system (MCS) upgrade, which is currently operating on outdated systems

¹¹ LERF denotes Liquid Effluent Retention Facility.

¹² ETF denotes Effluent Treatment Facility.

- Completed design of the ETF Load-In Station building expansion to support enhanced facility operation
- Completed design of the ETF redundant filtration upgrade to reduce processing downtime
- Completed design of the ETF Vessel Off-Gas System upgrade to repair degraded condition
- Completed preliminary design review for the ETF supplemental organic treatment system (i.e., ETF acetonitrile treatment)
- Began conceptual design of the ETF motor control center upgrade
- Began conceptual design of the ETF carbon dioxide membrane contactors upgrade
- Began conceptual design of the ETF freeze protection upgrade.

Significant Planned Actions in the Next Six Months

- Complete design of the ETF supplemental organic treatment system (i.e., ETF acetonitrile treatment) to provide the capability to treat the WTP DFLAW effluent
- Complete design of the ETF modular grout system to provide the onsite capability to stabilize the WTP DFLAW effluent
- Complete design of the ETF brine storage tanks to provide the capacity to manage the WTP DFLAW effluent
- Complete design of the ETF carbon dioxide membrane contactors to provide the capability to treat the WTP DFLAW effluent
- Complete design of the ETF motor control center upgrade to address the deficient condition and provide additional capability for ongoing upgrade projects
- Receive material procurements for the ETF MCS and ultraviolet/oxidation system upgrades.

Issues

- Work has paused on the LERF Basin 44 cover replacement project while nuclear safety evaluations are performed by Washington River Protection Solutions LLC and ORP. Evaluations are being performed due to visual indication of solid material in the basin and sample results from that material. Two options to repair/replace the LERF Basin 44 cover have been developed and issued to vendors for bid proposals.
- On March 24, 2020, the Hanford Site moved to an essential mission-critical operations posture in recognition of increasing COVID-19 concerns. During this time, the majority of the Hanford Site workforce transitioned to telework, and a limited number of workers reported to the site to perform activities necessary to maintain the site in a safe condition, protective of the community, the region, and the environment.

- On May 20, 2020, DOE authorized the Hanford Site to move to Phase 1. Hanford Site operations began Phase 1 on May 26, 2020. During Phase 1, essential mission-critical operations were continued and targeted mobilization and low-risk workscope, such as implementation of COVID-19 protocols to infrastructure and facilities, required training, medical evaluations, and limited construction activities were added.
- The Hanford Site transitioned to Phase 2 beginning August 31, 2020. In Phase 2, the workforce that has been performing portable work via telework will generally continue to telework. The majority of the workforce performing nonportable work will return to the site to progress work activities, leveraging established COVID-19 controls.
- DOE and its contractors are engaged in ongoing analysis of work schedule impacts. DOE is continuing to evaluate the information and COVID-19 potential impacts on the TPA, and if other actions may be necessary.

Liquid Effluent Retention Facility Volumes

LERF liquid levels, inventory, and received waste are shown in the table below. Volumes in the table are estimated.¹³

Description	242AL-42 (Basin 42)	242AL-43 (Basin 43)	242AL-44 (Basin 44)
AZ-301 Condensate	-	+ 6,800	-
Mixed Waste Trench 31 and 34	+11,400	-	-
Other ¹	+ 1,200	-	-
Processing Campaign(s)	-	-	-
Total Volume	2,950,000	6,476,000	816,000

¹ 325 retention process sewer.

Data Date: September 30, 2020.

Values shown in gallons.

¹³ The volume in each Liquid Effluent Retention Facility basin is calculated from liquid level sensor readings. Therefore, based on sensor fluctuations and/or environmental effects (e.g., precipitation, temperature), values for basin volumes may vary slightly from the net inputs and outputs shown for the basin.

Tank System Update

Tank Farms Assistant Manager: Rob Hastings
Technical Lead: Dustin Stewart
Ecology Project Manager: Jeff Lyon, Nina Menard

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

M-045-91E4 Provide SST¹⁴ Farms Dome Deflection Surveys Every 2 Years to Ecology

Due: September 30, 2021.
 Status: On schedule.

M-045-91K Complete Initial Baseline Visual Inspections of all SSTs

Due: September 30, 2023.
 Status: On schedule.

M-045-91K-T01 Submit Report of the Initial Baseline Visual Inspection of all SSTs Remaining to be Inspected

Due: March 31, 2024.
 Status: On schedule.

M-045-91L Obtain Assessment Reviewed/Certified by an IQRPE¹⁵ Attesting to SST Structural Integrity

Due: September 30, 2034.
 Status: On schedule.

Double-Shell Tank Integrity

Significant Past Accomplishments

- Received and installed a retractable corrosion monitoring probe in Tank 241-AY-101.
- Completed ultrasonic testing inspections for the following tanks in FY 2020:
 - 241-AW-102
 - 241-AW-101
 - 241-AW-106.
- Completed enhanced annulus visual inspection in FY 2020:
 - 241-AW-101
 - 241-AW-102
 - 241-AW-103
 - 241-AW-104
 - 241-AW-105

¹⁴ SST denotes single-shell tank.

¹⁵ IQRPE denotes Independent Qualified Registered Professional Engineer.

- 241-AW-106
 - 241-SY-101
 - 241-SY-102
 - 241-SY-103.
- Released RPP-RPT-62123, *Ultrasonic Inspection and Air Slot Visual Inspection Results for Double Shell Tank 241-AW-102 – FY 2020*, in June 2020.
 - Released RPP-RPT-62202, *Ultrasonic Inspection and Air Slot Visual Inspection Results for Double Shell Tank 241-AW-101 – FY 2020*, in August 2020.
 - Issued a contract to fabricate, test, and deliver a primary tank bottom volumetric inspection system to be deployed into the annulus of double-shell tanks (DST) and used to characterize regions of the primary tank bottom.
 - Issued a competitive procurement contract to a vendor to design and fabricate a tertiary leak detection inspection tool for deployment beneath the secondary liner of a DST.
 - Completed fabrication of two retractable corrosion monitoring probes for tanks 241-AP-102 and 241-AZ-101 and installed probe in Tank 241-AP-102.
 - Revised TFC-ENG-CHEM-D-19, *Maintain Tank Monitoring Surveillance Baselines*, to accommodate tank baseline changes in tank farms MCS.

Significant Planned Actions in the Next Six Months

- Install retractable corrosion monitoring probe in tank 241-AZ-101
- Complete the FY 2021 ultrasonic testing inspections at tanks 241-AW-105, 241-AW-104, and 241-AP-103.

Ultrasonic Testing Report Status

- 241-AW-102 ultrasonic testing report released in June 2020.
- 241-AW-101 ultrasonic testing report released in August 2020.
- 241-AW-106 ultrasonic testing draft report in progress with anticipated completion in November 2020.

Issues

- On March 24, 2020, the Hanford Site moved to an essential mission-critical operations posture in recognition of increasing COVID-19 concerns. During this time, the majority of the Hanford Site workforce transitioned to telework, and a limited number of workers reported to the site to perform activities necessary to maintain the site in a safe condition, protective of the community, the region, and the environment.
- On May 20, 2020, DOE authorized the Hanford Site to move to Phase 1. Hanford Site operations began Phase 1 on May 26, 2020. During Phase 1, essential mission-critical operations were continued and targeted mobilization and low-risk workscope, such as

implementation of COVID-19 protocols to infrastructure and facilities, required training, medical evaluations, and limited construction activities were added.

