

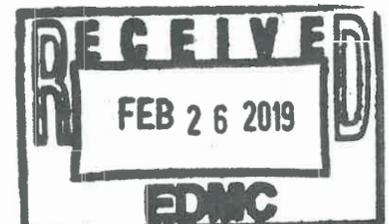
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*Office of River Protection  
Project Managers' Meeting Minutes*

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2440 Stevens Center  
Richland, Washington  
January 3, 2019



**PROJECT MANAGERS CONCURRENCE SIGNATURES**

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

Wahed Abdul

Date: 1/25/19

Wahed Abdul, DOE-ORP

Jan Bovier

Date: 1/25/19

Jan Bovier, DOE-ORP

Kaylin Burnett

Date: 2/20/19

Kaylin Burnett, DOE-ORP

Janet Diediker

Date: 2/7/19

Janet Diediker, DOE-ORP

Paul Hernandez

Date: 2/1/19

Paul Hernandez, DOE-ORP

Steve Pfaff

Date: 2/6/2019

Steve Pfaff, DOE-ORP

Jeff Rambo

Date: 1/28/19

Jeff Rambo, DOE-ORP

Sahid Smith

Date: 2/6/19

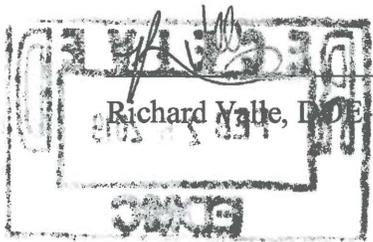
Sahid Smith, DOE-ORP

Dustin Stewart

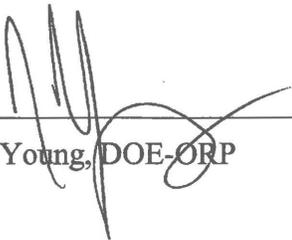
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Dustin Stewart, DOE-ORP

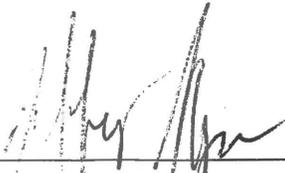
Date: 01/25/2019



Richard Valle, DOE-ORP

  
\_\_\_\_\_  
Jason Young, DOE-ORP

Date: 1/25/19

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

Date: 2/21/19

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

Date: 2-20-19

  
\_\_\_\_\_  
Stephanie Schleif, Project Manager,  
Washington State Department of Ecology

Date: 2/25/19

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## TERMS

APR	air-purifying respirator
BNI	Bechtel National, Inc.
BOF	Balance of Facilities
CD	consent decree
CRESP	Consortium for Risk Evaluation with Stakeholder Participation
DFLAW	direct-feed low-activity waste
DOE	U.S. Department of Energy
DST	double-shell tank
Ecology	Washington State Department of Ecology
EMF	Effluent Management Facility
ERSS	extended reach sluicer system
ETF	Effluent Treatment Facility
EVMS	earned value management system
HLW	High-Level Waste (Facility)
LAB	Analytical Laboratory
LERF	Liquid Effluent Retention Facility
LOE	level of effort
ORP	U.S. Department of Energy, Office of River Protection
PMM	project manager meeting
RCRA	<i>Resource Conservation and Recovery Act</i>
RLD	radioactive liquid waste disposal
SCBA	self-contained breathing apparatus
SST	single-shell tank
TBI	Test Bed Initiative
TPA	Tri-Party Agreement
TSCR	tank-side cesium removal
WRPS	Washington River Protection Solutions LLC

## **TRI-PARTY AGREEMENT MILESTONE REVIEW AND MONTHLY SUMMARY REPORT**

### **1.0 ADMINISTRATIVE ITEMS/MILESTONE STATUS**

#### **1.1 Upcoming Meetings**

The next project managers meeting (PMM) is scheduled for Thursday, February 7, 2019, from 9:00 a.m. to 11:30 a.m. at the U.S. Department of Energy (DOE) Office of River Protection (ORP) building in Richland, Washington.

The next ORP Quarterly Milestone Review meeting is scheduled for Thursday, February 21, 2019, from 9:00 a.m. to 11:00 a.m. at the Washington State Department of Ecology (Ecology) building in Richland, Washington. The Tri-Party Agreement (TPA) Interagency Management Integration Team meeting will precede the Quarterly Milestone Review, starting at 8:00 a.m., at the same location.

