

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

December 12, 2019

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2440 Stevens Center  
Richland, Washington

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**CONCURRENCE SIGNATURES**

The undersigned TPA Project Managers (or their delegates) indicate by their signatures that these meeting minutes reflect the actual occurrences of the above-dated Tri-Party Agreement Project Managers' Meeting.

Brian A. Harkins  
Brian Harkins, DOE-ORP

Date: 1/27/20

Mat Irwin  
Mat Irwin, DOE-ORP

Date: 1/29/20

Jason Young  
Jason Young, DOE-ORP

Date: 1/30/20

Jeff Lyon  
Jeff Lyon, Project Manager  
Washington State Department of Ecology

Date: 2/26/20

Dan McDonald  
Dan McDonald, Project Manager  
Washington State Department of Ecology

Date: 2/13/2020

John Temple  
John Temple, Project Manager  
Washington State Department of Ecology

Date: 2/12/20

# TRI-PARTY AGREEMENT MONTHLY REPORT

## 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
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

# TRI-PARTY AGREEMENT MONTHLY REPORT

## 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 January 9, 2020, at 2440 Stevens Center.

### 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 October 1- October 31, 2019, were entered into the Administrative Record on November 25, 2019.*

### 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 3-5 of the October 2019 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 – December 2019 Meeting.")

**Action No. 1 (TF-16-11-04):** ORP reported no change in status. Action remains On Hold.

**Action No. 2 (TF-18-10-01):** ORP noted the Factory Acceptance Testing (FAT) will start in early January. ORP noted that the equipment was on-site. Ecology asked for an email update regarding status. ORP also has a presentation on tank AP-106 and preparations for tank-side cesium removal (TSCR) system scheduled for later in the meeting. (See attached presentation.)

**Action No. 3 (TF-18-10-02):** No change in status. Action remains open.

**Action No. 4 (TF-19-04-03):** No change in status. Action remains Open.

# TRI-PARTY AGREEMENT MONTHLY REPORT

## 2.0 SYSTEM PLAN

ORP reported the System Plan 9 report had been submitted to Ecology in September 2019, and that Ecology had concurred with the selected scenarios. Discussions on the scenarios continue between ORP and Ecology.

## 3.0 ACQUISITION OF NEW FACILITIES

ORP reported there has been no change in this activity.

## 4.0 SUPPLEMENTAL TREATMENT AND PART B PERMIT APPLICATIONS

ORP reported there has been no change in this activity.

## 5.0 LOW-ACTIVITY WASTE PRETREATMENT SYSTEM

ORP reported there has been no change in this activity.

## 6.0 TANK-SIDE CESIUM REMOVAL SYSTEM

### Significant Past Accomplishments

ORP reported that the tank-side cesium removal (TSCR) system technology testing, ion-exchange pad designs, and tank farm upgrades were all completed in September 2019.

### Significant Planned Actions in the Next Six Months

ORP reported that the TSCR system fabricated equipment has been shipped to Richland from South Carolina and factory acceptance/testing is expected to begin in January 2020.

### Issues/Other Items

ORP had no issues to report.

## 7.0 242-A EVAPORATOR STATUS

### Significant Past Accomplishments

ORP reported it had completed annual electrical preventative maintenance activities and the 60 percent design for 242-A Evaporator transfer line replacement, as well as received the new instrument air dryer.

### Significant Planned Actions in the Next Six Months

ORP reported it will procure new PB-1 and PB-2 replacement pumps. ORP noted they will complete the 100 percent design for the 242-A Evaporator transfer line replacement, replace the sock filter assembly on the filtered raw water system, and initiate 242-A Evaporator safety systems upgrades engineering design.

### Issues/Other Items

# TRI-PARTY AGREEMENT MONTHLY REPORT

ORP noted that it was working with Ecology on permitting issues/needed permits related to the transfer line replacement.

ORP elaborated on the 242-A Evaporator safety system upgrades, noting that they were in response to Defense Nuclear Facilities Safety Board (DNFSB) concerns regarding potential/theoretical seismic and fire threats faced by the facility. Ecology asked for more discussion on this topic at the next project managers meeting.

## **8.0 LIQUID EFFLUENT RETENTION FACILITY AND 200 AREA EFFLUENT TREATMENT FACILITY**

### **Significant Past Accomplishments**

ORP reported the total fiscal year 2020 processing volume was approximately 1 million gallons.

ORP reported initiation of ETF Basin 42 cleanout activities.

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

ORP noted the status of the following activities:

- Continue ETF cleanout activities at the completion of LERF Basin 42 processing.
- Complete the refurbishment of the ETF, including: commissioning of the new peroxide decomposer vessel and media system; complete replacement of select facility stairs and ladders to improve safety; begin upgrade of ETF reverse osmosis system to replace leak-prone and obsolete system pumps; replacement of ETF evaporator drain valve; and begin replacement of ETF uninterruptable power supply, rough filter system, chiller and dilute caustic tank.
- 30 percent design review for LERF Basin 41. ORP is exploring potentially putting LERF Basin 41 into service to provide extra surge capacity and backup for existing basins.