- The Hanford Site transitioned to Phase 2 beginning August 31, 2020. In Phase 2, the workforce that has been performing portable work via telework will generally continue to telework. The majority of the workforce performing nonportable work will return to the site to progress work activities, leveraging established COVID-19 controls.
- DOE and its contractors are engaged in ongoing analysis of work schedule impacts. DOE is continuing to evaluate the information and COVID-19 potential impacts on the TPA, and if other actions may be necessary.

Single-Shell Tank Integrity

Significant Past Accomplishments

- Performed TFC-ENG-CHEM-P-57, *Intrusion Notification and Tank Leak Assessment Process*, on the following tanks in FY 2020:
 - 241-SX-104
 - 241-T-109.
- Visual inspections were completed for the following tanks in FY 2020:
 - 241-TX-101 (completed December 2019)
 - 241-TX-102 (completed December 2019)
 - 241-TX-104 (completed January 2020)
 - 241-TX-107 (completed January 2020)
 - 241-S-103 (completed January 2020)
 - 241-S-110 (completed January 2020)
 - 241-BX-112 (completed February 2020)
 - 241-BY-107 (completed February 2020)
 - 241-SX-112 (completed February 2020)
 - 241-TY-104 (completed February 2020)
 - 241-TX-110 (completed February 2020)
 - 241-BX-109 (completed February 2020)
 - 241-B-107 (completed March 2020)
 - 241-BX-108 (completed March 2020)
 - 241-BX-105 (completed June 2020).
- Visual inspections for extent of condition, as a result of Tank 241-SX-112 findings in February 2020:
 - 241-SX-112 (completed July 2020)
 - 241-SX-109 (completed July 2020)
 - 241-SX-108 (completed August 2020)
 - 241-SX-111 (completed August 2020)
 - 241-SX-110 (completed August 2020)
 - 241-SX-106 (completed August 2020).

- Visual inspections for CHEM-P-57 tank leak assessment:
 - 241-B-109 (completed September 2020).
- Completed work package planning for visual inspection of five miscellaneous underground storage tanks.
- Completed the in-tank laser scan for dome spalling extent of condition, as a result of Tank 241-SX-112 findings in February 2020:
 - Tank 241-SX-112 Leica laser scan (August 2020).
 - Tank 241-SX-111 Leica laser scan (September 2020).
 - Tank 241-SX-109 Leica laser scan (September 2020).

Significant Planned Actions in the Next Six Months

- Perform TFC-ENG-CHEM-P-57 on tanks 241-TX-113 and 241-B-109 (in progress)
- Perform FY 2021 visual inspections

Issues

- Tank 241-SX-112 was inspected visually in late February. The concrete dome was inspected fully, and there were three spots of spalled concrete in the dome. While there have been past inspections of the tank, they did not include the full dome; this is the first inspection to reflect the spalling. There is no evidence of structural issues; however, the dome loading is being limited to current levels until further analysis is complete. The full analysis may take several months to complete, but a structural analysis contract is in place with the Pacific Northwest National Laboratory. Tank 241-SX-112 was inspected visually again in late July. The inspection did not identify any changes in the condition of the spalled locations. Concrete was noted on the waste surface under the spalled locations, suggesting that the spalling took place after 1969 when the tank was pumped and taken out of service. Further analysis is ongoing.
- Tank 241-SX-109 was inspected visually in late July. Spalled concrete was identified in the northeast portion of the tank dome next to a rectangular construction manhole. Additional small/shallow spalling locations, similar to those in Tank 241-SX-112, were noted on the tank dome. Concrete has been noted on the waste surface, and, comparing to past visual inspections, suggests that the spalling occurred post-1996.
- Tank 241-SX-108 was inspected visually in early August. Minor spalled concrete was identified on the tank dome.
- Tank 241-SX-111 was inspected visually in mid-August. Spalled/Cracked concrete was identified in various locations on the tank dome. Concrete has been noted on the waste surface, and, when comparing to past visual inspections, suggests that the spalling occurred post-1987.
- On March 24, 2020, the Hanford Site moved to an essential mission-critical operations posture in recognition of increasing COVID-19 concerns. During this time, the majority of the Hanford Site workforce transitioned to telework, and a limited number of workers

reported to the site to perform activities necessary to maintain the site in a safe condition, protective of the community, the region, and the environment.

- On May 20, 2020, DOE authorized the Hanford Site to move to Phase 1. Hanford Site operations began Phase 1 on May 26, 2020. During Phase 1, essential mission-critical operations were continued and targeted mobilization and low-risk workscope, such as implementation of COVID-19 protocols to infrastructure and facilities, required training, medical evaluations, and limited construction activities were added.
- The Hanford Site transitioned to Phase 2 beginning August 31, 2020. In Phase 2, the workforce that has been performing portable work via telework will generally continue to telework. The majority of the workforce performing nonportable work will return to the site to progress work activities, leveraging established COVID-19 controls.
- DOE and its contractors are engaged in ongoing analysis of work schedule impacts. DOE is continuing to evaluate the information and COVID-19 potential impacts on the TPA, and if other actions may be necessary.

Independent Qualified Registered Professional Engineer Activities

- DST system:
 - RPP-RPT-58441, *Double-Shell Tank System Integrity Assessment Report (DSTAR)*, Rev. 1, was completed in 2016.
 - The independent, qualified, registered, professional engineer (IQRPE) recommended the next DST system integrity assessment report be completed in 10 years.
- Single-shell tank (SST) system:
 - Completed M-045-9II Milestone report RPP-IQRPE-50028, *Single-Shell Tank System Structural Integrity Assessment Report*, in 2018.
 - The IQRPE recommended the next SST structural integrity assessment be completed in 16 years. Ecology transmitted letter 19-NWP-009, “Single-Shell Tank Structural Integrity Assessment, RPP-IQRPE-50028,” on January 16, 2019. The letter noted Ecology’s agreement with the IQRPE’s 16-year recommendation.
- 242-A Evaporator:
 - Completed RPP-RPT-60098, *242-A Evaporator System Integrity Assessment Report*, Rev. 0, in 2018.
 - The IQRPE recommended the next 242-A Evaporator system integrity assessment be completed in 15 years. Ecology transmitted letter 18-NWP-114, “Department of Ecology’s (Ecology’s) Comment on the 242-A Evaporator System Integrity Assessment Report, RPP-RPT-60098, Revision 0,” on July 19, 2018. The letter noted Ecology’s disagreement with the IQRPE’s 15 year recommendation. The Hanford Sitewide permit, Rev. 8C, currently provides for 242-A Evaporator system integrity assessments at a frequency of 10 years, and ORP will continue to comply with the permit condition.
- ETF:
 - Completed RPP-IQRPE-50043, *Effluent Treatment Facility (ETF) IQRPE Integrity Assessment*, in 2019.
 - The IQRPE recommended the next ETF integrity assessment be completed in 10 years.
- 219-S Tank system:
 - Completed RPP-IQRPE-50029, *219-S Integrity Assessment Report*, in February 2020.
 - The IQRPE recommended the next 219-S Tank system integrity assessment be completed in 20 years.