#### **1.2 Recent Items Entered/To Be Entered into the Administrative Record**

The ORP provided the monthly TPA and Consent Decree (CD) reports for December 2018, which cover progress during the period of November 1-30, 2018, and the earned value management system (EVMS) data for October 1-31, 2018.

#### **1.3 Tri-Party Agreement Milestone Status**

ORP reported that all TPA milestones reported on were either on schedule or in abeyance.

#### **1.4 Tri-Party Agreement and Consent Decree Agreements, Issues, and Action Items**

##### **Action No. 1 (TF-16-11-04)**

ORP stated that this action is still on hold. ORP explained that they are currently in talks with Ecology on the use of exhausters in various ways in the tank farms, but that there is no change in status. This action remains open.

##### **Action No. 2 (TF-17-04-01)**

ORP had previously requested that this item be removed from the action item list, and was waiting for Ecology's concurrence to do so. ORP stated that they had not received Ecology's concurrence. This action remains open.

##### **Action No. 3 (TF-18-11-03)**

ORP explained that Ecology had met with ORP, and that a series of meetings would follow. ORP suggested the action item be removed from the list, and asked if there were any objections. No objections were raised. This action will be closed.

**Action No. 4 (TF-18-07-01)**

ORP stated there was no change to the action item status. ORP would inquire about the DOE Richland Operations Office's expected date for the 200-BP-5 interim record of decision. This action remains open.

**Action No. 5 (TF-18-10-01)**

ORP indicated that there was no change to the action item's status. A meeting has not yet been held specific to the crystalline silicotitanate ion exchange media. ORP explained the intent to hold the 60-percent design review meeting the following week, during which a breakout session would be held to discuss the crystalline silicotitanate ion exchange media's compatibility issues. Ecology noted that the column witness was complete, and that portion of the action item could be marked complete. This action remains open.

**Action No. 6 (TF-18-10-02)**

ORP indicated that Ecology, ORP, and contractor staff met on December 11, 2018, to discuss Ecology's email dated October 22, 2018, which described alleged departures from or inconsistencies with TPA requirements for single-shell tank (SST) closure. ORP stated they are preparing a response to Ecology's email. Ecology inquired whether or not ORP agreed or disagreed with Ecology's assertions. ORP responded that they are still examining the purported issues. This action remains open.

**2.0 SYSTEM PLAN**

ORP indicated the System Plan negotiations had been extended until mid-February 2019.

**3.0 ACQUISITION OF NEW FACILITIES**

ORP stated the status of the acquisition of new facilities has not changed, and the subject milestones (M-047-07, M-090-13, M-090-00, M-047-00) would remain in abeyance.

**4.0 SUPPLEMENTAL TREATMENT AND PART B PERMIT APPLICATIONS**

ORP stated the status of supplemental treatment milestones had not changed, and the subject milestones (M-062-45-T01, M-062-45-ZZ, M-062-45-ZZ-A, M-062-31-T01, M-062-32-T01, and M-062-33-T01) would remain in abeyance due to ongoing negotiations.

## **5.0 TANK-SIDE CESIUM REMOVAL**

### **5.1 Significant Past Accomplishments**

ORP stated the 30-percent design review of the tank-side cesium removal (TSCR) system was completed in September.

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

ORP stated the 60-percent design review would be held in January 2019.

### **5.3 Issues**

ORP indicated that no issues arose in November, but that Ecology raised an issue in late December related to the plan for venting offgases from the TSCR system to Tank AP-108. ORP had planned that exhaust from the TSCR system would be vented back to Tank AP-108. ORP indicated that discussions with Ecology were ongoing, that some level of agreement had been reached, and that ORP was evaluating different offgas monitoring methods. ORP described working on the sampling campaign strategy and frequency, which will support further discussion in the coming weeks. Ecology asked for clarification on the venting path forward and what agreement had been reached. ORP described an email from Ecology that indicated Ecology would be in favor of venting back to AP-108 as long as ORP had the capability to monitor that exhaust. ORP clarified that the discussion was held at the senior management level.

