

***Office of River Protection
Tri-Party Agreement Project Managers' Meeting Minutes***

May 13/20, 2021

Meeting held virtually, via MS TEAMS

CONCURRENCE SIGNATURES

In accordance with the Tri-Party Agreement Section 4.1, Project Manager Role, any agreements and commitments resulting from the meeting will be prepared and signed by all parties as soon as possible after the meeting. The undersigned indicate by their signatures (or their delegate's signature) that these meeting minutes reflect the actual discussion during this meeting.

Signatures denote concurrence with the agreements and commitments resulting from this meeting and do not imply agreement with statements made during this meeting. Attachments to these meeting minutes are provided for informational purposes only.

**Brian A.
Harkins**

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Harkins
Date: 2021.06.08 07:27:46
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Brian Harkins, Project Manager
DOE-ORP

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Jason Young

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Jason Young, Project Manager
DOE-ORP

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DOE-ORP

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(ECY)
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Jeff Lyon, Project Manager
Washington State Department of Ecology

Date: _____

**McDonald, Dan
(ECY)**

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Dan (ECY)
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Dan McDonald, Project Manager
Washington State Department of Ecology

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**Temple,
John (ECY)**

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Temple, John (ECY)
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John Temple, Project Manager
Washington State Department of Ecology

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**OFFICE OF RIVER PROTECTION TRI-PARTY AGREEMENT/CONSENT
DECREE MONTHLY PROJECT MANAGERS' MEETING**

TERMS

BBI	Best-basis inventory
BOF	Balance of Facilities
CD	Consent Decree
CD-3B	critical decision
CERCLA	<i>Comprehensive Environmental Response, Compensation and Liability Act</i>
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
EIS	Environmental Impact Statement
EM-1	DOE Office of Environmental Management, Assistant Secretary
EMF	Effluent Management Facility
EPA	U.S. Environmental Protection Agency
ERSS	Extended Reach Sluicer System
ETF	Effluent Treatment Facility
EVMS	earned value management system
FY	fiscal year
IAMIT	Inter-agency Management Integration Team
IMUST	Inactive Miscellaneous Underground Storage Tanks
IQRPE	Independent Qualified Registered Professional Engineer
LAW	Low-activity waste
LBL	LAW Facility, Balance of Facilities and Lab
LERF	Liquid Effluent Retention Facility
MUST	Miscellaneous Underground Storage Tank
ORP	U. S. Department of Energy, Office of River Protection
PA	Performance Assessment
PMM	project manager meeting
POC	Point of contact
PT	Pretreatment
RAD	Radiation absorbed dose
RCRA	<i>Resource Conservation and Recovery Act</i>
SST	single-shell tank
TC&WM	Tank Closure and Waste Management
TPA	Tri-Party Agreement
TSCR	tank-side cesium removal
TWRWP	tank waste retrieval work plan
UT	Ultrasonic Test
WMA-C	Waste Management Area C
WRPS	Washington River Protection Solutions LLC
WTP	Waste Treatment and Immobilization Plant

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1.0 ADMINISTRATIVE ITEMS/MILESTONE STATUS/ACTIONS

Upcoming Meetings

The next U.S. Department of Energy-Office of River Protection (ORP) Tri-Party Agreement Project Managers' meeting is scheduled for June 10, 2021, via MS TEAMS.

Recent Items Entered Into the Hanford Administrative Record

The Office of River Protection Tri-Party Agreement and Consent Decree monthly reports for the period of March 1 – March 31, 2021, were entered into the Hanford Administrative Record on April 29, 2021.

Tri-Party Agreement Milestone Status

ORP stated all Tri-Party Agreement (TPA) milestones reported on were either Complete, On Schedule or In Dispute Resolution (for details on specific milestones, see pages 3-6 of the March 2021 ORP TPA Monthly Report).

Tri-Party Agreement Issues and Action Items

For reference, see attached, "ORP/Ecology TPA and CD Agreements, Issues and Action Items – May 2021 Meeting."

Action No. 1 (TF-20-10-01): Ecology has provided proposed dates for a briefing. Action now with ORP to schedule the briefing. *This action remains open.*

Action No. 2 (TF-20-10-03): Ecology has provided proposed dates for a briefing. Action now with ORP to schedule the briefing. *This action remains open.*

Action No. 3 (TF-20-11-01): Ecology stated it was willing to close this action, though it would still like to discuss alternatives at some point. Ecology also noted that the referenced language remains unchanged in the TPA. *This action was closed.*

Action No. 4 (20-11-02): Ecology reported it had reviewed the document (RPP-12711 "Temporary Waste Transfer Line Management Program Plan"), which closed the action, but also noted that it had disapproved a recent TPA Change Notice sent from ORP on the document, citing the need for broader changes than those proposed by ORP (the changes were essentially updating equipment numbers and other minor technical edits). Ecology proposed meeting with ORP to discuss making more substantial changes to the document. ORP responded that it was not a high priority to make changes to the document at this time but agreed to schedule a meeting with Ecology to discuss (which initiated a new action). *This action was closed.*

Action No. 5 (TF-21-02-01): There was an attempt to hold the dry-run on May 10, 2021, however, according to ORP, Ecology introduced several issues that prevented the dry-run going forward. Ecology's Project Manager asked for an email of those issues, which ORP agreed to provide. Ecology's Project Manager will meeting internally with Ecology staff to discuss the issues and will reply to ORP. *This action remains open.*

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Action No. 6 (TF-21-02-03): Ecology submitted Addendum L to ORP on May 12, 2021 in draft form and would like ORP to respond in writing with a status of when ORP will submit the remaining draft addenda. ORP responded that it did not expect Addendum L in draft and that it would need some time to respond. Ecology noted that ORP had committed to a schedule for submitting the remaining addenda in 2019. ORP said it would work on a schedule for submitting the remaining addenda. *This action remains open.*

Action No. 7 (TF-21-02-04): The action was **closed** April 26, 2021.

Action No. 8 (TF-21-02-05): Ecology shared a draft issue paper with ORP and a meeting has been scheduled for May 18, 2021 where ORP and Ecology will discuss. *The action remains open.*

Action No. 9 (TF-21-02-06): Ecology would like ORP to respond in writing whether it is open to expanding the length of the TPA Project Managers Meeting or to holding separate, on-the-record meetings. ORP did not have a status update. *The action remains open.*

Action No. 10 (TF-21-02-08): Ecology reported Ecology and ORP management had met on the topic, but there was no immediate information on the outcome of that meeting. *The action remains open.*

2.0 SYSTEM PLAN

Significant Past Accomplishments

- The U.S. Environmental Protection Agency (EPA), U.S. Department of Energy (DOE), and Washington State Department of Ecology (Ecology) met in the first mediated session of the “Holistic Negotiations” on June 25, 2020. There was one negotiation session held in January.
- On January 27, 2021, DOE submitted signed change package M-62-21-01 to Ecology for evaluation to extend the M-62-45 Milestone date 90 days due to “Holistic Negotiations” progress. This change package was not concurred on by Ecology within the 14-day period and therefore went into dispute on February 10, 2021.

Significant Planned Actions in the Next Six Months

- Discuss disputes with regard to milestone M-062-45 and its associated milestones during “Holistic Negotiations.”

Issues/Other Items

- 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.

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3.0 ACQUISITION OF NEW FACILITIES/SUPPLEMENTAL TREATMENT AND RCRA PART B PERMIT APPLICATIONS

Significant Past Accomplishments

- Completed M-090-14 Milestone, "Submit CD-1 for Facility to Store Spent Ion Exchange Columns Prior to DFLAW." ORP transmitted letter 20-ECD-0050, "Submittal of CD-1 for Facility to Store Spent Ion Exchange Columns Prior to Direct Feed Low-Activity Waste Tri-Party Agreement Milestone M-090-14," to Ecology on October 23, 2020.

Significant Planned Actions in the Next Six Months

- Refer to "System Plan" (Section 2.0), Significant Planned Actions

Issues/Other Items

- 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.