In-Tank Characterization and Summary

Tank Farms Assistant Manager: Rob Hastings
Technical Lead: Dustin Stewart
Ecology Project Manager: Jeff Lyon

Reports Completed or Released

For September 2020, the following reports were completed (internal access only) or released (external access):

- Completed:
 - RPP-RPT-58701, *Derivation of Best-Basis Inventory for Tank 241-TX-111 as of July 1, 2020*, Rev. 1
 - RPP-RPT-59892, *Derivation of Best-Basis Inventory for Tank 241-A-101 as of August 1, 2020*, Rev. 2
 - RPP-RPT-57338, *Derivation of Best-Basis Inventory for Tank 241-U-111 as of July 1, 2020*, Rev. 2
 - RPP-RPT-59562, *Derivation of Best-Basis Inventory for Tank 241-BY-105 as of July 1, 2020*, Rev. 1
 - RPP-RPT-59532, *Derivation of Best-Basis Inventory for Tank 241-T-109 as of August 1, 2020*, Rev. 2
 - RPP-PLAN-63800, *Tank Sampling and Analysis Plan for Residual Solid Waste in Tank 241-AX-102*, Rev. 3
 - RPP-RPT-62033, *Final Analytical Report for Tank 241-AP-106 Repurposing Step 6 Grab Samples 2019-12*, Rev. 1
 - RPP-RPT-60989, *Final Analytical Report for Tank 241-AY-101 Grab Sampling – Post-Recirculation 2018*, Rev. 2
 - RPP-RPT-60671, *Final Analytical Report for Tank 241-AP-107 DFLAW Grab Sampling and Analysis Plan-Fiscal Year 2018*, Rev. 3
- Released:
 - HNF-EP-0182, *Waste Tank Summary Report for Month Ending July 31, 2020*, Rev. 391.

Tank Sampling

Significant Past Accomplishments

- For September 2020, the following tank sampling was conducted:
 - Performed Tank 241-AX-102 post-retrieval solids grab sampling on September 23, 2020. Three samples were received at the laboratory.

Significant Planned Actions in the Next Six Months

- Tank 241-AX-102 post-retrieval solids grab sampling is planned for October, 2020.
- Tank 241-AN-106 core sampling is planned for October and November 2020.
- Tank 241-AN-106 liquid grab sampling is planned for November 2020.
- Tank 241-AP-107 qualification liquid grab sampling is planned for December 2020.
- Tank 241-AP-107 large-volume liquid grab sampling is planned for December 2020 and January 2021.
- Catch Tank C-301 grab sampling is planned for January 2021.

Issues

- On March 24, 2020, the Hanford Site moved to an essential mission-critical operations posture in recognition of increasing COVID-19 concerns. During this time, the majority of the Hanford Site workforce transitioned to telework, and a limited number of workers reported to the site to perform activities necessary to maintain the site in a safe condition, protective of the community, the region, and the environment.
- On May 20, 2020, DOE authorized the Hanford Site to move to Phase 1. Hanford Site operations began Phase 1 on May 26, 2020. During Phase 1, essential mission-critical operations were continued and targeted mobilization and low-risk workscope, such as implementation of COVID-19 protocols to infrastructure and facilities, required training, medical evaluations, and limited construction activities were added.
- The Hanford Site transitioned to Phase 2 beginning August 31, 2020. In Phase 2, the workforce that has been performing portable work via telework will generally continue to telework. The majority of the workforce performing nonportable work will return to the site to progress work activities, leveraging established COVID-19 controls.
- DOE and its contractors are engaged in ongoing analysis of work schedule impacts. DOE is continuing to evaluate the information and COVID-19 potential impacts on the TPA, and if other actions may be necessary.

Best-Basis Inventory Updates

Significant Past Accomplishments

- Best-basis inventory updates for the following tanks were completed in September 2020:
 - 241-A-101
 - 241-BY-105
 - 241-T-109
 - 241-TX-111
 - 241-U-111.

Significant Planned Actions in the Next Month

- Best-basis inventory updates for the following tanks are currently planned to be completed in October 2020:
 - None.

Issues

- On March 24, 2020, the Hanford Site moved to an essential mission-critical operations posture in recognition of increasing COVID-19 concerns. During this time, the majority of the Hanford Site workforce transitioned to telework, and a limited number of workers reported to the site to perform activities necessary to maintain the site in a safe condition, protective of the community, the region, and the environment.
- On May 20, 2020, DOE authorized the Hanford Site to move to Phase 1. Hanford Site operations began Phase 1 on May 26, 2020. During Phase 1, essential mission-critical operations were continued and targeted mobilization and low-risk workscope, such as implementation of COVID-19 protocols to infrastructure and facilities, required training, medical evaluations, and limited construction activities were added.
- The Hanford Site transitioned to Phase 2 beginning August 31, 2020. In Phase 2, the workforce that has been performing portable work via telework will generally continue to telework. The majority of the workforce performing nonportable work will return to the site to progress work activities, leveraging established COVID-19 controls.
- DOE and its contractors are engaged in ongoing analysis of work schedule impacts. DOE is continuing to evaluate the information and COVID-19 potential impacts on the TPA, and if other actions may be necessary.

Single-Shell Tank Closure Program

Tank Farms Assistant Manager: Rob Hastings

Technical Lead: Rod Lobos

Ecology Project Manager: Jeff Lyon

M-045-59 Control Surface Water Infiltration Pathways as Needed

Due: To be determined. Will be implemented if 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, M-45-58 Milestone, and implementation of other interim corrective measures).

Status: On schedule.

M-045-62 Submit the Draft Tier 3 Closure Plan with Corrective Measures in Phase 2 Corrective Measures Implementation Work Plan (CMIP) for WMA-C¹⁶

Due: To be determined. To be established in accordance with the date identified in the M-45-82 Milestone Tier 2 closure plan.

Status: On schedule.

M-045-83 Complete the Closure of WMA-C by Completing Closure Activities Specified in the Tier 2 Closure Plan

Due: To be determined. To be established in accordance with the date identified in the M-45-82 Milestone Tier 2 closure plan.

Status: On schedule.

M-045-92V Complete Construction of Barriers 1 (South) and 2 (North) and Expansion Barrier in 241-SX Farm

Due: October 31, 2019.

Status: Completed.

Note: This includes the construction of the SX Tank Farm expansion barrier as well.

M-045-92W Submit to Ecology Design for Barrier 3 in 241-TX Farm

Due: October 31, 2019.

Status: Completed.

M-045-92AC Submit to Ecology for Approval a Maintenance and Performance Monitoring Plan for Interim Barriers

Due: October 31, 2019.

Status: Completed.

¹⁶ WMA-C denotes C Tank Farm waste management area.

- M-045-92X** **Barrier 3 in 241-TX Farm Design Approved by Ecology**
 Due: January 31, 2020.
 Status: Completed October 17, 2019.
- M-045-56** **Ecology and DOE Agree, at a Minimum, to Meet Yearly (by July)**
 Due: July 31, 2020.
 Status: Completed July 9, 2020.
- M-045-99** **Submit to Ecology the Preliminary Performance Assessment/Closure Analysis (refers to WMA A/AX)**
 Due: September 30, 2020.
 Status: Completed September 29, 2020.
- M-045-92AD** **Submit Yearly Reports Summarizing the Results of Maintenance and Performance Monitoring Activities**
 Due: October 31, 2020.
 Status: On schedule.
- M-045-97** **Submit to Ecology as a Primary Document a Waste Management Area Integration Study for WMA A/AX as described in HFFACO¹⁷ Appendix I.2.1.1**
 Due: September 30, 2021.
 Status: On schedule.
- M-045-92Y** **Complete Construction of Barrier 3 in 241-TX Farm**
 Due: October 31, 2021.
 Status: On schedule.
- M-045-92Z** **Submit to Ecology Design for Barrier 4 in 241-U Farm**
 Due: October 31, 2021.
 Status: On schedule.
- M-045-92AA** **Barrier 4 in 241-U Farm Design Approved by Ecology**
 Due: January 31, 2022.
 Status: On schedule.
- M-045-85** **Initiate Negotiations of HFFACO Interim Milestones for Closure of Remaining WMAs**
 Due: January 31, 2022.
 Status: On schedule.

¹⁷ HFFACO denotes *Hanford Federal Facility Agreement and Consent Order*.