## **6.0 242-A EVAPORATOR STATUS**

ORP stated that evaporator campaign EC-10 would consist of a cold run followed by a hot run. Problems with the slurry line were preventing full operations. This strategy, along with the ongoing drills and simulator work, will help keep the staff proficient and the facility in state of readiness. The hot run is scheduled for June.

### **6.1 Significant Past Accomplishments**

ORP described relocating the spare PB-1 pump from the load-out room, and installing a tent in which to rebuild the pump to accommodate the Test Bed Initiative (TBI) proposal.

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

ORP explained that current plans include moving the spare PB-1 pump back into the 242-A Evaporator because (1) the tent lacked sufficient radiation and climate controls, and (2) the TBI that was proposed for use of the space was moved out of the 242-A Evaporator.

ORP explained that a new PB-1 replacement pump would be procured, as well as spare parts with which to rebuild the existing spare pump that will be going back in the building.

### 6.3 Issues

ORP explained that the PB-1 pump had failed, and that efforts are underway to rebuild the pump and procure a spare pump.

ORP stated that the SL-167 slurry transfer line, which transfers waste from 242-A to AW Tank Farm, did not pass the encasement pressure test. ORP explained the contractor is using an engineered plug to isolate test risers, which will facilitate in testing the line. Testing is currently scheduled for second week of January. Concurrently, ORP explained, ORP has authorized the contractor to begin work on the replacement transfer line.

Ecology inquired if work had begun on building two new slurry return lines, and ORP confirmed, clarifying that the work being performed is the initial design.

Ecology asked why the contractor is doing another test, given the line has already failed once. ORP explained that the contractor expects that the line failed at a test riser, adding that the test riser configuration could have contributed to the failure. ORP continued that the plug is expected to seal the failure point, so the pipe itself can be tested.

Ecology referenced ORP's earlier statement that cold runs would begin in June, and asked when hot runs or a campaign would begin. ORP explained that until SL-167 is fixed, no slurry could be moved through the line, and therefore no campaigns would be completed.

ORP explained that the cold runs were evaporator runs using just water, and that evaporator runs were considered hot when wastes are introduced into the stream. Normally hot wastes are circulated until specific requirements are met. Because SL-167 is not tight, hot runs would not be completed (i.e., wastes transferred through slurry line to Tank AW-102). Instead, the waste will be run through the evaporator and then returned to its feed tank for a future evaporation campaign. The cold and hot runs are still being named "EC," and would be sequential, starting with EC-10 and then EC-11. If the slurry line tests tight, ORP will confer with Ecology on running an actual waste reduction campaign.

Ecology asked the source of the waste for the cold/hot runs. ORP explained that the waste in question is staged in AW-102, which was designated for EC-10. Ecology inquired about and ORP confirmed that there are no feed line problems.

Ecology asked what would be dumped back into the feed tank. ORP explained the contents of the pot and the recirculation loop would be returned to AW-102 (24-25,000 gallons). Ecology asked if that meant both the slurry and the condensate would be returned to AW-102. ORP explained that to initiate operations, raw water had to be added to the system, and that waste is slowly introduced until the correct specific gravity is met. ORP explained that for this reason, it is not clear whether there will a waste volume reduction, and that any waste volume reduction would depend on the length of the hot run. ORP clarified that the condensate would not be returned to AW Tank Farm. Instead, the condensate would go to the Liquid Effluent Retention Facility (LERF).

Ecology expressed a concern regarding the use of a dump valve as an operational valve, because dump valves are typically used for emergency dumping. Ecology stated that the permit allows for the use of a dump valve for dumping when the system is shut down, but that ORP is using the dump valve in some other manner. Ecology suggested that ORP meet with the Ecology permit writer to discuss the issue.

**New Action:** Meet with Ecology to discuss use of dump valve.

Ecology asked for clarification on whether ORP will be doing a hot run or not, given the need to replace the transfer line, and asked when the next waste volume reduction run is scheduled. ORP explained that will either be when the SL-167 slurry line is proven tight, or new slurry lines are installed, and that the SL-167 tests were scheduled for January 9-10, 2019. ORP added that the new lines would be designed and constructed regardless of the SL-167 test results because of the age of the infrastructure. Ecology asked for a schedule, and ORP explained that they should have a schedule in a few months, but that initial estimates for the transfer line construction project were somewhere between 2 and 3 years. ORP continued that an evaluation of the double-shell tank (DST) space had been performed, and that a presumed 3-year outage of the evaporator would not impact retrieval milestones.