ORP reported it began conceptual design for ETF supplemental organic treatment. Ecology asked if this work was part of the ETF upgrades, ORP said it was a separate project. ORP also noted that it expected a 60% design review in January.

### **Issues/Other Items**

Work has paused on the LERF Basin 44 cover replacement project while nuclear safety evaluations are performed. Evaluations are due to visual indication of solid material in the basin and sample results from that material. Ecology asked if ORP had any indication of the makeup and amount of the solid. ORP responded it did not at this time and that it was still drawing down the basin, but that was a hazardous task, due to the potential radiological hazard.

## **9.0 TANK SYSTEM UPDATE**

### **9.1 Double-Shell Tank Integrity**

# TRI-PARTY AGREEMENT MONTHLY REPORT

## Significant Past Accomplishments

ORP noted the status of the following activities:

- Received an annulus floor cleaner to clean the annulus floor of tank 241-AY-101
- Received and installed a retractable corrosion monitoring probe in tank 241-AY-101
- Ultrasonic testing inspections were completed for the following tanks:
  - 241-AP-107, 241-AP-108, 241-AN-102, 241-AP-106, 241-AP-102 (annulus floor ultrasonic testing only; air slot inspection)
- Completed enhanced annulus visual inspections for tanks:
  - 241-AN-101, 241-AN-102, 241-AN-103, 241-AN-104 241-AN-105, 241-AN-106, 241-AN-107, 241-AZ-101, 241-AZ-102

## Significant Planned Actions in the Next Six Months

ORP plans to complete the design of a primary tank bottom volumetric inspection system to be deployed into the annulus of double-shell tanks and used to characterize regions of the primary tank bottom. The system is “guided wave”.

ORP will fabricate a retractable corrosion monitoring probe in tanks 241-AW-104 and 241-AP-102. ORP is also fabricating leak detection inspection tool for deployment between the secondary liner and the double-shell tanks.

## Issues/Other Items

ORP had no issues to report.

## 9.2 Single-Shell Tank Integrity

### Significant Past Accomplishments

ORP reported it had completed visual inspections for 17 tanks in FY 2019: 241-AX-102, 241-B-102, 241-B-103, 241-B-110, 241-B-111, 241-B-112, 241-BX-104, 241-C-106, 241-SX-114, 241-SX-115, 241-T-103, 241-T-108, 241-T-202, 241-U-101, 241-U-106, 241-U-109, and 241-TY-106.

ORP reported that it had released and transmitted RPP-RPT-55202, *Dome Survey Report for Hanford Single-Shell Tanks*, Rev. 3, to Ecology in September satisfying TPA milestone M-045-91E3.

ORP completed the TFC-ENG-CHEM-D-42, *Tank Leak Assessment Process* on tanks 241-T-101 and 241-T-103.

### Significant Planned Actions in the Next Six Months

ORP plans to complete the TFC-ENG-CHEM-D-42, *Tank Leak Assessment Process* on tanks 241-SX-104, 241-T-109 and 241-T-113.

ORP referred to page 17 of the October 2019 TPA monthly report for the list of tanks to be visually inspected.

# TRI-PARTY AGREEMENT MONTHLY REPORT

## 10.0 IN-TANK CHARACTERIZATION AND SUMMARY

### 10.1 Reports Completed or Released

See page 20 of the October 2019 TPA monthly report for the full list.

### 10.2 Tank Sampling

#### Significant Past Accomplishments

ORP reported core sampling completed on tank 241-AN-107 and grab sampling completed on tank 241-AP-106. In addition, ORP completed grab sampling on the first two risers of tank 241-A-105.

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

See page 21 of the October 2019 TPA monthly report for the list of future tank sampling planned.

### 10.3 Best-Basis Inventory Updates

#### Significant Past Accomplishments

ORP reported completion of best-basis inventory updates for tanks 241-T-110 and 241-SX-115.

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

ORP reported best-basis inventory updates were planned for tank 241-AX-102. ORP is also planning to perform a best-basis inventory for tank 241-C-106 (as well as take new video inside the tank).

#### Issues/Other Items

ORP had no issues to report.

## 11.0 SINGLE-SHELL TANK CLOSURE PROGRAM

#### Significant Past Accomplishments

ORP reported the following activities:

- 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 single-shell tank closure plans in the Hanford Sitewide permit.
- DOE/ORP-2014-02, *Clean Closure Practicality Demonstration for the Single-Shell Tanks*, with supplemental information DOE/ORP-201-4-02-SUPP-1 was approved via letter 19-NWP-090, "Transmittal of Supplemental Information to the *Clean Closure*

## TRI-PARTY AGREEMENT MONTHLY REPORT

*Practicability Demonstration for the Single-Shell Tanks, DOE/ORP-2014-02-SUPP1, Revision 0,”* by Ecology on June 12, 2019.