4.0 LOW ACTIVITY WASTE PRETREATMENT SYSTEM

Significant Past Accomplishments

- Completed M-062-50 Milestone, "Submit as a Secondary Document, a Mass Balance Flow." ORP transmitted letter 20-ECD-0057, "Completion of Tri-Party Agreement Milestone M-062-50" to Ecology on December 4, 2020.

Significant Planned Actions in the Next Six Months

- None reported

Issues/Other Items

- None reported

5.0 TANK SIDE CESIUM REMOVAL SYSTEM (TSCR)

Significant Past Accomplishments

- ORP approved the Documented Safety Analysis (DSA) addendum Technical Safety Requirements.
- Completed Tank Side Cesium Removal (TSCR) construction operations required to turn over the system to Operations to perform water runs.
- Completed backfill for SN-637/700 near ICD-30/31. Completed electrical tie-ins for the TSCR enclosures.
- Completed the TSCR shield wall installation.
- Completed hydrostatic testing of primary piping in waste transfer line SN-700, which connects AP Tank Farm to the main W-211 transfer line leading to the Waste Treatment and Immobilization Plant (WTP). The testing included the re-purposed portion of the W-211 transfer line and marks completion of integrity testing for that section, supporting closure of a major project risk.

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- Installed two filter units and three Ion Exchange Columns (IXCs) into the TSCR Enclosure in preparation for water runs.
- IXC base plates were installed for the first 20 spent IXCs.

Significant Planned Actions in the Next Six Months

- Receive the *Resource Conservation and Recovery Act* (RCRA) Permit from Ecology.
- Complete TSCR construction operations within AP Tank Farm.
- Complete TSCR Operational Acceptance Test. (*updated as of today's meeting as "complete")
- Washington River Protection Solutions, LLC will perform the Management Self-Assessment and the Contractor Readiness Assessment.
- DOE will conduct the Readiness Assessment of the contractor.

Issues/Other Items

- Ecology noted it was prepared to do the construction certification for TSCR and would do so sometime during the upcoming summer.
- ORP noted it had received a draft TPA Change Control Form with proposed milestones for TSCR IXC storage from Ecology, and had found those milestones agreeable.

6.0 242-A EVAPORATOR STATUS

Significant Past Accomplishments

ORP reported it had:

- Completed work on the resolution of the universal joint potential inadequacy in the safety analysis. Universal joint testing was completed, and the vendor has incorporated the new universal joints into the calculations, engineering change notices, and drawings.
- Replaced bag filters on both the K1 and K2 ventilation systems.
- Repaired the K1-5-3 exhauster system and returned it to operable status.
- Completed development of the 100 percent engineering design revisions for the 242-A Evaporator DSA upgrades.
- Completed wall nozzle fabrication for the 242-A Evaporator slurry and feed transfer line replacement.
- Completed AW-02A pump pit jumper removal for the 242-A Evaporator slurry and feed transfer line replacement.

Significant Planned Actions in the Next Six Months

- Procure new PB-1 and PB-2 replacement pumps.
- Receive 242-A DSA Safety System upgrades procurements.
- Initiate 242-A DSA Safety System upgrades construction phase.
- Initiate 242-A Ventilation Control System upgrades.
- Install new wall nozzle in the AW-02A pit in support of the new 242-A Evaporator slurry line and feed transfer lines.
- Mobilize AW Tank Farm transfer line excavation for the 242-A Evaporator slurry and feed transfer line replacement.

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- Install new wall nozzles in the evaporator pump room to support the new 242-A Evaporator slurry and feed transfer lines.
- Remove the old 242-A Evaporator feed pump and install a new one in the AW-02E pit.
- Begin excavation between the AW-02A and AW-B pits for the 242-A Evaporator slurry and feed transfer line replacement.

Issues/Other Items

- 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 was completed, and the vendor has incorporated the new universal joints into the calculations, engineering change notices, and drawings.
- Following universal joint determination, 92 universal joints/actuators will need to be replaced. Project team and facility operations personnel are initiating phased planning of replacement to support tank transfer operations.
- Elaborating on the wall nozzle fabrication, ORP explained that the evaporator was an old facility and the annulus area for the transfer line did not drain into the leak detector, so installing new wall nozzles will ensure, in the event of a leak in the primary line, the liquid will to the annulus space between the inner and outer pipe, and will drain to the pit.
- Ecology asked about upgrades to the 242-A Evaporator PC5000 leak detection system, specifically if any design work was already in progress which might necessitate a follow-on permit modification. Ecology asked for a status update. ORP took the action to do so.

7.0 LIQUID EFFLUENT RETENTION FACILITY AND 200 AREA EFFLUENT TREATMENT FACILITY

Significant Past Accomplishments

ETF:

- Total fiscal year (FY) 2021 processing volume: approximately 3.2 million gallons.
- Completed processing operations for FY 2021, and began facility cleanout activities in preparation for plant outage.
- Completed third party inspections of the ETF Evaporator and Thin Film Dryer boiler.
- Completed transfer of the remaining heel volume from LERF Basin 44 to LERF Basin 42 in support of Basin 44 cover replacement.
- Continued fieldwork for the ETF Monitoring and Control System (MCS) upgrade.
- Began site mobilization of the construction subcontractor for the ETF Ultraviolet/Oxidation (UV/OX) upgrade.
- Began conceptual design of the ETF modular grout system.
- Completed conceptual design of the ETF brine storage tanks.
- Completed preliminary design of the ETF carbon dioxide membrane contactors.
- Completed preliminary design of the ETF motor control center upgrade.
- Completed preliminary design of the ETF freeze protection upgrade.
- Began conceptual design of the ETF instrument air system.

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Significant Planned Actions in the Next Six Months

- Complete replacement of the LERF Basin 44 cover to address the degraded condition.
- Complete the FY 2021 portion of the ETF MCS upgrade, as it is currently operating on outdated systems. This includes the ETF main treatment train, secondary treatment train, and local control units 15 and 17.
- Complete the ETF UV/OX upgrade, as the current system is no longer supported by the manufacturer.
- Complete procurement and fabrication of the ETF supplemental organic treatment (i.e. steam stripping) systems 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 added capacity to manage the WTP DFLAW effluent.
- Complete design of the ETF carbon dioxide membrane upgrade 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.
- Complete design of the ETF freeze protection upgrade, as systems have become degraded and many replacement parts are considered obsolete.
- Complete design of the ETF instrument air upgrade to provide added capability to manage the WTP DFLAW effluent.
- Continue procurements and fabrications for the ETF MCS, UV/OX, redundant filtration, carbon dioxide membrane, freeze protection, instrument air, and vessel off-gas system upgrade projects.

Issues/Other Items

- None

8.0 TANK SYSTEM UPDATE

8.1 Double-Shell Tank Integrity

Significant Past Accomplishments

- Released RPP-RPT-34311, Double-Shell Tank Integrity Inspection Report for 241-AY Tank Farm, in December 2020.
- Completed fieldwork for nine of nine enhanced annulus visual inspections for the following double-shell tanks:
 - Tank 241-AP-101
 - Tank 241-AP-102
 - Tank 241-AP-103
 - Tank 241-AP-104
 - Tank 241-AP-105
 - Tank 241-AP-106
 - Tank 241-AP-107

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Tank 241-AP-108

Tank 241-AY-101

- Completed ultrasonic testing inspections at Tank 241-AW-105.
- Completed ultrasonic testing inspections at Tank 241-AW-104.
- Began ultrasonic testing fieldwork at Tank 241-AP-103.
- Completed Tank 241-AW-106 ultrasonic testing report.

Significant Planned Actions in the Next Six Months

- Complete additional air-slot inspections at Tank 241-AW-104.
- Complete ultrasonic testing inspections at Tanks 241-AZ-102 and 241-AY-101.
- Complete limited ultrasonic testing inspection scans at Tank 241-AP-106, and Liquid Air Interface scans at Tanks 241-AY-101 and 241-AZ-102.
- Draft ultrasonic testing inspection reports for Tanks 241-AW-104 and 241-AP-103.
- Complete report development for the nine DST annulus visual inspections performed in FY 2021.
- Receive and test Southwest Research Institute Guided Wave inspection system at Pacific Northwest National Laboratory.