Ecology inquired whether the evaporator issues would impact the direct-feed low-activity waste (DFLAW) startup activities and the 2023 CD date. ORP responded that waste is already staged in Tank AP-107 for the first DFLAW campaign, and stated that the evaporator issues would not affect DFLAW activities in the near term. Ecology requested that ORP follow up on and provide a schedule for the SL-167 transfer line replacement.

**New Action:** Provide schedule for the construction of SL-167 replacement lines.

Ecology requested that ORP email the results of the SL-167 tests, and ORP agreed to share the results when they are available.

**New Action:** Provide results of slurry line testing to Ecology.

## **7.0 LIQUID EFFLUENT RETENTION FACILITY/200 AREA EFFLUENT TREATMENT FACILITY**

ORP explained that Basin 42 was placed in service, but no liquid volume has been transferred since the cover replacement. The total volumes of Basins 43 and 44 were ~5.67 Mgal and ~7.36 Mgal, respectively. The only basin that received waste in the reporting period was Basin 43, which received condensate from AZ-301 and leachate from the mixed waste trenches and solid waste landfill lysimeter.

### **7.1 Significant Past Accomplishments**

ORP explained that for the first quarter of FY 2019, no waste was processed. ORP reported several accomplishments for the Effluent Treatment Facility (ETF) Integrity Program, including completing visual inspections of several tanks, releasing the *Effluent Treatment Facility Integrity Program Plan*, placing Basin 42 back in service, and beginning *Resource Conservation and Recovery Act* (RCRA) inspection of secondary waste receiving tank A.

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

ORP described plans to continue the plant cleanout and corrective maintenance outage, which initially had been planned for completion during the first quarter of FY 2019, but is now scheduled for January 2019. In addition, ORP described plans to perform remaining fieldwork activities in support of the ETF integrity assessment project (by the end of February 2019),

continue the annual RCRA tank inspections, and transfer the contents of Basin 44 (~7.36 Mgal) to Basin 42 to facilitate Basin 44 cover replacement. ORP explained the liquid would be transferred in 3-foot increments, each separated by a 72-hour pause to check leachate levels.

ORP referenced work to be completed throughout FY 2019, and described directing the contractor to perform additional work than what had been reported in November.

The State of Oregon asked how much volume is contained in a 3-foot increment. ORP explained that the volume of a 3-foot increment varied because the basin is sloped. ORP explained that the 6-foot volume comprises about 2 Mgal. Oregon also asked about the 72-hour pause between transfers, and ORP explained that an anomaly was observed during a 2018 transfer when the entire contents were transferred. The pause will allow ORP to observe how the contents interact as they are introduced in the basin.

Ecology asked if ORP had observed any anomalies during the transfer of the ~6 Mgal. ORP explained that the contents appear stable.

Ecology asked about the ETF design items reported in work to be performed this fiscal year. ORP explained that the design will be completed this fiscal year. ORP clarified that a design to replace the existing ultraviolet light/oxidation system would be completed. Ecology asked about the “ETF monitor and control system design” item listed in the monthly report, specifically what would be monitored and controlled. ORP explained that the existing control room is being upgraded, and that no new monitoring installations were taking place.

## **8.0 TANK SYSTEM UPDATE**

### **8.1 Field Activities**

#### **Significant Past Accomplishments**

ORP explained that no waste-disturbing activities took place during the reporting period, and referred to the FY 2018 and 2019 field activities listed on page 14 of the TPA report.

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

ORP explained that no waste-disturbing activities are planned for the next 6 months. ORP listed the major field activities to be performed in the next 6 months, including (1) fabricating and replacing the AP-02A jumper; (2) removing the AP-02D pump; (3) installing the in-pit heater at AP02A and AY01A; (4) installing cross-site transfer line permanent power to 6241V; (5) conducting operational acceptance testing of AW Tank Farm and AY/AZ Tank Farm safety-significant airflow installations; (6) conducting startup and turnover of tank farm wireless installations in AN and AP Tank Farms; and (7) conducting testing and readiness of safety-significant airflow instrumentation.