- M-045-98** **Submit to Ecology as a Primary Document an RFI/CMS¹⁸ work plan for WMA A/AX including an implementation schedule in accordance with HFFACO Action Plan Section 11.6**
 Due: September 30, 2022.
 Status: On schedule.
- M-045-102** **Submit to Ecology a Performance Assessment (PA) Maintenance Plan for WMA A/AX PA**
 Due: September 30, 2022.
 Status: On schedule.
- M-045-92AB** **Complete Construction of Barrier 4 in 241-U Farm**
 Due: October 31, 2023.
 Status: On schedule.
- M-045-103** **Submit to Ecology a PMR¹⁹ with Tier 2 RCRA Closure Plan for WMA A/AX and Schedule for Tier 3 Schedule**
 Due: September 30, 2026.
 Status: On schedule.
- M-045-104** **Submit to Ecology as a PMR the Post-Closure Plan for WMA A/AX**
 Due: September 30, 2028.
 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 Milestone.

Significant Past Accomplishments

- Submitted revisions and comment responses to Ecology for RPP-RPT-59389, *Tier 2 Resource Conservation and Recovery Act (RCRA) Closure Action Plan for Waste Management Area C*; RPP-RPT-59390, *Tier 3 Resource Conservation and Recovery Act (RCRA) Component Closure Activity Plan for 241-C-200 Series Tanks*; and RPP-RPT-58858, *Tier 1 Closure Plan Single-Shell Tank System*.
- Continued permitting workshops with Ecology for the SST closure plans in the Hanford Site-wide permit. The workshops are currently being conducted as teleconferences.
- Submitted RPP-ENV-61497, *Preliminary Performance Assessment of Waste Management Area A-AX*, and RPP-ENV-62206, *Analysis of Post-Closure Groundwater Impacts From Hazardous Chemicals in Residual Wastes in Tanks and Ancillary*

¹⁸ RFI/CMS denotes *Resource Conservation and Recovery Act* Facility Investigation/Corrective Measure Study.

¹⁹ PMR denotes Permit Modification Request.

Equipment at Waste Management Area A-AX, on September 29, 2020, to meet the M-045-99 Milestone.

- Held two data quality objective meetings for WMA A/AX boundary with Ecology and EPA, September 1 and September 16, 2020.
- Held a data quality objective sampling meeting for WMA A/AX with Ecology on September 29, 2020.
- Completed liner installation on the TX Evapotranspiration Basin.
- Submitted RPP-RPT-61684, *Maintenance and Performance Monitoring Plan for the Interim Barriers Program*, Rev. 1, to Ecology via letter 20-TF-0069, “The U.S. Department of Energy, Office of River Protection, Transmittal of RPP-RPT-61684, Maintenance and Performance Monitoring Plan for the Interim Barriers Program, Rev. 1,” on July 23, 2020. Ecology extended its review of the document until September 18, 2020 (20-NWP-137, “Extension of the Department of Ecology’s (Ecology) Comment Review Period for the *Maintenance and Performance Monitoring Plan*, RPP-RPT-61684, Revision 1, for the Interim Barriers Program”). Report RPP-RPT-61684, Rev. 00B was delivered to Ecology on October 10, 2019, to complete M-045-92AC Milestone.

Significant Planned Activities in the Next Six Months

- Resolve Ecology’s comments on RPP-RPT-59389, RPP-RPT-59390, and RPP-RPT-58858
- Release updated TPA Appendix I Performance Assessment documents incorporating Ecology comments as appropriate for WMA-C
- Submit the yearly report summarizing the results of maintenance and performance monitoring activities to meet M-045-92AD Milestone
- Complete the storm water drain system for the TX evapotranspiration basin
- Hold additional WMAs A/AX boundary meetings for the purpose of reaching agreement.

Issues

- Ecology proposed (via an email from Mr. Jeff Lyon on June 17, 2020) to remove the milestone (i.e., M-045-62, “Submit the Draft Tier 3 Closure Plan with Corrective Measures in Phase 2 CMIP for WMA-C”) for submittal of the CMIP, with the intent to install a final closure cap rather than implement the planned interim barrier. Ecology’s proposal to install the final closure cap before most of the closure activities would be completed at tank farms 241-A, 241-AN, 241-AP, 241-AW, 241-AX, 241-AY, and 241-AZ is an issue for the following reasons:
 - Could impact retrievals and tank structural stability
 - Could cause runoff issues for adjacent tank farms
 - Is not consistent with the approach analyzed in DOE/EIS-0391, *Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site*,

Richland, Washington, and the record of decision (78 FR 75918, “Final Tank Closure and Waste Management Environmental Impact Statement for the Hanford Site, Richland, Washington”) and captured in the approved RPP-RPT-59379, *Waste Management Area C Phase 2 Corrective Measures Study Report*.

DOE is developing the CMIP to submit to Ecology and has followed this path since RPP-RPT-59379 was approved in June 2018. DOE understands that the CMIP is the vehicle that Ecology will use to meet its TPA/HFFACO obligations in its role as lead agency, as set forth in paragraph 54 of the HFFACO legal agreement. Paragraph 54 of the HFFACO states:

DOE shall develop and submit its proposed remedial action (or corrective action) alternative following completion and approval of a Remedial Investigation and Feasibility Study (or RCRA Facility Investigation and Corrective Measures Study), in accordance with the requirements and schedules set forth in the Action Plan. If Ecology is the lead regulatory agency, it will recommend the CERCLA²⁰ remedial action(s) it deems appropriate to EPA. The EPA Administrator, in consultation with the DOE and Ecology, shall make final selection of the CERCLA remedial action(s), which shall not be subject to dispute.

Notwithstanding Ecology’s forthcoming recommendations, whether the same indicate Ecology’s position that corrective actions are not needed for the dangerous waste constituents, the EPA Administrator has sole authority to make the *Comprehensive Environmental Response, Compensation, and Liability Act* remedial action decisions. DOE has not received a clearly articulated rationale for any Ecology-proposed change or the process Ecology plans to use to recommend any remedial action(s) to the EPA and to obtain the EPA’s selection of remedial action(s).

- Report RPP-RPT-61684, Rev. 00B, was delivered to Ecology on October 10, 2019, to complete M-045-92AC Milestone. ORP submitted RPP-RPT-61684, Rev. 1, to Ecology via letter 20-TF-0069 on July 23, 2020. Ecology extended its review of the document until September 18, 2020 (20-NWP-137). ORP received 20-NWP-159, “Department of Ecology’s (Ecology) Comments on the United States Department of Energy – Office of River Protection’s (USDOE-ORP) *Maintenance and Performance Monitoring Plan for the Interim Barriers Program* (RPP-RPT-61684, Rev. 1),” with Ecology’s comments. ORP will be requesting additional time to respond and make modifications to the document.
- On March 24, 2020, the Hanford Site moved to an essential mission-critical operations posture in recognition of increasing COVID-19 concerns. During this time, the majority of the Hanford Site workforce transitioned to telework, and a limited number of workers reported to the site to perform activities necessary to maintain the site in a safe condition, protective of the community, the region, and the environment.
- On May 20, 2020, DOE authorized the Hanford Site to move to Phase 1. Hanford Site operations began Phase 1 on May 26, 2020. During Phase 1, essential mission-critical operations were continued and targeted mobilization and low-risk workscope, such as

²⁰ CERCLA denotes *Comprehensive Environmental Response, Compensation, and Liability Act*.

implementation of COVID-19 protocols to infrastructure and facilities, required training, medical evaluations, and limited construction activities were added.