Ultrasonic Testing Report Status

- Tank 241-AW-106 ultrasonic testing report was released as RPP-RPT-62764, Ultrasonic Inspection and Air Slot Visual Inspection Results for Double Shell Tank 241-AW-106 FY 2020, on February 17, 2021.
- Tank 241-AW-105 ultrasonic testing report was released as RPP-RPT-62939, Ultrasonic Inspection and Air Slot Visual Inspection Results for Double Shell Tank 241-AW-105 FY 2020, on March 8, 2021.
- Tank 241-AW-104 ultrasonic testing report is in the drafting phase with expected release by May 2021.

Issues/Other Items

- Two of the annulus Enrafs in Tank 241-AY-102 began giving erratic readings in early 2021. The erratic readings were initially thought to be caused by the Enraf plummets coming into contact with wetted solids, as the liquid in the annulus has been slowly evaporating. The Enrafs were flushed on January 29, 2021, after which the readings resumed normal behavior. A visual inspection of the annulus was performed after the flushing operations, which did not indicate that either Enraf plummet was in contact with wetted solids. As water evaporates from the annulus waste, the waste and inhibiting chemicals are becoming more concentrated. It is assumed that as the waste becomes more concentrated, the rate at which solid waste builds up on the Enraf plummets during operation increases.
- One of the annulus Enrafs in Tank 241-AN-105 alarmed high on February 13, 2021. The indicated level reached approximately 0.77 inches for several hours. The readings then took several more hours to return to their prior level. A visual inspection was performed

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in the annulus on February 18, 2021 which confirmed the presence of liquid in the annulus under the Enraf that had alarmed. Neither the annulus visual inspection nor a radiation survey of the Enraf plummet suggested that any waste was present in the annulus. It is currently suspected that snowmelt entered the annulus space through an unused pump pit. Investigation into the cause of the intrusion is ongoing. ORP noted it had briefed Ecology on this issue.

- Ecology suggested monthly visual annulus inspections. ORP did not accept nor reject the proposal.

8.2 Single-Shell Tank Integrity

Significant Past Accomplishments

- Performed TFC-ENG-CHEM-P-57, Intrusion Notification and Tank Leak Assessment Process, on Tank 241-TX-113.
- Visual inspections were completed for the following single-shell tanks (SSTs):
 - Tank 241-B-106 (completed November 2020)
 - Tank 241-B-108 (completed December 2020)
 - Tank 241-BY-112 (completed December 2020)
 - Tank 241-BY-104 (completed January 2021)
 - Tank 241-BY-108 (completed January 2021)
 - Tank 241-AX-104 (completed January 2021)
 - Tank 241-BY-103 (completed February 2021)
 - Tank 241-B-109 (completed February 2021)
 - Tank 241-U-108 (completed March 2021)
 - Tank 241-U-110 (completed March 2021)
 - Tank 241-U-112 (completed March 2021)
 - Tank 241-U-202 (completed March 2021)
 - Tank 241-U-203 (completed March 2021)
 - Tank 241-U-204 (completed March 2021)
- Completed Tank 241-B-109 drywell monitoring.

Significant Planned Actions in the Next Six Months

- Perform visual inspections of the following SSTs: Tank 241-U-201, Tanks 241-S-102 and 241-S-112.
- Complete report development for the SST integrity visual inspections performed in FY 2021.
- Complete development and release of final Tank SX-112 Extent of Condition report.
- Perform TFC-ENG-CHEM-P-57 on Tank 241-B-109 (in progress).

Issues/Other Items

- ORP referred to the full listing in the March 2021 TPA Monthly Report.

9.0 IN-TANK CHARACTERIZATION AND SUMMARY

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9.1 Reports Completed or Released

ORP completed nine reports and released one. For details, please refer to page 27 of the March 2021 TPA monthly report.

9.2 Tank Sampling

Significant Past Accomplishments

For March 2021, the following tank sampling was conducted:

- Tank 241-AP-101 liquid grab sampling was completed on March 23, 2021. Nine samples were received at the 222-S Laboratory.
- Began Tank 241-AN-101 core sampling equipment set-up.

Significant Planned Actions in the Next Six Months

- Catch Tank C-301 grab sampling is planned for April 2021.
- Tank 241-AX-104 grab sampling is planned for June 2021.
- Tank 241-AN-101 core sampling is planned for July 2021.
- Tank 241-AN-101 grab sampling is planned for July 2021.
- Tank 241-AZ-102 grab sampling is planned for August 2021.
- Tank 241-AY-102 grab sampling is planned for September 2021.
- Complete Tank 241-AN-101 core sampling in July 2021.

Issues/Other Items

- None

9.3 Best-Basis Inventory Updates

Significant Past Accomplishments

Best-basis inventory updates for the following tanks were completed in March 2021:

- Tank 241-AN-101
- Tank 241-AP-106
- Tank 241-AX-104
- Tank 241-AZ-102
- Tank 241-BX-103
- Tank 241-T-111
- Tank 241-TY-103
- Tank 241-U-109

Significant Planned Actions in the Next Six Months

Best-basis inventory updates for the following tanks are currently planned to be completed in April 2021:

- Tank 241-SX-101.
- Tank 241-T-102.

Issues/Other Items

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- None reported

10.0 SINGLE-SHELL TANK CLOSURE PROGRAM

Significant Past Accomplishments

ORP reported the following completed activities:

- Submitted RPP-RPT-62684, FY 2019 Annual Interim Surface Barrier Monitoring Report, Rev. 0, to Ecology via letter 20-TF-0095, "The U.S. Department of Energy, Office of River Protection, Transmittal of RPP-RPT-62684, Fiscal Year 2019 Annual Interim Surface Barrier Monitoring Report, Rev. 0, to Meet Hanford Federal Facility Agreement and Consent Order Milestone M-045-92AD" on October 7, 2020. This completed the M-045-92AD Milestone.
- Responded to Ecology comments on RPP-RPT-62684 via letter 21-TF-000239, "Response to 20-NWP-199 from the Washington State Department of Ecology," dated January 20, 2021. Ecology comments had been received via letter 20-NWP-199, "Department of Ecology's (Ecology) Review Comment Record on the United States Department of Energy – Office of River Protection's FY2019 Annual Interim Surface Barrier Monitoring Report, RPP-RPT-62684, Revision 0," dated December 23, 2020.
- 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 Sitewide 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 Equipment at Waste Management Area A-AX, on September 29, 2020, to meet the M-045-99 Milestone.
- Held a data quality objective meeting for defining the WMA A/AX boundary with Ecology and EPA, September 1, 2020. Held two follow-up meetings for defining the WMA A/AX boundary with Ecology on September 16 and November 3, 2020.
- Held a data quality objective sampling meeting for WMA A/AX with Ecology on September 29, 2020.
- Held a sample depth meeting for D0006 in WMA A/AX with Ecology on October 14, 2020.
- Completed liner installation on the TX Evapotranspiration Basin on August 31, 2020.
- Completed the storm water drainage system and stabilization of the Waste Isolation Division site for the TX Evapotranspiration Basin on November 17, 2020.
- Completed hydro seed application for the TX Evapotranspiration Basin on November 18, 2020.
- Issued limited notice to proceed to construction subcontractor for TX Tank Farm Barrier construction on December 15, 2020.

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- Began hiring and personnel training for TX Tank Farm Barrier construction on January 4, 2021.
- Continued hiring and personnel training for TX Tank Farm Barrier construction.
- Began installation of the change and break trailers for TX Tank Farm Barrier construction on January 20, 2021.
- Continued installation of the change and break trailers for TX Tank Farm Barrier construction.
- On December 1, 2020, DOE submitted to Ecology the updated document via letter 20-TF-0106, "Reissue – 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. 2." In the Ecology letter dated December 21, 2020 (20-NWP-202, "Extension of the Department of Ecology's [Ecology] Comment Review Period for the Maintenance and Performance Monitoring Plan for the Interim Barriers Program, Revision 2"), Ecology extended their comment review period to February 15, 2020. Ecology approved the document via letter 21-NWP-021, "Approval of Maintenance and Performance Monitoring Plan for the Interim Barriers Program, RPP-RPT-61684, Revision 2," on February 3, 2021.
- Completed direct push activities for WMA A/AX Focus Area 2.