- Submitted design for Barrier 3 in 241-TX Tank Farm to Ecology, which completed TPA milestone M-045-92W.
- Submitted the maintenance and performance monitoring plan for interim barriers to Ecology, on October 10, 2019, completing TPA milestone M-045-92AC (a different date than stated in the October 2019 TPA monthly report, which incorrectly stated the date as October 31, 2019).

### **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.

### **Issues/Other Items**

ORP noted the WMA-C Baseline Risk Assessment was still stalled, pending decisions by the TPA Inter-agency Management Integration Team.

ORP reported it was working to resolve 47 additional comments on RPP-RPT-59389 and RPP-RPT-59390. Both reports related to the closure of WMA-C.

ORP reported the continuing dispute over the waste retrieval criteria waiver on tank 241-C-106 – now on appeal before the Washington State Pollution Control Hearings Board (PCHB) – as an issue. The hearing before the PCHB is scheduled for July 28, 2020.

## **12.0 SINGLE-SHELL TANK RETRIEVAL PROGRAM**

### **Significant Past Accomplishments**

Refer to the Consent Decree portion of these meeting minutes (page 8, section 2.0)

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

Refer to the Consent Decree portion of these meeting minutes (page 8, section 2.0).

### **Issues**

Refer to the Consent Decree portion of these meeting minutes (page 8, section 2.0).

## **13.0 TANK OPERATIONS CONTRACT OVERVIEW**

The earned value data can be viewed in the October 2019 ORP TPA Monthly Report on pages 27-36.

## **TRI-PARTY AGREEMENT MONTHLY REPORT**

### **WBS 5.01 – Base Operations**

The earned value data can be viewed in the October 2019 ORP TPA Monthly Report on page 29.

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

The earned value data can be viewed in the October 2019 ORP TPA Monthly Report on page 31.

### **WBS 5.03 – Waste Feed Delivery/Treatment Planning**

The earned value data can be viewed in the October 2019 ORP TPA Monthly Report on page 33.

### **WBS 5.05 – Treat Waste**

The earned value data can be viewed in the October 2019 ORP TPA Monthly Report on page 35.

### **14.0 TANK 241-AP-106 REPURPOSING TO SUPPORT DIRECT FEED LAW (Presentation)**

See attached for full presentation. Summary: ORP presented on the preparations/repurposing of tank 241-AP-106 to support DFLAW.

# CONSENT DECREE MONTHLY REPORT

## 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 October 2019 ORP Consent Decree Monthly Report).

### Consent Decree Issues and Action Items

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

**Action No. 1 (WTP-19-19-01):** ORP reported that this action was closed November 7, 2019.

## 2.0 SINGLE-SHELL TANK RETRIEVAL PROGRAM

### Consent Decree Milestones

ORP reported Consent Decree milestone D-16B-03 is on schedule, D-16B-02 is under analysis, and D-16-B-01 is complete.

### Significant Accomplishments during the Prior Month

ORP reported the following completed activities:

- Removed the tank 241-A-103 Pit 03C pump
- Completed the removal of the 241-AX-103 R1B pump
- Readied 241-AX-104 A, B, C, and D pits for equipment installation (the next tank to be retrieved).

### Ongoing Activities

ORP reported the following ongoing activities:

- Installation of the electrical infrastructure (power and control systems) in the A Tank Farm.
- Continue removal of long-length equipment at 241-AX-103 and 241-AX-101.
- Installation of A Tank Farm ventilation system
- Continue 241-AX-102 waste retrieval operations (approximately 70 percent retrieved, as of 12/12/19)
- Install waste retrieval equipment in 241-AX-104
- Re-video remaining waste volume in 241-C-106
- Resolve 241-A-101 stuck shield plug (presumed to be permanently stuck - hole drilling is the next step)

### Significant Planned Activities in the Next Month

ORP reported the following planned activities:

- Complete terminations of electrical power to A Farm exhausters
- Install Tank 241-A-101 air inlet station (delayed due to stuck shield plug)
- Remove Tank 241-AX-103 03C saltwell screen
- Remove Tank 241-A-101 R2 thermocouple
- Resume Tank AX-102 waste retrieval operations
- Lower the remaining damaged section of Tank A-103 R2 thermocouple into the tank

# CONSENT DECREE MONTHLY REPORT

## Issues/Other Items

ORP reported that on September 13, 2019, Tank AX-102 retrieval operations were suspended, due to issues associated with sluicer number 2 in the AX-102 C Pit and sluicer number 3 in the AX-102 D Pit. Operation of sluicer number 3 was suspended because one of the hydraulic pistons, located at the articulating elbow, was slightly bent. Though still dealing with these issues, ORP said it will apply lessons learned to retrieval of tank 241-AX-104. For tank 241-AX-102, ORP reported that it had resumed retrievals but have encountered a sand-like substance that is complicating operations and may signal the limit of the second retrieval technology.