- The Hanford Site transitioned to Phase 2 beginning August 31, 2020. In Phase 2, the workforce that has been performing portable work via telework will generally continue to telework. The majority of the workforce performing nonportable work will return to the site to progress work activities, leveraging established COVID-19 controls.
- DOE and its contractors are engaged in ongoing analysis of work schedule impacts. DOE is continuing to evaluate the information and COVID-19 potential impacts on the TPA, and if other actions may be necessary.

Single-Shell Tank Retrieval Program

Tank Farms Assistant Manager: Rob Hastings

Technical Lead: Jeff Rambo

Ecology Project Manager: Jeff Lyon

M-045-93 Submit Report for Description, Analysis and Technology for Removing Drainable Liquids from SSTs

Due: June 30, 2020.

Status: Completed.

M-045-86 Submit Retrieval Data Report (RDR) to Ecology for 19 Tanks Retrieved Under Consent Decree

Due: To be determined (12 months after retrieval certification).

Status: No retrieval data reports are currently underway. The next planned retrieval is Tank 241-AX-102.

M-045-70 Complete Waste Retrieval from all Remaining Single Shell Tanks (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 Milestone.

Significant Past Accomplishments

- Refer to the Consent Decree monthly report.

Significant Planned Activities in the Next Six Months

- Refer to the Consent Decree monthly report.

Issues

- Refer to the Consent Decree monthly report.

Tank Operations Contract Overview

Earned Value Data: Fiscal Year 2020

August-2020

Tank Farms ORP-0014 WBS 5 - River Protection Project (in \$000s)										
	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
CM	\$67,107	\$59,148	\$59,977	(\$7,959)	(\$829)	0.88	0.99			
FYTD	\$641,295	\$607,743	\$585,536	(\$33,552)	\$22,207	0.95	1.04	\$736,102		
CTD	\$6,163,892	\$6,060,361	\$6,004,640	(\$103,531)	\$55,721	0.98	1.01	\$6,272,281	\$6,219,801	\$52,481

ACWP = actual cost of work performed.

BAC = budget at completion.

BCWP = budgeted cost of work performed.

BCWS = budgeted cost of work scheduled.

CM = current month.

CPI = cost performance index.

CTD = contract to date.

CV = cost variance.

EAC = estimate at completion.

FYTD = fiscal year to date.

SPI = schedule performance index.

SV = schedule variance.

VAC = variance at completion.

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.

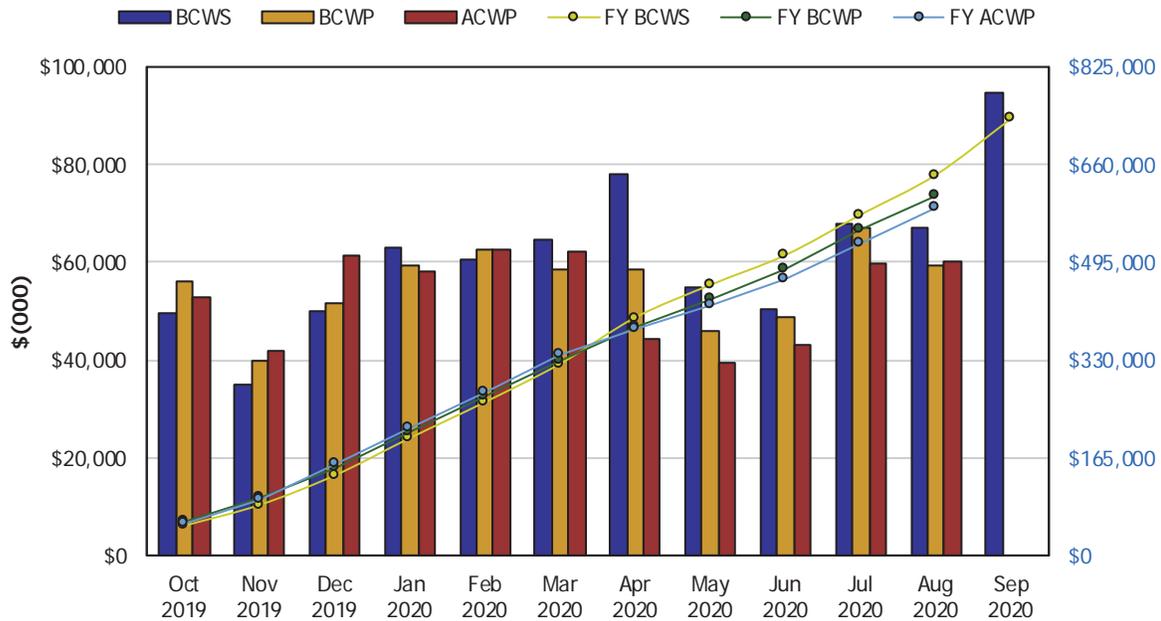
The cost variance (CV) measures the actual cost of work performed against the earned dollar value of that performed work. As an example, assume \$10,000 of work was planned to-date, \$8,000 was reported as being performed (earned), at an actual cost of \$9,000. This work would be reported as being \$2,000 behind schedule [a negative or unfavorable SV: \$8,000–\$10,000 = (\$2,000)], and has cost \$1,000 more [a negative or unfavorable CV: \$8,000–\$9,000 = (\$1,000)] 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.

Earned Value Data: Fiscal Year 2020

August-2020

Tank Farms ORP-0014
WBS 5 - River Protection Project

EVMS Monthly and Fiscal Year Values



Earned Value Month

Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2019	\$49,558	\$56,275	\$52,812	1.14	1.07	\$49,558	\$56,275	\$52,812	1.14	1.07
Nov 2019	\$34,954	\$39,741	\$42,066	1.14	0.94	\$84,512	\$96,016	\$94,879	1.14	1.01
Dec 2019	\$49,841	\$51,597	\$61,200	1.04	0.84	\$134,353	\$147,613	\$156,079	1.10	0.95
Jan 2020	\$63,048	\$59,514	\$57,979	0.94	1.03	\$197,401	\$207,128	\$214,059	1.05	0.97
Feb 2020	\$60,669	\$62,504	\$62,711	1.03	1.00	\$258,071	\$269,632	\$276,770	1.04	0.97
Mar 2020	\$64,495	\$58,502	\$62,318	0.91	0.94	\$322,565	\$328,133	\$339,088	1.02	0.97
Apr 2020	\$78,113	\$58,649	\$44,236	0.75	1.33	\$400,679	\$386,782	\$383,324	0.97	1.01
May 2020	\$55,020	\$45,899	\$39,337	0.83	1.17	\$455,699	\$432,681	\$422,661	0.95	1.02
Jun 2020	\$50,419	\$48,860	\$43,270	0.97	1.13	\$506,117	\$481,541	\$465,931	0.95	1.03
Jul 2020	\$68,072	\$67,055	\$59,629	0.99	1.12	\$574,189	\$548,596	\$525,560	0.96	1.04
Aug 2020	\$67,107	\$59,148	\$59,977	0.88	0.99	\$641,295	\$607,743	\$585,536	0.95	1.04
Sep 2020	\$94,806			0.00	0.00	\$736,102			0.00	0.00