Significant Planned Activities in the Next Six Months

ORP reported the following planned activities:

- 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.
- Complete direct push activities for WMA A/AX Focus Area 2.
- Complete TX Tank Farm Barrier change and break trailer installations and construction mobilization.
- Complete balance of TX Tank Farm Barrier construction personnel hiring and training.
- Complete TX Tank Farm Barrier subgrade modifications.
- Complete TX Tank Farm Barrier protective structure installation and initiate barrier placement for TX Tank Farm Barrier construction.

Issues/Other Items

- See pages 34-36 of the March 2021 ORP TPA Monthly Report

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1.0 CONSENT DECREE MILESTONES/ADMINISTRATIVE ACTIONS

Consent Decree Milestones

ORP reported milestones as On Schedule, At Risk, or Under Analysis (see pages 3-4 of the ORP March 2021 Consent Decree Monthly Report).

Consent Decree Issues and Action Items

For reference, see attached "ORP/Ecology TPA and CD Agreements, Issues and Action Items May 2021 Meeting."

Action Items

Action No. 1 (WTP-21-02-01): Ecology noted it would probably be later in the summer before it schedules a walkdown of the LAW facility. *The action remains open.*

2.0 SINGLE-SHELL TANK RETRIEVAL PROGRAM

Significant Accomplishments during the Prior Month

- Completed installation of new trailers to maintain COVID-19 social distancing protocols and mitigate further schedule impacts.
- Completed Tank AX-101 on-dome electrical system installation.
- Completed Tank A-101 01H Pit saltwell pump and screen removal.

On-Going Activities

- Work continued on the development of a Tank AX-102 third retrieval technology practicability evaluation. The alternative mechanical retrieval options study was completed, which in addition to the completed chemical analysis of the Tank AX-102 post retrieval samples, will support the request to forgo a third retrieval technology in Tank AX-102.
- Continued preparation of Tank AX-104 post first and second technology retrieval activities including preparation of a retrieval completion report for first and second technologies, preparation for post retrieval residual volume measurement system deployment, and post retrieval sampling.
- Continued Tank AX-101 hose-in-hose transfer line (HIHTL) installation.
- Continued Tank AX-103 waste retrieval system installation, sluicers, pump, HIHTLs, and other equipment in preparation for Tank AX-103 retrieval operations.
- Continued Tank A-101 equipment removal activities in preparation for new retrieval equipment installation.
- Continued new tent installation to mitigate COVID-19 social distancing impacts.
- Began A Tank Farm electrical infrastructure installation

Significant Planned Activities in the Next Month

- Complete Tank AX-103 POR413 diversion box to POR497 splitter box HIHTL.
- Complete new tent installation to maintain COVID-19 social distancing protocols and mitigate further schedule impacts.

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Issues/Other Items

- ORP referred to pages 9-10 of the February 2021 Consent Decree Monthly Report for the complete listing of issues.

3.0 TANK WASTE RETRIEVAL WORK PLAN STATUS

Significant Accomplishments during the Prior Month

ORP reported no activity.

Significant Planned Activities in the Next Month

ORP reported no new activity.

4.0 RETRIEVE AND CLOSE SINGLE-SHELL TANKS

Significant Accomplishments during the Prior Month

ORP reported no activity.

Significant Planned Activities in the Next Month

ORP reported no new activity.

5.0 WASTE TREATMENT AND IMMOBILIZATION PLANT PROJECT

**Note: The May 20, 2021 Tri-Party Agreement/Consent Decree Waste Treatment and Immobilization Project Managers Meeting deviated from the traditional format (for this meeting only), with both the Washington State Department of Ecology and the DOE Office of River Protection agreeing to cover only the "focus areas and challenges" the project is currently encountering.*

After a status of the Action Items (see Section 1.0 / pg. 16 of this report), ORP noted that it planned to provide Ecology some additional information regarding the Effluent Treatment Facility.

Ecology asked about the Low Activity Waste (LAW) Facility and in particular, the Melter Support Handling System and Mechanical Handling Control System. Ecology, referring to recent reports it received, noted that for example, crane rails were out of tolerance and asked for a status. ORP responded that it did not have specific details on that topic, but in general, the LAW Facility is experiencing startup issues, typical of a project this size. ORP also noted that though it had established a large pool of subcontractor/vendors, some problems can only be serviced by specialized vendors and getting contracts in place for these specific vendors can take time. Ecology noted that it had been seeing a trend in so-called "safety themed" issues, particularly with cranes, and asked if ORP was making a concerted effort to track and correct the issues. ORP responded that it was tracking these items via a weekly "top-ten" meeting, and that specific to the cranes, the original strategy was that the individual cranes would be load-tested in the series in which the melting process would go. ORP said it has since changed to a strategy of

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commissioning testing of the cranes in parallel. ORP added that it is heavily engaged with its contractors at both the priority level and at the logic level.

Shifting to the Analytical Laboratory (LAB), ORP noted that LAB was now basically an operating facility. ORP added that after receiving sealed sources, it will be doing open source method validation later this year.

ORP reported that the facility hoods are in operational and are being moved to enhance workflow in individual laboratories. Ecology asked that, considering the movement of vents, a rebalance of the airflow was needed. ORP responded that it was not the vents that needed to be rebalanced, but the fume hoods, and those hoods do need to be recertified. ORP reemphasized that that the recertification of the fume hoods stems from workflow optimization activities.

ORP also noted other work at the LAB, namely in the area of interface with the Low Activity Waste Facility, where auto sampling system testing is being done. ORP noted that the Low Activity Waste Facility is where the controls for the vacuum pumps within the LAB are located. Testing of that system is key, ORP said.

On the Balance of Facilities (BOF), ORP reported that progress was being made, but plant service is a concern because of its importance to the Low Activity Waste Facility, with regards to having the ability to manipulate valves and support other testing activities. Also, the service is key to cooling during melter operations. ORP reported that a small number of compressors were down recently for a variety of reasons, but overall, ORP said, the plant service is progressing. ORP noted that the chill water system was "solid" at this point in time, but there is still some work to do with a chiller refurbishment.

ORP said the two challenge points at BOF are the Glass Former Facility and the Steam Plant. At the Steam Plant, ORP said it is grappling with the ability to maintain boiler operation consistently at low output levels. ORP noted that, with it being summertime, the Steam Plant is not as vital as it would be in winter as it provides heat and ventilation, so that is giving crews time to troubleshoot issues. On the Glass Former Facility, ORP is focusing on successfully transferring materials around at the right weights. The facility continues testing with silica. Also at the Glass Former Facility, ORP reported that another area of focus is with the air system. The air system is a series of three small compressors that sit just outside the facility on a pad. To address the issue there will be a plant service air outage, during which ORP will tie-in the main plant service air header to the Glass Former Facility. The change will allow the ability to provide air either from the individual compressors at the Glass Former Facility or from the main header.

Ecology asked if the support compressors may have been undersized and if ORP anticipated the possibility of an increase in operator intervention at the Glass Former Facility. ORP responded that that the air compressors are not undersized, rather that there are multiple that need to operate in unison. So there are a series of compressors, two that that will provide the load, and another one for a standby. But ORP would like to avoid a situation where two of three compressors go down for repairs, saying that it does not want an incidence where small glass former compressor

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went down interfering with melter operations. So, ORP said, tying to the plant service system is good practice, and provides much more operational flexibility.

Ecology then asked if ORP was seeing a trend that would indicate what spares or what spares protocols it may need to enhance. ORP responded that the spares program is revisited on a regular basis, which it stated was a positive change from early on, when the focus was on critical spares for critical systems. Focusing only on critical spares shifted the emphasis on what kind of redundancy ORP needed across the overall operating system. ORP noted that several of the individual systems at BOF now have a robust redundancy program, which ORP said was a positive step.