## **3.0 TANK WASTE RETRIEVAL WORK PLAN STATUS**

### Significant Accomplishments during the Prior Month

ORP reported it had submitted a tank waste retrieval work plan modification for 241-AX-104 to Ecology for review and approval.

### Significant Planned Activities in the Next Month

ORP reported no new activity.

## **4.0 RETRIEVE AND CLOSE SINGLE-SHELL TANKS**

### WBS 5.02

The earned value data can be viewed in the October 2019 ORP Consent Decree Monthly Report on page 11.

## **5.0 WASTE TREATMENT AND IMMOBILIZATION PLANT PROJECT**

### Project Schedule and Cost Variance Performance

The earned value data can be viewed in the October 2019 ORP Consent Decree Monthly Report on page 16.

ORP reported the baseline data was for September 2019 and shows a favorable schedule variance of \$0.3.6 million and a favorable cost variance of \$7.0 million. ORP attributed these variances, in part, to schedule recovery at the Low Activity Waste Facility (LAW) and at the laboratory facilities (LAB).

## **6.0 PRETREATMENT FACILITY**

ORP reported a small favorable cost variance due to termination of contracts for suspended plant equipment purchases and related storage of equipment.

## CONSENT DECREE MONTHLY REPORT

The earned value data can be viewed in the October 2019 ORP Consent Decree Monthly Report on page 20.

### 7.0 HIGH-LEVEL WASTE FACILITY

ORP reported it was currently reviewing multiple designs for the overall facility. ORP also noted that the Analysis of Alternatives (AoA) results may produce further design revisions. Ecology asked about the projected completion of the AoA, which ORP forecasted as late summer, 2020.

The earned value data can be viewed in the October 2019 ORP Consent Decree Monthly Report on page 23.

### 8.0 LOW-ACTIVITY WASTE FACILITY

ORP reported that 84% of Low Activity Waste (LAW) Facility systems have been turned over from construction to startup, and of those, 30% are already turned over from startup to operations. Key among these systems are the melter feed process system and the primary off-gas system.

ORP reported it is still waiting on the delivery of the active gas analyzer, a key component of the LAW Facility, but that factory-acceptance testing was complete. ORP also noted it also has some procurements awaiting.

The earned value data can be viewed in the October 2019 ORP Consent Decree Monthly Report on page 26.

### 9.0 BALANCE OF FACILITIES

ORP reported that startup testing at the Balance of Facilities (BOF) is nearly complete.

ORP reported that several major pieces of equipment are installed and are in the testing phase, notably the chillers in the Chiller Compressor Plant. ORP also reported that after repairs (heater element), which necessitated a drawdown of the reservoir, the cooling tower is now near operational, pending testing.

Also notable, was at the time of this meeting (and not in the October 2019 monthly report), the steam plant was pressurized and active steam was circulating in the building.

ORP reported that silica, which emulates glass, has been loaded in the glass former storage facility. This will enable testing of glass-forming systems.

ORP reported that substantial progress was being made at the Effluent Treatment Facility (EMF), particularly with pipe and electrical commodities installation. Also, all tanks have been delivered to the facility.

## CONSENT DECREE MONTHLY REPORT

The earned value data can be viewed in the October 2019 ORP TPA Monthly Report on page 29.

### 10.0 ANALYTICAL LABORATORY

ORP reported that construction at the Analytical Laboratory was essentially complete and the focus is now on startup and turnover to Plant Management/Operations. Of the notable completions, the HVAC system is now operational and a radiological boundary has been established.

The earned value data can be viewed in the October 2019 ORP TPA Monthly Report on page 31.

### 11.0 OTHER DISCUSSION

ORP reported on several process improvements that are improving progress. These include, but are not limited to: an increase in trained commissioning technicians; the emergence of Plant Management personnel taking over for Construction personnel; the contractor's use of "barrier workshops" to gain efficiencies; elimination of a single-point failure which will allow faster testing and more throughput of glass simulant in the two glass melters; more contractor flexibility in quality assurance and design changes (within thresholds); and the use of commercial best-practices in chemical management (from DuPont and others).



# THE HANFORD SITE

## Office of River Protection Tri-Party Agreement

Monthly Reporting Period  
October 1 – 31, 2019

## Significant Past Accomplishments

The selected scenarios for the *River Protection System Plan*, Rev. 9 were agreed upon by U.S. Department of Energy, Office of River Protection (ORP) and 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, “Re: Transmittal of Signed Concurrence for Selected Scenarios for the River Protection Project System Plan, Revision 9, RPP-RPT-61707, Rev. 0.”