## **8.2 Double-Shell Tank Integrity**

### **Significant Past Accomplishments**

ORP described having performed nine enhanced annulus visual inspections during FY 2018, and having completed ultrasonic testing inspections for 241-AP-107 tank in FY 2019.

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

ORP explained that the following actions were planned for completion during the next 6 months: (1) continuing the annual comprehensive inspection of Tank AY-101 annulus; (2) performing ultrasonic testing inspections of three additional tank annuli; (3) performing enhanced visual inspections for nine annuli (though SST inspections would be performed before DST inspections); and (4) procuring/designing an annulus floor cleaner for AY-101.

Ecology noted that on page 14 of the TPA report, ORP indicated that no waste-disturbing activities were planned, and yet ORP planned to remove the “big pump.” Ecology stated that the two items seemed inconsistent, and asked for clarification.

ORP explained that “waste-disturbing activities” typically are categorized by the transfer or recirculation of waste, and that all necessary precautions would be taken. ORP also explained that the current pump removal process is much safer than that used in the past.

Ecology asked and ORP agreed to send copies of the ultrasonic testing inspection reports and visual reports to Ecology.

## **8.3 Secondary Liner Integrity**

### **Significant Past Accomplishments**

ORP explained that the items reported have not changed over the last few months, and described having completed modeling of potential water ingress routes as well as a visual inspection.

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

ORP stated that the laboratory testing for corrosion (from soil moisture) of secondary liners would be completed this year, as well as ultrasonic testing of Tank 241-AP-102.

## **8.4 Single-Shell Tank Integrity**

### **Significant Past Accomplishments**

ORP described having completed three visual inspections of SSTs.

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

ORP explained that eight or nine visual inspections of SSTs remained to be completed this fiscal year, as well as three miscellaneous underground storage tank visual camera inspections. In addition, ORP explained that tank leak assessments were ongoing for two tanks.

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

### **Double-Shell Tank System**

ORP explained that the *Double-Shell Tank System Integrity Assessment Report* was completed in 2016, and the next assessment will be in 2026.

### **Single-Shell Tank System**

ORP explained the *Single-Shell Tank System Structural Integrity Assessment Report* was delivered to Ecology in 2018, and the next assessment has not yet been scheduled.

### **242-A Evaporator**

ORP stated that there are several ongoing issues that are being addressed with Ecology.

### **Effluent Treatment Facility**

ORP stated that the Independent Qualified Registered Professional Engineer activities associated with the ETF are ongoing.

### **219-S**

ORP explained there was a slight pause but activities have restarted, including performing leak assessments of select tanks.

Ecology asked what the requirement or basis is to perform the camera visual inspections of three miscellaneous underground storage tanks. ORP explained that some intrusions have been observed that warranted a visual inspection. Ecology requested that ORP identify the three tanks in question, and ORP agreed to do so.

## **9.0 IN-TANK CHARACTERIZATION SUMMARY**

### **9.1 Significant Past Accomplishments**

ORP explained that a number of documents have been completed or released. These documents are listed in the TPA report on page 19.

ORP described tank-sampling activities completed in November, including large-volume sampling of 241-AW-102, grab sampling of 241-SY-101, and other sampling of 241-SY-101.

ORP stated that best-basis inventory updates were completed for six tanks in November.

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

ORP stated that future tank sampling is scheduled as shown in the TPA report, but that the 241-A-105 solid grab sampling, the 241-AP-107 large-volume grab sampling, and possibly the 241-AZ-102 leak detector pit grab sampling have been completed.

ORP stated the best-basis inventory updates listed in the TPA report are planned for completion in December.

Ecology noted that there was no mention of the TBI in the in-tank characterization summary. ORP questioned the appropriateness of including TBI in the TPA report. ORP explained the TBI project is short term and funded directly by DOE Headquarters as a technology development initiative. ORP continued that the TBI project did not conflict with DFLAW, and that there are no TBI-specific TPA milestones. ORP explained having invited Ecology to the 30- and 60-percent design reviews, and preparing for 90-percent design at the end of January. ORP stated the sampling and analysis was completed on December 22, and committed to sending that information over to Ecology.