The State of Oregon asked about the melter, once running, needing to be cleaned out if necessary, in a system that can't be overridden. ORP responded that what they're working on right now is the best way to ensure that the silos don't have a problem is the continual testing and tuning for the facility itself, adding that it is a very basic and straightforward facility.

On the LAW, ORP noted that LAW, there was a great deal of progress from startup, to system transfer, to plant management. ORP did caution that systems startup is much different from integrated system tuning and that LAW is entering integrated system tuning, more so than any of the other facilities have been to date. ORP also noted recent personnel changes on the project, as well as some focused work by Integrated Project Teams, are giving them greater confidence.

ORP/Ecology TPA and CD Agreements, Issues, and Action Items – May 2021 Meeting

Agreements:

1. Per an Ecology standing request (4/21/2016), ORP agrees to include any written directives given by DOE to the contractors for work required by the CD in future quarterly CD Reports (see CD Section IV-C-1-e).
2. The ORP and Ecology PMs have developed, signed, and entered an outline for the CD Tank Completion Certification into the TPA Administrative Record. A briefing to senior management will occur if any follow-on actions arise.
3. Ecology and ORP have agreed to move the TPA/CD PMM meeting to the second Thursday of the month starting in December 2019. The TPA and CD monthly reports distribution will occur by the end of each month via link to the Admin Record. Ecology requested at the December 2019 meeting that this form be included with the email that includes the links to the monthly reports. This will be the format for report distribution and monthly meetings going forward.

Issues:

1. Appendix H step 2b, has not been completed. USDOE have submitted Single-Shell Tank (SST) WMA (Waste Management Area)-C Closure Plans without any indication of the role and participation for Nuclear Regulatory Commission (NRC), or a plan for completing this step.
2. Appendix I – USDOE has presented an inaccurate process for closure of the Tank Farms, and of WMA-C. Appendix I has defined the expectations of the Tri-Parties, and a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) decision has not been an assumption from any of the Tri-Parties.
 - a. Appendix I, Section 3.1 states: “Ecology¹ is the lead regulatory agency responsible for the closure of the SST system. EPA² is the support regulatory agency providing oversight of the state’s authorized program.”; “The Parties’ expect that this Agreement Appendix I will incorporate Agreement Section 5.5 processes to provide a mechanism for avoiding duplicative regulation between Ecology and the EPA through the lead agency concept.”; “EPA will evaluate the need to provide additional comments based on its review of proposed modifications to WMA closure action plans, and issue additional comments to Ecology as necessary.”
 - b. Appendix I, Section 3.2 states: “A consistent groundwater monitoring, protection, and risk assessment methodology will also be realized through close integration of activities, as described in the Hanford Site Groundwater Strategy (DOE/RL-2002-59). Consistent application of the requirements of this Appendix I will serve to aid the Parties in ensuring cost effective and consistent cleanup on the Central Plateau.”
 - c. Section 5.5 of the TPA (Action Plan): “The information necessary for performing RCRA³ closures/post-closures within an operable unit will be provided in various RFI⁴/CMS⁵ documents. The initial work plan will contain a Sampling and Analysis Plan (SAP) for the

¹ Washington State Department of Ecology

² Environmental Protection Agency

³ Resource Conservation & Recovery Act

⁴ RCRA Facility Investigation

⁵ Corrective Measure Study

ORP/Ecology TPA and CD Agreements, Issues, and Action Items – May 2021 Meeting

associated RCRA units and it will outline the manner in which RCRA closure/post-closure plan requirements will be met in the work plan and subsequent documents. The selected closure/post-closure method and associated design details will (unless otherwise agreed to by the parties) be submitted as part of the CMS report at a later date, as specified in the work plan.” “In any case, the parties agree that CERCLA remedial actions and, as appropriate, HSWA⁶ corrective measures will comply with ARARs⁷.”

- d. Section 5.6: “The EPA and Ecology have selected a lead regulatory agency approach to minimize duplication of effort and maximize productivity. Either the EPA or Ecology will be the lead regulatory agency for each operable unit, TSD⁸ group/unit or milestone. The lead regulatory agency for a specific operable unit, TSD group/unit or milestone will be responsible for overseeing the activities covered by this action plan that relate to the successful completion of that milestone or activities at that operable unit or TSD group/unit, ensuring that all applicable requirements are met.”

⁶ 1984 Hazardous and Solid Waste Amendments

⁷ Applicable or Relevant and Appropriate Requirements

⁸ Treatment, Storage, and/or Disposal

ORP/Ecology TPA and CD Agreements, Issues, and Action Items – May 2021 Meeting

#	Action ID Start Date	Action	Updates / Needs for Closure	Actionee(s)	Status/ Date Closed
1	TF-20-10-01 08-Oct 2020	ORP to provide Ecology (Jeff Lyon) the contract associated with Request for Proposal for the Primary Tank Volumetric Inspection/Tertiary Leak Detection Tool	02/11/21 – ECY will send ORP potential dates for meeting/briefing.	Jeff Lyon (provide dates for scheduling meeting/briefing)	Open
2	TF-20-10-03 08-Oct 2020	ORP To provide Ecology with the report associated with R&D work performed by PNNL related to tank bottom volumetric inspection system.	02/11/21 – ECY will send ORP potential dates for meeting/briefing.	Jeff Lyon (provide dates for scheduling meeting/briefing)	Open
3	TF-20-11-01 12-Nov 2020	ORP and Ecology to schedule a meeting to discuss the issues at the beginning of this document pertaining to TPA Appendices H, I.	Email sent to J. Lyon 12/10/20 to help define this action and the criteria for closing.	Jeff Lyon	Open
4	TF-20-11-02 12-Nov-2020	Ecology to status change notice associated with RPP-12711 (“Temporary Waste Transfer Line Management Program Plan”)		Jeff Lyon	Open
5	TF-21-02-01 11 Feb 2021	Ecology requested a ‘dry run’ meeting for Informational meeting with Tribes regarding the upcoming SST/WMA-C closure RCRA permitting Actions . ORP to provide a target date for a proposed public informational workshop briefing on permitting	DOE is in agreement and will plan to conduct a briefing covering the general overall closure process and Appendix I PA for WMA-C. The audience for the briefing will be, Tribes, Oregon, HAB, Public.	ORP	Open

ORP/Ecology TPA and CD Agreements, Issues, and Action Items – May 2021 Meeting

#	Action ID Start Date	Action	Updates / Needs for Closure	Action e(s)	Status/ Date Closed
		<p>activities associated with WMA-C closure, which will take place prior to formal public comment. ORP will also identify a date for a proposed dry-run of this meeting. Note: ORP will have a better estimate on that date after discussions with it's the DOE / Ecology Permitting group</p>	<p>Timing will be approximately 1 month before the public comment period begins for the permitting action.</p> <p>It will be clarified for all participants that any comments should be submitted as part of the permitting action.</p> <p>DOE will present on the following:</p> <p>Overview of TPA closure process</p> <p>Results of Appendix I PA</p> <p>Summary of 435.1 PA</p> <p>Summary of RCRA CA</p> <p>Summary of Past Leaks</p> <p>Summary of Baseline Risk Assessment</p> <p>Ecology will present on the following:</p> <p>Closure Plans</p>		
6	TF-21-02-03 11 Feb 2021	ORP to provide Ecology a status on when it will be submitting the remaining draft addenda (specifically		ORP	Open