## Significant Planned Actions in the Next Six Months

- Discuss disputes with regard to milestone M-062-45 and its associated milestones during holistic negotiations.
- Ecology and ORP will continue discussions in support of System Plan, Rev. 9 development, due October 31, 2020.

## **Significant Past Accomplishments**

- Waste feed delivery final design was released in August 2019
- Tank-side cesium removal (TSCR) system, tank farm upgrades, and TSCR spent ion exchange pad final designs were completed in September 2019
- TSCR technology testing for batch contact was completed in September 2019

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

- TSCR system fabrication is projected to be completed in 2019
- TSCR system factory acceptance testing is projected to begin in 2019

## Significant Past Accomplishments

- Completed annual electrical preventive maintenance activities
- Awarded fabrication contract for PB-1 and PB-2 spare pumps
- Completed design for replacement of instrument air dryer
- Received new instrument air dryer
- Completed 60 percent design for transfer line replacement

## Significant Planned Actions in the Next Six Months

- Procure new PB-1 and PB-2 replacement pumps
- Install instrument air dryer upgrade
- Complete 100 percent design for transfer line replacement
- Replace the sock filter assembly on the filtered raw water system
- Initiate safe systems upgrades engineering design

# Liquid Effluent Retention and 200 Area Effluent Treatment Facilities

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## Significant Past Accomplishments

- Total FY 2020 processing volume: approximately 1 million gallons
- Initiated Effluent Treatment Facility (ETF) cleanout activities at the completion of Liquid Effluent Retention Facility Basin 42 processing

## Significant Planned Actions in the Next Six Months

- Continue ETF cleanout activities for the completion of Liquid Effluent Retention Facility Basin 42 processing
- Commissioning of the new ETF peroxide decomposer vessel and media system will continue through December 2019
- Complete the replacement of select facility stairs and ladders to improve personnel safety and ergonomics
- Begin upgrade of ETF reverse osmosis system to replace leak prone valves and obsolete system pumps

# Liquid Effluent Retention and 200 Area Effluent Treatment Facilities

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## Significant Planned Actions continued

- Begin upgrade of the ETF cooling tower system
- Begin replacement of the leak-prone ETF evaporator drain valve
- Begin replacement of the ETF uninterruptible power supply, rough filter system, chiller, and dilute caustic tank
- A 30-percent design review for LERF Basin 41 is scheduled for November 5, 2019
- Begin conceptual design for ETF supplemental organic treatment

## Issue

- Work has paused on the LERF Basin 44 cover replacement project while nuclear safety evaluations are performed. Evaluations are due to visual indication of solid material in the basin and sample results from that material

# Liquid Effluent Retention and 200 Area Effluent Treatment Facilities

## LERF Volumes

Description	242AL-42 (Basin 42)	242AL-43 (Basin 43)	242AL-44 (Basin 44)
AZ-301 Condensate	+3,500	-	-
Mixed Waste Trench 31 and 34	+25,500	-	-
Other (325 RPS)	-	+1,800	-
Processing Campaign(s)	-1,002,000	-	-
<b>Total Volume</b>	<b>2,610,000</b>	<b>6,441,000</b>	<b>630,000</b>

Data Date: October 31, 2019  
 Values shown in gallons  
 RPS denotes retention process sewer

## Significant Past Accomplishments

- Received an annulus floor cleaner for tank AY-101
- Installed a retractable corrosion monitoring probe in tank AY-101
- Completed ultrasonic testing inspections for: 241-AP-107, 241-AP-108, 241-AN-102, 241-AP-106, and 241-AP-102<sup>1</sup>
- Completed enhanced annulus visual inspections for: 241-AN-102, 241-AN-103, 241-AN-104, 241-AN-105, 241-AN-106, 241-AN-107, 241-AZ-101, and 241-AZ-102

## Significant Planned Actions in the Next Six Months

- Complete design of a primary tank bottom volumetric inspection system to be deployed in the annulus of double-shell tanks (DSTs) to characterize regions of the primary tank bottom. The contract to fabricate, test, and deliver this system will be awarded in FY 2020.

<sup>1</sup> Completed inspection for 241-AP-102 consisted of annulus floor ultrasonic testing only; air slot inspection

## **Significant Planned Actions continued**

- Fabricate two retractable corrosion monitoring probes for installation in the following tanks: 241-AW-104 and 241-AP-102
- Award a competitive procurement contract to design and fabricate a tertiary leak detection inspection tool for deployment beneath the secondary liner of a DST
- Complete ultrasonic testing of the following tanks: 241-AW-102, 241-AW-101, and 241-AW-106
- Complete enhanced annulus visual inspections for: 241-SY-101, 241-SY-102, 241-SY-103, 241-AW-101, 241-AW-102, 241-AW-103, 241-AW-104, 241-AW-105, and 241-AW-106.