CTD	\$6,163,892	\$6,060,361	\$6,004,640	0.98	1.01
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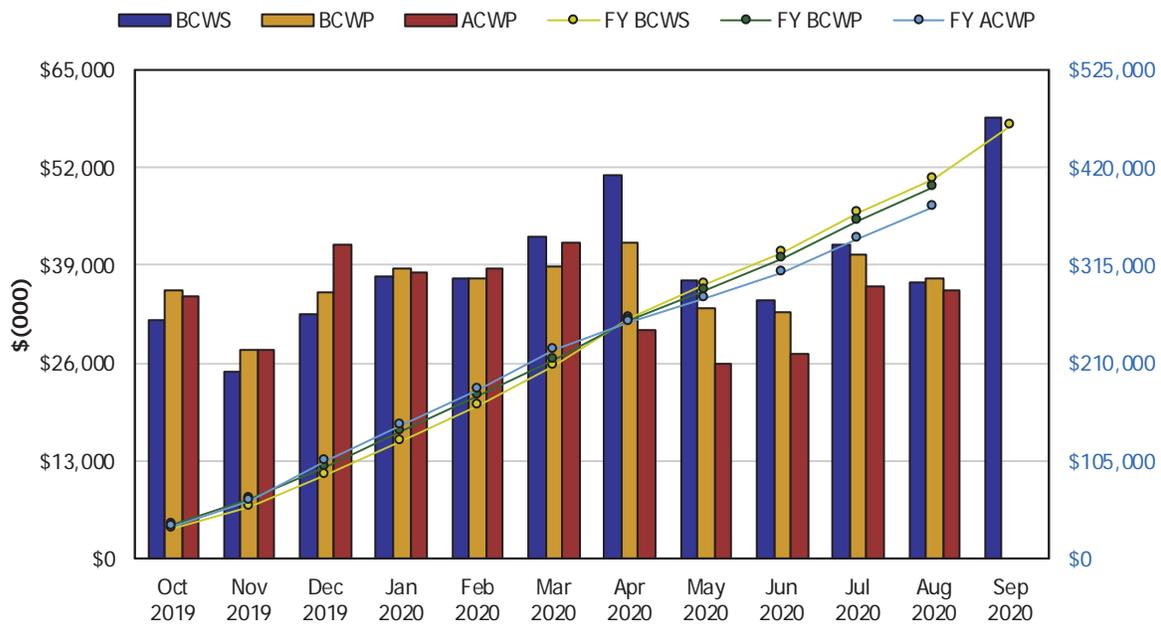
- ACWP = actual cost of work performed.
- BCWP = budgeted cost of work performed.
- BCWS = budgeted cost of work scheduled.
- CPI = cost performance index.
- CM = current month.
- CTD = contract to date.
- FY = fiscal year.
- SPI = schedule performance index.

Earned Value Data: Fiscal Year 2020

August-2020

Tank Farms ORP-0014
WBS 5.1 - Base Operations

EVMS Monthly and Fiscal Year Values



Earned Value Month

Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2019	\$31,720	\$35,563	\$34,769	1.12	1.02	\$31,720	\$35,563	\$34,769	1.12	1.02
Nov 2019	\$24,924	\$27,726	\$27,829	1.11	1.00	\$56,644	\$63,289	\$62,598	1.12	1.01
Dec 2019	\$32,399	\$35,357	\$41,699	1.09	0.85	\$89,043	\$98,646	\$104,297	1.11	0.95
Jan 2020	\$37,525	\$38,619	\$38,174	1.03	1.01	\$126,568	\$137,265	\$142,471	1.08	0.96
Feb 2020	\$37,219	\$37,342	\$38,509	1.00	0.97	\$163,787	\$174,607	\$180,980	1.07	0.96
Mar 2020	\$42,891	\$38,955	\$42,127	0.91	0.92	\$206,678	\$213,562	\$223,107	1.03	0.96
Apr 2020	\$50,864	\$42,080	\$30,456	0.83	1.38	\$257,542	\$255,642	\$253,563	0.99	1.01
May 2020	\$36,892	\$33,386	\$25,784	0.90	1.29	\$294,435	\$289,028	\$279,347	0.98	1.03
Jun 2020	\$34,378	\$32,642	\$27,185	0.95	1.20	\$328,812	\$321,670	\$306,532	0.98	1.05
Jul 2020	\$41,800	\$40,542	\$36,139	0.97	1.12	\$370,612	\$362,211	\$342,671	0.98	1.06
Aug 2020	\$36,727	\$37,130	\$35,690	1.01	1.04	\$407,339	\$399,342	\$378,361	0.98	1.06
Sep 2020	\$58,643					\$465,982			0.00	0.00
CTD	\$4,065,989	\$4,018,920	\$3,947,788	0.99	1.02					

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: Rob Hastings
Technical Lead: Ricky Bang

5.01 – Base Operations

The August 2020 variances below do not impact TPA milestones.

The current month **favorable** SV of \$403,300 was primarily due to:

- Schedule recovery for the procurement of the ETF MCS and hardware upgrade project as vendors completed milestones for fabrication of components.

The current month **favorable** CV of \$1,440,900 was primarily due to:

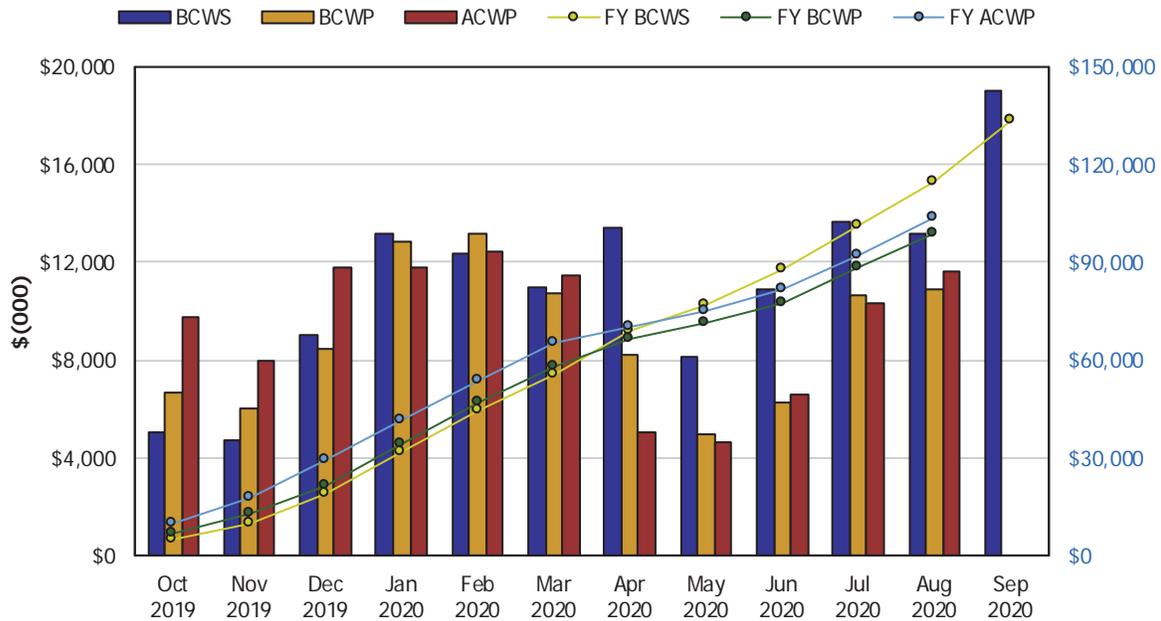
- Work performance under-spending as a result of restrictions related to COVID-19. Affected scope for the reporting month included, but was not limited to:
 - Production operations support services
 - Industrial hygiene
 - Tank Operations Contract training course costs
 - ETF/LERF/Treated Effluent Disposal Facility operations and maintenance
 - 222-S Laboratory general support operations support and safe compliant support
 - Production operations in AN, AP, B, BX, BY, and C tank farms
 - Production operations in S, SX, SY, T, TX, TY, and U tank farms
 - Production operations in A, AX, AY, and AZ tank farms.