ORP/Ecology TPA and CD Agreements, Issues, and Action Items – May 2021 Meeting

#	Action ID Start Date	Action	Updates / Needs for Closure	Actionee(s)	Status/ Date Closed
		Addendum L) in support of the Part V Closure Units, Single-Shell Tank System Closure Unit Group Permit modification.			
7	TF-21-02-04 11 Feb 2021	Regarding letter 21-TF-00357, subject: WMA-A/X Integration Study, ORP to provide Ecology more details on what “information required to complete many of the sections identified by Ecology for inclusion will not be available”	Ecology asked ORP to send written information to Ecology regarding its position on this action. ORP agreed to do so, with the hopes of closing the action next month.	ORP	Closed 4/26/2021 based on e-mail from J. Lyon.
8	TF-21-02-05 11 Feb 2021	Ecology would like to elevate the WMA-A/X Integration Study to the IAMIT.	Note: the WMA-A/X boundary is already a topic for the IAMIT. It is not clear what is being elevated to the IAMIT. Suggest Ecology develop issue statement, or white paper explaining what the IAMIT is being asked to consider. ECY agreed to provide letter numbers in regards to the IAMIT discussion and will propose a statement for ORP review/agreement that will then be given to the IAMIT.	Ecology	Open
9	TF-21-02-06 11 Feb 2021	Ecology would like to expand the length of the Monthly	ORP suggested holding separate meetings outside the PMM to allow for more lengthy discussion,	ORP	Open

ORP/Ecology TPA and CD Agreements, Issues, and Action Items – May 2021 Meeting

#	Action ID Start Date	Action	Updates / Needs for Closure	Actionee(s)	Status/ Date Closed
		ORP TPA Project Managers Meeting to include more on-the-record discussion. Note ORP TPA PMM meeting minutes are signed by the parties, unlike other meetings	thus allowing the ORP Project Managers Meeting to remain focused on accomplishments and projected activities. Ecology asked DOE to provide its stance in writing.		
10	TF-21-02-08 11 Feb 2021	Ecology offered draft TPA Change Control Forms to a) require Ground Water Monitoring Plans (GWMP's) for all of the Waste Management Areas (WMAs) in the Single Shell Tank (SST) System, for incorporation into the Rev 8C Site-wide permit and, b) Deletion of milestone M-045-62 for submittal of a Tier 3 closure plan to implement the Phase 2 Corrective Measures Implementation Work Plan (CMIP). Ecology would like to discuss this further at the applicable TPA Project Managers Meeting.	(1) USDOE's request to meet on the GWMP's. I have provided dates through May 13 for a meeting. For GWMP's, as with the WMA-C closure milestones, these milestones are necessary as a compliance schedule. A compliance schedule (the TPA Milestones) are needed if USDOE cannot provide permit material that meets our minimum regulatory requirements for a permit modification. I hope that USDOE will be providing alternative dates and a justification for those alternate dates in our meeting. We also are anticipating an update on how ORP is coordinating the development of milestones for M-045 with the Richland Office, to address the GWMP's and to assure that ORP can provide a complete permit modification request. If USDOE needs assistance in understanding our regulatory requirements, please provide your questions in advance, so that we can provide a response. (2) USDOE referred to a "76 page document". Based on our research of this, the "76-page document" is the Ecology resolutions agreed to with EPA in regards to their comments on the Draft Rev 9 permit. Please refer to comments , 23, 42, and 43 for information that address	Ecology	Open

ORP/Ecology TPA and CD Agreements, Issues, and Action Items – May 2021 Meeting

#	Action ID Start Date	Action	Updates / Needs for Closure	Action e(s)	Status/ Date Closed
			<p>concerns regarding Corrective Measures. Ecology may have incorrectly identified the Soil Evaluation as Addenda J and it actually Addenda L. If USDOE needs any additional information please let us know. Ecology has determined that any proposed actions that resulted from the Corrective Action “process”, will be part of the conditions in the site wide permit modification for the SST System Closure Unit Group, for a specific WMA, and in this case WMA-C. Ecology has requested information from USDOE in the permitting workshops so that we can complete the Addenda L, Soil Evaluation. We are still waiting for that information.</p>		

ORP/Ecology TPA and CD Agreements, Issues, and Action Items – May 2021 Meeting

#	Action ID Start Date	Action	Updates / Needs for Closure	Actionee(s)	Status/ Date Closed
1	WTP-21-02-01	ECY to setup walkdown for LAW verification		Jay Decker	Open
2	WTP-21-04-01	ORP to setup a meeting with Ecology to go over the BOF daily status reports to provide more details		Jason Young	Open



THE HANFORD SITE

Office of River Protection Tri-Party Agreement

Monthly Reporting Period
March 1 – 31, 2021

Significant Past Accomplishments

- The U.S. Environmental Protection Agency (EPA), U.S. Department of Energy (DOE), and Washington State Department of Ecology (Ecology) met in the first mediated session of the “Holistic Negotiations” on June 25, 2020. There were weekly negotiation sessions held in March.
- On January 27, 2021, DOE submitted signed change package M-62-21-01 to Ecology for evaluation to extend the M-62-45 Milestone date 90 days due to “Holistic Negotiations” progress. This change package was not concurred on by Ecology within the 14-day period and therefore went into dispute on February 10, 2021.

Significant Planned Actions in the Next Six Months

- Discuss disputes with regard to Milestone M-062-45 and its associated milestones during “Holistic Negotiations.”

Issues

- Ecology and DOE, Office of River Protection (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.

Comments applicable to each issues section in this presentation:

- 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 non-portable 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.

Significant Planned Actions in the Next Six Months

- See the “System Plan” section 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.

Significant Past Accomplishments

- Completed M-062-50 Milestone, “Submit to Ecology as a Secondary Document, a Mass Balance Flow.” ORP transmitted letter 20-ECD-0057, “Completion of Tri-Party Agreement Milestone M-062-50,” on December 4, 2020, to Ecology.

Significant Past Accomplishments

- ORP approved the Documented Safety Analysis (DSA) addendum Technical Safety Requirements.
- Completed Tank Side Cesium Removal (TSCR) construction operations required to turn over the system to Operations to perform water runs.
- Completed backfill for SN-637/700 near ICD-30/31. Completed electrical tie-ins for the TSCR enclosures.
- Completed the TSCR shield wall installation.
- Completed hydrostatic testing of primary piping in waste transfer line SN-700, which connects AP Tank Farm to the main W-211 transfer line leading to the Waste Treatment and Immobilization Plant (WTP). The testing included the re-purposed portion of the W-211 transfer line and marks completion of integrity testing for that section, supporting closure of a major project risk.

Significant Past Accomplishments (cont.)

- Installed two filter units and three Ion Exchange Columns (IXCs) into the TSCR Enclosure in preparation for water runs.
- IXC base plates were installed for the first 20 spent IXCs.

Significant Planned Actions in the Next Six Months

- Receive the *Resource Conservation and Recovery Act* (RCRA) Permit from Ecology.
- Complete TSCR construction operations within AP Tank Farm.
- Complete TSCR Operational Acceptance Test.
- Washington River Protection Solutions, LLC will perform the Management Self-Assessment and the Contractor Readiness Assessment.
- DOE will conduct the Readiness Assessment of the contractor.

Significant Past Accomplishments

- Completed work on the resolution of the universal joint potential inadequacy in the safety analysis. Universal joint testing was completed, and the vendor has incorporated the new universal joints into the calculations, engineering change notices, and drawings.
- Replaced bag filters on both the K1 and K2 ventilation systems.
- Repaired the K1-5-3 exhauster system and returned it to operable status.
- Completed development of the 100 percent engineering design revisions for the 242-A Evaporator DSA upgrades.
- Completed wall nozzle fabrication for the 242-A Evaporator slurry and feed transfer line replacement.
- Completed AW-02A pump pit jumper removal for the 242-A Evaporator slurry and feed transfer line replacement.

Significant Planned Actions in the Next Six Months

- Procure new PB-1 and PB-2 replacement pumps.
- Receive 242-A DSA Safety System upgrades procurements.
- Initiate 242-A DSA Safety System upgrades construction phase.
- Initiate 242-A Ventilation Control System upgrades.
- Install new wall nozzle in the AW-02A pit in support of the new 242-A Evaporator slurry line and feed transfer lines.
- Mobilize AW Tank Farm transfer line excavation for the 242-A Evaporator slurry and feed transfer line replacement.
- Install new wall nozzles in the evaporator pump room to support the new 242-A Evaporator slurry and feed transfer lines.
- Remove the old 242-A Evaporator feed pump and install a new one in the AW-02E pit.
- Begin excavation between the AW-02A and AW-B pits 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 was completed, and the vendor has incorporated the new universal joints into the calculations, engineering change notices, and drawings.
- Following universal joint determination, 92 universal joints/actuators will need to be replaced. Project team and facility operations personnel are initiating phased planning of replacement to support tank transfer operations.