## Significant Past Accomplishments

- Completed visual inspections for: 241-AX-102, 241-B-102, 241-B-103, 241-B-110, 241-B-111, 241-B-112, 241-BX-104, 241-C-106, 241-SX-114, 241-SX-115, 241-T-103, 241-T-108, 241-T-202, 241-U-101, 241-U-106, 241-U-109, and 241-TY-106
- Transmitted RPP-RPT-55202, *Dome Survey Report for Hanford Single-Shell Tanks*, Rev. 3, to Ecology in September satisfying TPA milestone M-045-91E3 via letter 19-TPD-0018, “Completion of Hanford Federal Facility Agreement and Consent Order Interim Milestone M-045-91E3 Deliverable,” dated September 5, 2019.
- Performed TFC-ENG-CHEM-D-42, *Tank Leak Assessment Process*, on the following tanks: 241-T-101 and 241-T-103

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

- Perform TFC-ENG-CHEM-D-42 on: 241-SX-104, 241-T-109, and 241-T-113
- Perform visual inspection on: 241-B-107, 241-BX-105, 241-BX-108, 241-BX-109, 241-BX-112, 241-BY-107, 241-S-103, 242-S-110, 241-SX-112, 241-TX-101, 241-TX-102, 241-TX-104, 241-TX-107, 241-TX-110, 241-TY-101, and 241-TY-104

## Reports Completed or Released

- Completed six reports and released one. For details, please refer to the monthly report

## Significant Past Accomplishments

- Conducted core sampling on 241-AN-107 – six samples received
- Conducted grab sampling on 241-AP-106 – six samples received
- Conducted grab sampling (first of two risers) on 241-A-105 – two samples were received by laboratory

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## Significant Planned Actions in the Next Six Months

- Continue sampling 241-A-104
- November 2019:
  - Grab sampling – 241-AN-101
  - Core sampling – 241-AN-107
- December 2019
  - Grab sampling phase 1 – 241-AP-105
  - Grab sampling – 241-AP-106
- February 2020
  - Grab sampling – 241-AP-102
- March 2020
  - Grab sampling phase 2 – 241-AP-105
- April 2020
  - Grab sampling – 241-AP-108 (if required)

## Significant Past Accomplishments

- Completed best-basis inventory updates for: 241-T-110 and 241-SX-115

## Significant Planned Actions in the Next Month

- Complete best-basis inventory updates for 241-AX-102

## 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 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 single-shell tank (SST) closure plans in the Hanford sitewide permit
- Approved DOE/ORP-2014-02, *Clean Closure Practicality Demonstration for the SSTs*, with supplemental information DOE/ORP-2014-02-SUPP-1 via letter 19-NWP-090, “Transmittal of Supplemental Information to the Clean Closure Practicability Demonstration for the SSTs, DOE/ORP-2014-02-SUPP1, Revision 0,” by Ecology on June 12, 2019.
- Submitted design for Barrier 3 in 241-TX to Ecology. This action completes milestone M-045-92W as noted by administrative record (AR-03145) signed October 17, 2019.

## Significant Past Accomplishments continued

- Submitted the maintenance and performance monitoring plan for interim barriers to Ecology. This action completes milestone M-045-92AC. ORP letter 19-TPD-0027, “Completion of Maintenance Performance and Monitoring Plan Submittal to Meet Hanford Federal Facility Agreement and Consent Order Milestone M-045-92AC,” dated October 31, 2019, documented completion of this milestone. The letter states the Maintenance and Performance Monitoring Plan was hand delivered to Ecology for approval on October 10, 2019.

## Significant Planned Activities in the Next Six Months

- Resolve Ecology’s comments on RPP-RPT-59389, RPP-RPT-59390, and RPP-RPT-58858.

## Issues

- Interagency Management Integration Team decisions for the four issues on RPP-RPT-58329, Baseline Risk Assessment for Waste Management Area C, have been stalled since the February 21, 2019, meeting.
- The U.S. Department of Energy received 47 additional comments on RPP-RPT-59389 and RPP-RPT-59390 via an email from Ecology on August 30, 2019. ORP is developing a path forward to resolve these additional comments.

## Issues continued

- ORP formally initiated the TPA dispute resolution process with Ecology over Ecology’s “Denial of Request for Waiver for TPA Waste Retrieval Criteria for SST 241-C-106” (C-106). This dispute was extended at the TPA Interagency Management Integration Team level until June 12, 2019. A Director’s Determination by the Director of Ecology was made on June 26, 2019 (19-NWP-101, “Director’s Determination on United States Department of Energy Request for a Waiver of Single-Shell Tank Retrieval Criteria”). ORP appealed the Director of Ecology’s determination to the Pollution Control Hearings Board on July 26, 2019. The parties participated in mediation on October 28, 2019. The parties were unable to successfully negotiate and resolve the appeal on October 28, but have agreed to one additional negotiation meeting in November. The important dates and litigation deadlines are set forth in the Pollution Control Hearings Board’s Second Amended Pre-hearing Order. The hearing in this appeal is scheduled for July 28, 2020.