Earned Value Data: Fiscal Year 2020

August-2020

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

EVMS Monthly and Fiscal Year Values



Earned Value Month

Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2019	\$5,039	\$6,662	\$9,772	1.32	0.68	\$5,039	\$6,662	\$9,772	1.32	0.68
Nov 2019	\$4,722	\$6,050	\$7,940	1.28	0.76	\$9,761	\$12,712	\$17,711	1.30	0.72
Dec 2019	\$9,040	\$8,482	\$11,822	0.94	0.72	\$18,801	\$21,193	\$29,534	1.13	0.72
Jan 2020	\$13,201	\$12,877	\$11,828	0.98	1.09	\$32,003	\$34,070	\$41,362	1.06	0.82
Feb 2020	\$12,323	\$13,174	\$12,473	1.07	1.06	\$44,326	\$47,245	\$53,834	1.07	0.88
Mar 2020	\$10,984	\$10,744	\$11,497	0.98	0.93	\$55,310	\$57,989	\$65,331	1.05	0.89
Apr 2020	\$13,412	\$8,230	\$5,011	0.61	1.64	\$68,722	\$66,218	\$70,343	0.96	0.94
May 2020	\$8,123	\$4,957	\$4,623	0.61	1.07	\$76,845	\$71,175	\$74,966	0.93	0.95
Jun 2020	\$10,857	\$6,262	\$6,619	0.58	0.95	\$87,702	\$77,437	\$81,585	0.88	0.95
Jul 2020	\$13,648	\$10,678	\$10,292	0.78	1.04	\$101,350	\$88,115	\$91,877	0.87	0.96
Aug 2020	\$13,193	\$10,903	\$11,608	0.83	0.94	\$114,543	\$99,019	\$103,484	0.86	0.96
Sep 2020	\$19,005			0.00	0.00	\$133,549			0.00	0.00

CTD	\$1,198,805	\$1,160,360	\$1,222,267	0.97	0.95
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- ACWP = actual cost of work performed.
- BCWP = budgeted cost of work performed.
- BCWS = budgeted cost of work scheduled.
- CPI = cost performance index.
- CM = current month.
- CTD = contract to date.
- FY = fiscal year.
- SPI = schedule performance index.

Tank Farms Assistant Manager: Rob Hastings
Technical Lead: Jeff Rambo

5.02 – Retrieve and Close Single-Shell Tanks

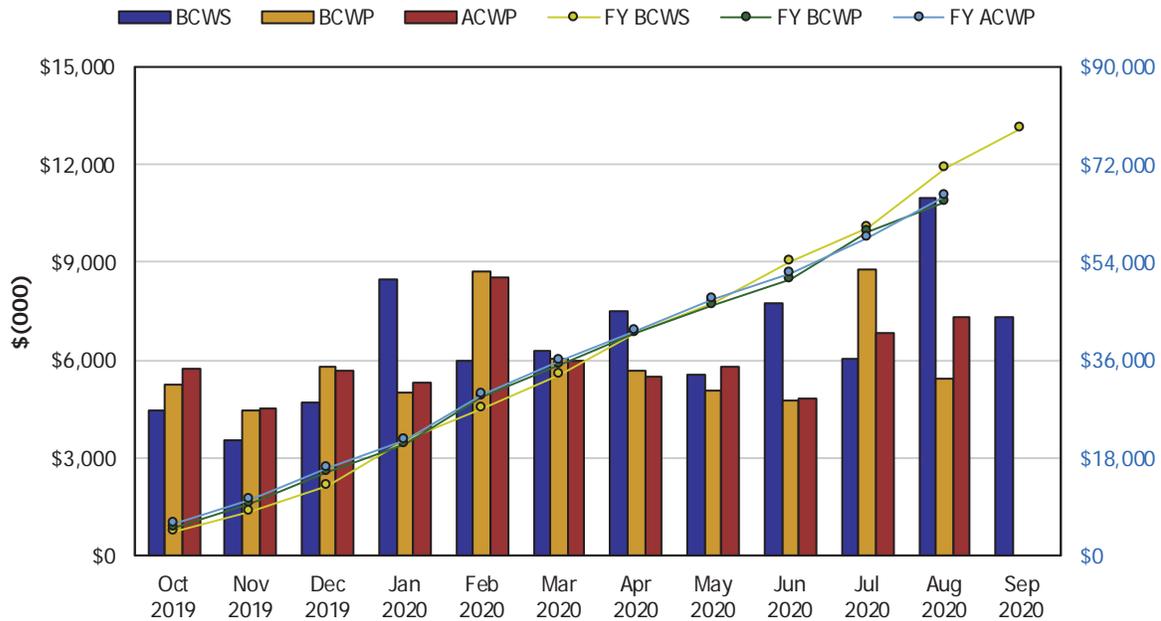
For the retrieval portion, see the Consent Decree monthly report for cost and schedule status.

Earned Value Data: Fiscal Year 2020

August-2020

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

EVMS Monthly and Fiscal Year Values



Earned Value Month

Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2019	\$4,444	\$5,240	\$5,748	1.18	0.91	\$4,444	\$5,240	\$5,748	1.18	0.91
Nov 2019	\$3,521	\$4,447	\$4,535	1.26	0.98	\$7,965	\$9,687	\$10,283	1.22	0.94
Dec 2019	\$4,707	\$5,765	\$5,664	1.22	1.02	\$12,672	\$15,452	\$15,947	1.22	0.97
Jan 2020	\$8,446	\$5,009	\$5,307	0.59	0.94	\$21,118	\$20,461	\$21,254	0.97	0.96
Feb 2020	\$5,997	\$8,716	\$8,545	1.45	1.02	\$27,115	\$29,177	\$29,799	1.08	0.98
Mar 2020	\$6,256	\$6,053	\$5,966	0.97	1.01	\$33,371	\$35,230	\$35,765	1.06	0.99
Apr 2020	\$7,498	\$5,683	\$5,490	0.76	1.04	\$40,868	\$40,913	\$41,256	1.00	0.99
May 2020	\$5,562	\$5,055	\$5,822	0.91	0.87	\$46,430	\$45,968	\$47,078	0.99	0.98
Jun 2020	\$7,720	\$4,764	\$4,803	0.62	0.99	\$54,150	\$50,732	\$51,881	0.94	0.98
Jul 2020	\$6,060	\$8,797	\$6,826	1.45	1.29	\$60,209	\$59,529	\$58,707	0.99	1.01
Aug 2020	\$10,973	\$5,438	\$7,333	0.50	0.74	\$71,182	\$64,967	\$66,040	0.91	0.98
Sep 2020	\$7,314					\$78,496				

CTD	\$647,560	\$636,693	\$591,466	0.98	1.08
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- ACWP = actual cost of work performed. CM = current month.
- BCWP = budgeted cost of work performed. CTD = contract to date.
- BCWS = budgeted cost of work scheduled. FY = fiscal year.
- CPI = cost performance index. SPI = schedule performance index.

Tank Farms Assistant Manager: Rob Hastings
Federal Program Manager: Brian Harkins

5.03 – Waste Feed Delivery/Treatment

The August 2020 variances below do not impact TPA milestones.

The current month **unfavorable** SV of (\$5,535,200) was primarily due to:

- Rescheduling of vendor milestones associated with the Low-Activity Waste Facility melter cooling panel and the melter bubblers.