Significant Past Accomplishments

- Total fiscal year (FY) 2021 processing volume: ~3.2 million gallons.
- Completed processing operations for FY 2021 and completed facility cleanout activities for plant outage.
- Began Liquid Effluent Retention Facility (LERF) Basin 44 cover cleaning activities in support of Basin 44 cover replacement.
- Continued fieldwork for the ETF Monitoring and Control System (MCS) upgrade.
- Began fieldwork for the Effluent Treatment Facility (ETF) Ultraviolet/Oxidation (UV/OX) upgrade.
- Began site mobilization of the construction subcontractor for the LERF Basin 41 installation.
- Began conceptual design of the ETF modular grout system.
- Completed conceptual design of the ETF brine storage tanks.

Significant Past Accomplishments (cont.)

- Completed preliminary design of the ETF carbon dioxide membrane contactors.
- Completed preliminary design of the ETF motor control center upgrade.
- Completed preliminary design of the ETF freeze protection upgrade.
- Began conceptual design of the ETF instrument air system.

Significant Planned Actions

- Complete replacement of the LERF Basin 44 cover to address the degraded condition.
- Complete the FY 2021 portion of the ETF MCS upgrade, as it is currently operating on outdated systems. This includes the ETF main treatment train, secondary treatment train, and local control units 15 and 17.

Significant Planned Actions (cont.)

- Complete the ETF UV/OX upgrade, as the current system is no longer supported by the manufacturer.
- Complete LERF Basin 41 site preparation activities and begin construction fieldwork.
- Complete procurement and continue fabrications of the ETF supplemental organic treatment (i.e. steam stripping) system to provide the capability to treat the WTP Direct-Feed Low-Activity Waste (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 added capacity to manage the WTP DFLAW effluent.
- Complete design of the ETF carbon dioxide membrane upgrade to provide the capability to treat the WTP DFLAW effluent.

Significant Planned Actions (cont.)

- Complete design of the ETF motor control center upgrade to address the deficient condition and provide additional capability for ongoing upgrade projects.
- Complete design of the ETF freeze protection upgrade, as systems have become degraded and many replacement parts are considered obsolete.
- Complete design of the ETF instrument air upgrade to provide added capability to manage the WTP DFLAW effluent.
- Continue procurements and fabrications for the ETF MCS, UV/OX, redundant filtration, carbon dioxide membrane, freeze protection, instrument air, and vessel off-gas system upgrade projects.

Liquid Effluent Retention and 200 Area Effluent Treatment Facilities

LERF Volumes

Description	242AL-42 (Basin 42)	242AL-43 (Basin 43)	242AL-44 ^b (Basin 44)
AZ-301 Condensate	-	+ 3,200	-
Mixed Waste Trench 31 and 34	+ 6,200	-	-
Other ^a	+ 156,000	-	-
Total Volume	1,189,000	6,580,000	0 ^c

^a ETF surge tank return to LERF.

^b LERF Basin 44 was placed out-of-service on January 14, 2021.

^c LERF Basin 44 was emptied to allow for radiological surveys to support cover replacement.

Data Date: April 05, 2021.

Values shown in gallons.

Significant Past Accomplishments

- Released RPP-RPT-34311, *Double-Shell Tank Integrity Inspection Report for 241-AY Tank Farm*, in December 2020.
- Completed fieldwork for nine of nine enhanced annulus visual inspections for the following double-shell tanks (DSTs):
 - Tank 241-AP-101; Tank 241-AP-102; Tank 241-AP-103; Tank 241-AP-104; Tank 241-AP-105; Tank 241-AP-106; Tank 241-AP-107; Tank 241-AP-108; and Tank 241-AY-101.
- Completed ultrasonic testing inspections at Tank 241-AW-105.
- Completed ultrasonic testing inspections at Tank 241-AW-104.
- Completed ultrasonic testing field work at Tank 241-AP-103.
- Completed Tank 241-AW-106 ultrasonic testing report.
- Completed Tank 241-AW-105 ultrasonic testing report.

Significant Planned Actions

- Complete additional air-slot inspections at Tank 241-AW-104.
- Complete ultrasonic testing inspections at Tanks 241-AZ-102 and 241-AY-101.
- Complete limited ultrasonic testing inspection scans at Tank 241-AP-106, and Liquid Air Interface scans at Tanks 241-AY-101 and 241-AZ-102.
- Draft ultrasonic testing inspection reports for Tanks 241-AW-104 and 241-AP-103.
- Complete report development for the nine DST annulus visual inspections performed in FY 2021.
- Receive and test Southwest Research Institute Guided Wave inspection system at Pacific Northwest National Laboratory.

Ultrasonic Testing Report Status

- Tank 241-AW-106 ultrasonic testing report was released as RPP-RPT-62764, *Ultrasonic Inspection and Air Slot Visual Inspection Results for Double Shell Tank 241-AW-106 FY 2020*, on February 17, 2021.
- Tank 241-AW-105 ultrasonic testing report was released as RPP-RPT-62939, *Ultrasonic Inspection and Air Slot Visual Inspection Results for Double Shell Tank 241-AW-105 FY 2020*, on March 8, 2021.
- Tank 241-AW-104 ultrasonic testing report is in the drafting phase with expected release by May 2021.

Issues

- Two of the annulus Enrafs in Tank 241-AY-102 began giving erratic readings in early 2021. The erratic readings were initially thought to be caused by the Enraf plummets coming into contact with wetted solids, as the liquid in the annulus has been slowly evaporating. The Enrafs were flushed on January 29, 2021, after which the readings resumed normal behavior. A visual inspection of the annulus was performed after the flushing operations, which did not indicate that either Enraf plummet was in contact with wetted solids. As water evaporates from the annulus waste, the waste and inhibiting chemicals are becoming more concentrated. It is assumed that as the waste becomes more concentrated, the rate at which solid waste builds up on the Enraf plummets during operation increases.

Issues (cont.)

- One of the annulus Enrafs in Tank 241-AN-105 alarmed high on February 13, 2021. The indicated level reached approximately 0.77 inches for several hours. The readings then took several more hours to return to their prior level. A visual inspection was performed in the annulus on February 18, 2021 which confirmed the presence of liquid in the annulus under the Enraf that had alarmed. Neither the annulus visual inspection nor a radiation survey of the Enraf plummet suggested that any waste was present in the annulus. It is currently suspected that snowmelt entered the annulus space through an unused pump pit. Investigation into the cause of the intrusion is ongoing.

Significant Past Accomplishments

- Performed TFC-ENG-CHEM-P-57, *Intrusion Notification and Tank Leak Assessment Process*, on Tank 241-TX-113.
- Visual inspections were completed for the following single-shell tanks (SSTs):
 - Completed November 2020: Tank 241-B-106 and Tank 241-B-108.
 - Completed December 2020: Tank 241-BY-112.
 - Completed January 2021: Tank 241-BY-104; Tank 241-BY-108; and Tank 241-AX-104.
 - Completed February 2021: Tank 241-BY-103 and Tank 241-B-109
 - Completed March 2021: Tank 241-U-108; Tank 241-U-110; Tank 241-U-112; Tank 241-U-202; Tank 241-U-203; and Tank 241-U-204
- Completed Tank 241-B-109 drywell monitoring.

Significant Planned Actions

- Perform visual inspections of the following SSTs:
 - Tank 241-U-201.
 - Tanks 241-S-102 and 241-S-112.
- Complete report development for the SST integrity visual inspections performed in FY 2021.
- Complete development and release of final Tank SX-112 Extent of Condition report.
- Perform TFC-ENG-CHEM-P-57 on Tank 241-B-109 (in progress).

Issues

- Issues available in the report.