# THE HANFORD SITE

## Office of River Protection Consent Decree Monthly Report

Monthly Reporting Period  
October 1 – 31, 2019

## Significant Accomplishments during the Prior Month

- Removed A-103 Pit 03C pump
- Completed removal of the AX-103 R1B pump
- A, B, C, and D pits at AX-104 are ready for equipment installation

### Ongoing Activities

- Installation of the electrical infrastructure (power and control systems) in the A Tank Farm
- Removal of long-length equipment at AX-103 and AX-101
- Installation of A Tank Farm ventilation system:
- Waste retrieval operation of AX-102 (~69 percent retrieved)
- Installation of waste retrieval equipment in AX-104
- Re-video remaining waste volume in C-106
- Resolve A-101 1C pit stuck shield plug

## Significant Planned Activities in the Next Month

- Complete terminations of electrical power to A Tank Farm exhausters
- Install A-101 air inlet station (delayed due to stuck shield plug)
- Remove A-103 03C saltwell screen
- Remove A-101 R2 thermocouple
- Resume AX-102 waste retrieval operations
- Lower the remaining damaged section of A-103 R2 thermocouple into the tank

## Issues

- On September 13, 2019, Tank AX-102 retrieval operations were suspended due to issues associated with sluicer number 2 in the AX-102 C Pit and sluicer number 3 in the AX-102 D Pit.
- Additional issues available in the report

## Significant Accomplishments during the Prior Month

- A tank waste retrieval work plan modification for AX-104 was provided to Ecology for review and approval.

## ORP/Ecology TPA and CD Agreements, Issues, and Action Items –December 2019 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 first Thursday of the month starting in January 2019. The TPA and CD monthly reports distribution will occur by the end of December via link to the Admin Record. This will be the format for report distribution and monthly meetings going forward for calendar year 2019.

### 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: “Ecology<sup>1</sup> is the lead regulatory agency responsible for the closure of the SST system. EPA<sup>2</sup> 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 RCRA<sup>3</sup> closures/post-closures within an operable unit will be provided in various RFI<sup>4</sup>/CMS<sup>5</sup> documents. The initial work plan will contain a Sampling and Analysis Plan (SAP) for the associated RCRA units and it will outline the manner in which RCRA closure/post-closure plan requirements will be met in the work

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<sup>1</sup> Washington State Department of Ecology

<sup>2</sup> Environmental Protection Agency

<sup>3</sup> Resource Conservation & Recovery Act

<sup>4</sup> RCRA Facility Investigation

<sup>5</sup> Corrective Measure Study

## ORP/Ecology TPA and CD Agreements, Issues, and Action Items –December 2019 Meeting

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, HSWA<sup>6</sup> corrective measures will comply with ARARs<sup>7</sup>.”

- 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, TSD<sup>8</sup> 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.”

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<sup>6</sup> 1984 Hazardous and Solid Waste Amendments

<sup>7</sup> Applicable or Relevant and Appropriate Requirements

<sup>8</sup> Treatment, Storage, and/or Disposal

**ORP/Ecology TPA and CD Agreements, Issues, and Action Items –December 2019 Meeting**

#	Action ID Start Date	Action	Updates / Needs for Closure	Actionee(s)	Status/ Date Closed
1	TF-16-11-04 11-17-16	ORP to provide Ecology the T-112 work plan	In legal review. (07/19/2018) No change (09/20/2019)	Dusty Stewart	On Hold
2	TF-18-10-01 10/18/18	Follow up meetings for discussion and resolution of tank-side cesium removal (TSCR) related activities.	<p>Schedule a meeting to further discuss concerns related to crystalline silicotitanate (CST) compatibility with HLW glass, long term storage, ion exchange column design, potential for resolution concepts ( in the early stage). ORP will schedule first meeting within the next couple of weeks. Additionally Ecology would like a invite to witness the tall column test.</p> <p>4-4-19: ORP expects the meeting to occur prior to the end of April. Dan will provide list of Ecology names and available dates. The meeting should be scheduled for a couple of hours. Ecology would like clarification regarding the resin extracted from the column, which is purposed to be put in the high level waste stream. Currently there is no study to validated compatibility/treatment via HLW. Clarify disposition of the physical hardware.</p> <p>30 May 2019: Meeting held on May 20<sup>th</sup>. ORP recommends closing this action.</p> <p>6 June ORP Actions</p> <p>1. Provide Ecology with a copy of the Factory Acceptance Test (FAT) test plan once released. (TARGET Completion: October 2019)</p> <p>2. Provide the opportunity for Ecology to observe the FAT once the FAT has commenced. (TARGET Completion: November 2019)</p> <p>Updated 09/20/2019)</p>	Sahid Smith	Open