The current month **unfavorable** CV of (\$1,895,400) was primarily due to:

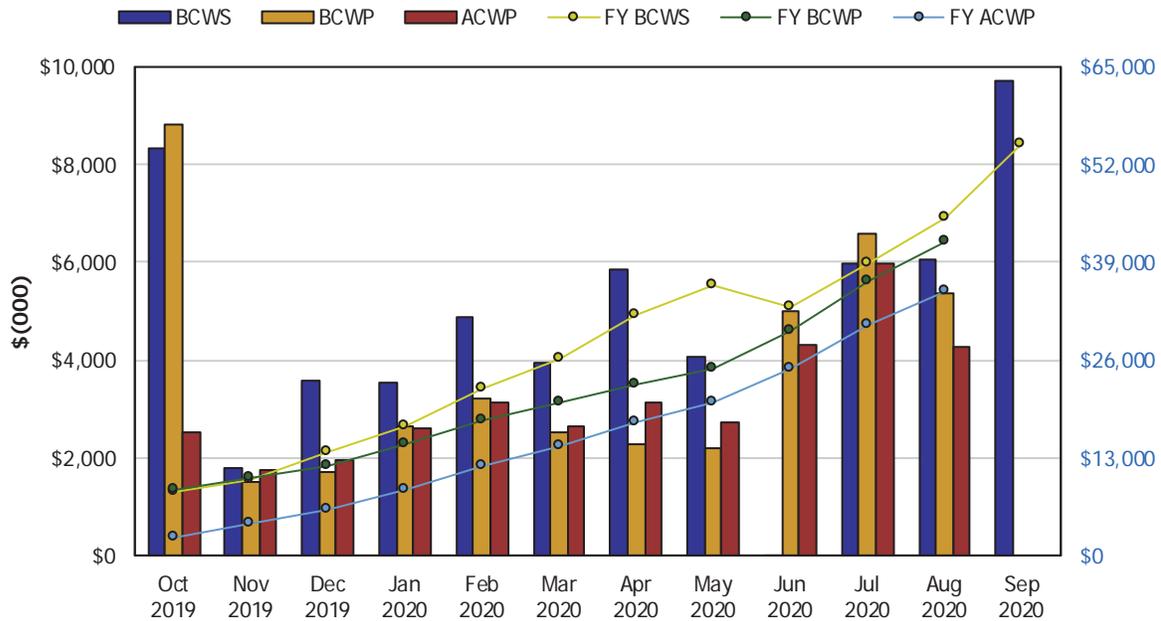
- The milestone payment for work associated with the Low-Activity Waste Facility bubblers partial plug head material receipt, accomplished and earned in July, was paid in August.

Earned Value Data: Fiscal Year 2020

August-2020

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

EVMS Monthly and Fiscal Year Values



Earned Value Month

Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2019	\$8,344	\$8,802	\$2,523	1.05	3.49	\$8,344	\$8,802	\$2,523	1.05	3.49
Nov 2019	\$1,778	\$1,510	\$1,759	0.85	0.86	\$10,122	\$10,312	\$4,282	1.02	2.41
Dec 2019	\$3,591	\$1,715	\$1,940	0.48	0.88	\$13,713	\$12,027	\$6,223	0.88	1.93
Jan 2020	\$3,546	\$2,663	\$2,588	0.75	1.03	\$17,260	\$14,691	\$8,810	0.85	1.67
Feb 2020	\$4,867	\$3,230	\$3,133	0.66	1.03	\$22,127	\$17,921	\$11,944	0.81	1.50
Mar 2020	\$3,928	\$2,526	\$2,646	0.64	0.95	\$26,055	\$20,446	\$14,590	0.78	1.40
Apr 2020	\$5,844	\$2,283	\$3,128	0.39	0.73	\$31,900	\$22,730	\$17,718	0.71	1.28
May 2020	\$4,059	\$2,179	\$2,731	0.54	0.80	\$35,959	\$24,908	\$20,449	0.69	1.22
Jun 2020	(\$2,984)	\$4,984	\$4,323	-1.67	1.15	\$32,974	\$29,892	\$24,772	0.91	1.21
Jul 2020	\$5,995	\$6,589	\$5,986	1.10	1.10	\$38,969	\$36,480	\$30,758	0.94	1.19
Aug 2020	\$6,071	\$5,361	\$4,281	0.88	1.25	\$45,040	\$41,841	\$35,040	0.93	1.19
Sep 2020	\$9,718			0.00	0.00	\$54,758			0.00	0.00

CTD	\$228,237	\$221,704	\$221,376	0.97	1.00
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- ACWP = actual cost of work performed.
- BCWP = budgeted cost of work performed.
- BCWS = budgeted cost of work scheduled.
- CPI = cost performance index.
- CM = current month.
- CTD = contract to date.
- FY = fiscal year.
- SPI = schedule performance index.

Tank Farms Assistant Manager: Rob Hastings
Federal Program Manager: Brian Harkins

5.05 – Treat Waste

The August 2020 variances below do not impact TPA milestones.

The current month unfavorable SV of (\$710,400) was primarily due to:

- Delay in completion of the AP-06A pit wall nozzle installation. A stop work was issued on August 18, 2020 in order to implement COVID-19 controls, which impacted all workscope performed within the AP Tank Farm, and temporarily delayed progress on the pit wall core drilling. There was also a delay in excavation for the SN-637 and SN-700 transfer lines between W-211 and ICD-30/31 due to unexpected field conditions.

The current month favorable CV of \$1,078,000 was primarily due to:

- Resumption of previously planned FY 2020 construction support activities that utilized fewer resources than anticipated.

Table 1 Administrative Record Metadata

Milestone Number or Facility Identification	Title
M-045-56P	Ecology and DOE Agree, at a Minimum, to Meet Yearly (by July)
M-045-91E4	Provide SST Farms Dome Deflection Surveys Every 2 Years to Ecology
M-045-92AD	Submit Yearly Reports Summarizing the Results of Maintenance and Performance Monitoring Activities
M-045-93	Submit Report for Description, Analysis and Technology for Removing Drainable Liquids from SSTs
M-045-97	Submit to Ecology a WMA Integration Study for WMA A/AX as a Primary Document
M-045-99	Submit to Ecology the Preliminary Performance Assessment/Closure Analysis
M-062-31-T01	Comp. Final Design & Submit RCRA Part B Permit Mod Request for Enhanced WTP & Supplemental Treatment
M-062-32-T01	Start Construction of Supplemental Vitrification Facility and/or WTP Enhancements
M-062-33-T01	Complete Construction of Supplemental Treatment Vitrification Facility and/or WTP Enhancements
M-062-40H	Submit System Plan to Ecology
M-062-45	Complete Negotiations 6-Months After Last Issuance of System Plan
M-062-45-A	Complete Negotiations 6-Months After Last Issuance of System Plan
M-062-45-T01	Complete Negotiations 6-Months After Last Issuance of System Plan
M-062-45-ZZ	Negotiate a One-Time Supplemental Treatment Selection
M-062-45-ZZ-A	Convert M-062-31-T01 Thru M-062-34-T01 to Interim Milestones
M-062-50	Submit to Ecology as a Secondary Document, a Mass Balance Flow
M-062-54A	Submit Permit Application for AP Tank Farm Mods and Operation Necessary to Support TSCR
M-090-14	Submit CD-1 for Facility to Store Spent Ion Exchange Columns Prior to DFLAW
S-2-3	Double-Shell Tank System (DST)
S-2-4	Single-Shell Tank System (SST)
S-2-8	Liquid Effluent Retention Facility (LERF)
T-2-6	242-A Evaporator

Milestone Number or Facility Identification	Title
T-2-8	Effluent Treatment Facility (ETF)
TS-2-8	Low-Activity Waste Pretreatment System (LAWPS)

CD = critical decision.
 DFLAW = direct-feed low-activity waste.
 DOE = U.S. Department of Energy.
 RCRA = *Resource Conservation and Recovery Act*.
 TSCR = tank-side cesium removal.
 WMA = waste management area.
 WTP = Waste Treatment and Immobilization Plant.