Significant Past Accomplishments

- For March 2021, the following tank sampling was conducted:
 - Tank 241-AP-101 liquid grab sampling was completed on March 23, 2021. Nine samples were received at the 222-S Laboratory.
 - Began Tank 241-AN-101 core sampling equipment set-up.

Significant Planned Actions

- Catch Tank C-301 grab sampling is planned for April 2021.
- Tank 241-AX-104 grab sampling is planned for June 2021.
- Tank 241-AN-101 core sampling is planned for July 2021.
- Tank 241-AN-101 grab sampling is planned for July 2021.
- Tank 241-AZ-102 grab sampling is planned for August 2021.
- Tank 241-AY-102 grab sampling is planned for September 2021.
- Complete Tank 241-AN-101 core sampling in July 2021.

Significant Past Accomplishments

- Best-basis inventory updates for the following tanks were completed in March 2021:
 - Tank 241-AN-101, Tank 241-AP-106, Tank 241-AX-104, Tank 241-AZ-102, Tank 241-BX-103, Tank 241-T-111, Tank 241-TY-103, and Tank 241-U-109.

Significant Planned Actions

- Best-basis inventory updates for the following tanks are currently planned to be completed in April 2021:
 - Tank 241-SX-101.
 - Tank 241-T-102.

Significant Past Accomplishments

- Submitted RPP-RPT-62684, *FY 2019 Annual Interim Surface Barrier Monitoring Report*, Rev. 0, to Ecology via letter 20-TF-0095, “The U.S. Department of Energy, Office of River Protection, Transmittal of RPP-RPT-62684, *Fiscal Year 2019 Annual Interim Surface Barrier Monitoring Report*, Rev. 0, to Meet Hanford Federal Facility Agreement and Consent Order Milestone M-045-92AD” on October 7, 2020. This completed the M-045-92AD Milestone.
- Responded to Ecology comments on RPP-RPT-62684 via letter 21-TF-000239, “Response to 20-NWP-199 from the Washington State Department of Ecology,” dated January 20, 2021. Ecology comments had been received via letter 20-NWP-199, “Department of Ecology’s (Ecology) Review Comment Record on the United States Department of Energy – Office of River Protection’s FY2019 Annual Interim Surface Barrier Monitoring Report, RPP-RPT-62684, Revision 0,” dated December 23, 2020.

Significant Past Accomplishments (cont.)

- 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 Sitewide permit. The workshops are currently being conducted as teleconferences.

Significant Past Accomplishments (cont.)

- 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 Equipment at Waste Management Area A-AX*, on September 29, 2020, to meet the M-045-99 Milestone.
- Held a data quality objective meeting for defining the WMA A/AX boundary with Ecology and EPA, September 1, 2020. Held two follow-up meetings for defining the WMA A/AX boundary with Ecology on September 16 and November 3, 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 on August 31, 2020.

Significant Past Accomplishments (cont.)

- Completed the storm water drainage system and stabilization of the Waste Isolation Division site for the TX Evapotranspiration Basin on November 17, 2020.
- Completed hydro seed application for the TX Evapotranspiration Basin on November 18, 2020.
- Issued limited notice to proceed to construction subcontractor for TX Tank Farm Barrier construction on December 15, 2020.
- Began hiring and personnel training for TX Tank Farm Barrier construction on January 4, 2021.
- Continued hiring and personnel training for TX Tank Farm Barrier construction.
- Began installation of the change and break trailers for TX Tank Farm Barrier construction on January 20, 2021.

Significant Past Accomplishments (cont.)

- Completed installation of change and break trailers installations, as well as construction mobilization for TX Tank Farm Barrier construction on March 11, 2021.
- Initiated southeast subgrade modifications for TX Tank Farm Barrier construction on March 10, 2021.
- In the Ecology letter dated December 21, 2020 (20-NWP-202, “Extension of the Department of Ecology’s [Ecology] Comment Review Period for the *Maintenance and Performance Monitoring Plan for the Interim Barriers Program, Revision 2*”), Ecology extended their comment review period to February 15, 2020. Ecology approved the document via letter 21-NWP-021, “Approval of *Maintenance and Performance Monitoring Plan for the Interim Barriers Program, RPP-RPT-61684, Revision 2,*” on February 3, 2021.
- Completed direct push activities for WMAA/AX Focus Area 2.

Significant Planned Actions

- 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.
- Begin direct push activities at T Tank Farm for the T-102 and T-105 Investigation.
- Submit WMAA/AX Integration Study to meet Milestone M-045-97, "Submit to Ecology as a Primary Document, a Waste Management Area Integration Study for WMAA/AX, as described in HFFACO Appendix I.2.1.1."
- Complete balance of TX Tank Farm Barrier construction personnel hiring and training.

Significant Planned Actions

- Complete southeast, southwest, and north subgrade modifications for TX Tank Farm Barrier construction.
- Complete TX Tank Farm Barrier protective structure installation and initiate barrier placement for TX Tank Farm Barrier construction.

Issues

- Issues available in the report.



THE HANFORD SITE

Office of River Protection Consent Decree Monthly Report

Monthly Reporting Period
March 1 – 31, 2021

Significant Accomplishments during the Prior Month

- Completed installation of new trailers to maintain COVID-19 social distancing protocols and mitigate further schedule impacts.
- Completed Tank AX-101 on-dome electrical system installation.
- Completed Tank A-101 01H Pit saltwell pump and screen removal.

Ongoing Activities

- Work continued on the development of a Tank AX-102 third retrieval technology practicability evaluation. The draft alternative mechanical retrieval options study was submitted to DOE for review. The draft study includes the completed chemical analysis of Tank AX-102 post retrieval samples and supports the request to forgo a third retrieval technology in Tank AX-102.
- Continued preparation of Tank AX-104 post first and second technology retrieval activities; including preparation of a retrieval completion report for first and second technologies, preparation for post retrieval residual volume measurement system deployment, and post retrieval sampling.

Ongoing Activities (cont.)

- Continued Tank AX-101 hose-in-hose transfer line (HIHTL) installation.
- Continued Tank AX-103 waste retrieval system installation, sluicers, pump, HIHTLs, and other equipment in preparation for Tank AX-103 retrieval operations.
- Continued Tank A-101 equipment removal activities in preparation for new retrieval equipment installation.
- Continued new tent installation to mitigate COVID-19 social distancing impacts.
- Began A Tank Farm electrical infrastructure installation.

Significant Planned Activities in the Next Month

- Complete Tank AX-103 POR413 diversion box to POR497 splitter box HIHTL.
- Complete new tent installation to maintain COVID-19 social distancing protocols and mitigate further schedule impacts.

Issues

- Issues available in the report.

**Office of River Protection
Monthly Tri-Party Agreement Project Managers Meeting
Tank Farms Portion
May 13, 2021**

ATTENDEES

Brian Harkins, DOE-ORP
Bryan Trimberger, DOE-ORP
Briana Lindberg, DOE-ORP
Rod Lobos, DOE-ORP
Isabelle Wheeler, DOE-ORP
Holly Bowers, WRPS
Dan Parker, WRPS
Maria Lopez, WRPS
Gordon Warwick, WRPS
Stephanie Brasher, HMIS
Michael Turner, HMIS

Amena Mayenna, Ecology
Deirdra Hahn, Ecology
Steve Lowe, Ecology
Maria Skorska, Ecology
Jeff Lyon, Ecology
Jim Alzheimer, Ecology
Kyle Rucker, Ecology
Steve Lowe, Ecology
Andrew Pomiak, Ecology
Shelley Cimon, State of Oregon

**Office of River Protection
Monthly Tri-Party Agreement Project Managers Meeting
Waste Treatment Project Portion
May 20, 2021**

ATTENDEES

Bryan Trimberger, DOE-ORP
Wahed Abdul, DOE-ORP
Jason Young, DOE-ORP
Mat Irwin, DOE-ORP
Dan McDonald, Ecology
Shelley Cimon, State of Oregon
Michael Turner, HMIS
Stephanie Brasher, HMIS