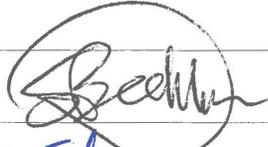
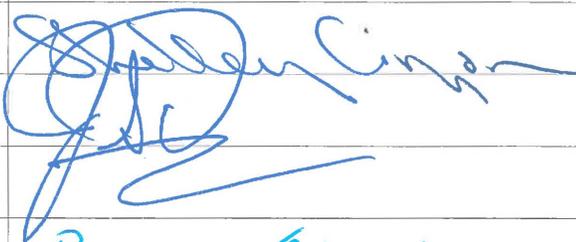
**ORP/Ecology TPA and CD Agreements, Issues, and Action Items –December 2019 Meeting**

#	Action ID Start Date	Action	Updates / Needs for Closure	Actionee(s)	Status/ Date Closed
3	TF-18-10-02 10/18/18	Ecology and DOE to meet to discuss Ecology email (see Updates)	The HFFACO is the current working agreement and Ecology is confident that the HFFACO has adequately described our expectations for WMA-C Closure. USDOE and Ecology will meet and discuss the areas where USDOE have not fulfilled the TPA requirements for SST Closure or are inconsistent with Tri-Party agreements and understanding. USDOE and Ecology will agree to a resolution to those deficiencies where USDOE have not fulfilled the TPA Requirements. If USDOE has concerns regarding the HFFACO, then our respective senior managers should provide direction to the TPA Project Managers for resolving those concerns. (Email Jeff Lyon, Oct 22, 2018) Meeting between ORP and Ecology occurred on 11 Dec 2018 to discuss these issues. ORP is preparing a response for Ecology. No Change 09/20/2019)	Rod Lobos	Open
4	TF-19-04-03	Demonstrate compliance with Appendix I for SST closure. (Jim Alzheimer)	Clarify how integration between RL and ORP is being coordinated for consistent action and compliance related to closure for CERCLA/RCRA and rad on similar type tanks. Clarify if this is captured in Tier 1, Tier 2 or Tier 3 closure plans. How are the separate closure documents providing compliance with Appendix I How is EPA involved? No Change 09/20/2019)	Rod Lobos	Open

**ORP/Ecology TPA and CD Agreements, Issues, and Action Items –December 2019 Meeting**

#	Action ID Start Date	Action	Updates / Needs for Closure	Actionee(s)	Status/ Date Closed
1	WTP-19-09-01	Briefing to Ecology	DOE will make a presentation related to the Design and Operability (D&O) Report	Wahed Abdul	Nov 7, 2019 Closed
2					

December 12, 2019  
Office of River Protection  
Tri Party Agreement Consent Decree Meeting

PRINT NAME	SIGN NAME	ORG
Abdul, Wahed		ORP
Alzheimer, Jim		ECY
Bang, Ricky		OEP
Barnes, Mike		ECY
Becky, Blackwell		ORP
Beehler, Steve		ORP
Brasher, Stephanie		MSA
Burnett, Kaylin		ORP
Cameron, Craig		EPA
Carlson, Annette		ECY
Cimon, Shelley		OR State
Decker, Jay		ECY
Diediker, Janet		ORP
Evans, Rana		ORP
Fletcher, Tom		ORP
Gao, Tracy		ECY
Hall, Katie		ECY
Harkins, Brian		ORP
Hastings, Rob		ORP
Hernandez, Paul		ORP
Irwin, Mat		ORP
Johnson, Jeremy		ORP
Jones, Mandy		ECY

December 12, 2019  
Office of River Protection  
Tri Party Agreement Consent Decree Meeting

PRINT NAME	SIGN NAME	ORG
Kemp, Christopher		ORP
Lobos, Rod		ORP
Lopez, Maria		WRPS
Lowe, Steven		ECY
Lucatero, Yoana		ECY
Lyon, Jeffery		ECY
McDonald, Dan		ECY
Menard, Nina		ECY
Mulkey, Charles		WRPS
Parker, Dan		WRPS
Pfaff, Stephen H		ORP
Pomiak, Andrew		ECY
Price, John		ECY
Rambo, Jeffrey		ORP
Serafin, Shane		ORP
Skorska, Maria		ECY
Smith, Sahid		ORP
Stewart, Dustin		ORP
Temple, John		ECY
Trimberger, Bryan		ORP
Turner, Michael		MSA
Turner, Vanessa		ORP
Valle, Richard		ORP