ORP continued that Washington River Protection Solutions LLC (WRPS) and Columbia Energy and Environmental Services were responsible for a portion of the TBI, and therefore ORP could not comment on the entirety of the project's scope, nor DOE Headquarters' contracts. ORP proposed to move forward to 90-percent design, and offered to meet monthly with Ecology to provide a more complete report on the project's status, instead of just reporting on ORP's portion of it during the TPA meeting. Ecology suggested statusing the TBI project during the monthly DST system activities meeting. ORP suggested scheduling and discussing the TBI activities separately because it is a standalone project, and there are no schedule interdependencies. The parties agreed to work offline to set up TBI status meetings.

## **10.0 SINGLE-SHELL TANK CLOSURE PROGRAM**

ORP reported no changes to the milestones listed on pages 22 and 23 of the TPA monthly report.

### **10.1 Significant Past Accomplishments**

ORP stated that the significant past accomplishments had not changed for several months.

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

ORP reported that planned actions include finalizing responses to Ecology's comments on the RCRA Tier 2 closure plans, which will be followed by RCRA Tier 3 closure plan comments. ORP stated that comment resolution for the TPA Appendix I performance assessment/RCRA closure assessment has begun.

### **10.3 Issues**

#### ***DOE/ORP-2014-02, Clean Closure Practicality Demonstration for the Single-Shell Tanks.***

ORP explained that a letter containing ORP's response to Ecology letter 15-NWP-149 is being routed for signature.

***RPP-RPT-58858, Tier 1 Closure Plan Single-Shell Tank System.*** ORP recommended that this issue be removed, stating that ORP is addressing the items from the SST Closure Matrix. Ecology agreed that this item could be removed from the issues list.

Ecology asked when ORP expects to complete and transmit the Tier 2 responses. ORP explained that an exact date was not set, but that the responses are being reviewed internally, including a review by the Office of Chief Counsel.

Ecology stated that it had previously provided 20 general comments on a document related to the performance assessment, and had asked for ORP's response to those comments. Ecology asked when ORP will transmit their responses, and if ORP had an update. ORP stated that WRPS is working on their responses, but there is no known response date.

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

ORP reported that completion of the *Retrieval Data Report for Single-Shell Tank 241-C-105* (TPA milestone M-045-86D) is slightly ahead of schedule. The remainder of the Single-Shell Tank Retrieval Program discussions are contained in the CD portion of this meeting minutes package.

## **12.0 TANK OPERATIONS CONTRACT OVERVIEW**

For WBS 5, ORP explained that not as much work was performed as was scheduled, and the work that was performed cost more than expected.

For WBS 5.1, ORP stated that more work was performed than was scheduled, but the work performed cost more than planned. The favorable schedule variance was due to schedule recovery in Tank AP-102A jumper repair fieldwork and the AW Tank Farm stack extension project. The unfavorable cost variance was due to additional resources required to support ETF inspections. The negative cost variance was also attributed to the installation of the 10-wide trailer for the expanded industrial hygiene workforce, which cost more than anticipated.

WBS 5.2 was previously discussed, and included in the CD portion of the minutes.

For WBS 5.3, ORP reported an unfavorable schedule variance (\$262K) that was associated with a 1-month delay on receipt of a sample from Tank AP-107. However, most of the variance resulted from stopping the TBI on September 30, 2018. The project ceased, and was then moved from the 242-A Evaporator to Tank SY-101. After a delay of approximately 3½ weeks, ORP approved a "not-to-exceed" value of research and development to allow WRPS to initiate planning requirements, including the function and requirements document. ORP's pre-planning activities ensured no impacts to staff, and the overall result is a more simplified project approach that should require fewer resources and be less expensive.

For WBS 5.5, ORP stated the unfavorable schedule variance was due to a delay in the 30-percent design of the waste transfer line modifications supporting both TSCR operations and DFLAW. The cost variance was favorable but below the reporting threshold to provide a narrative. WRPS has submitted a proposal to ORP on tank farm upgrades that included waste transfer lines, and ORP is reviewing the proposal.

## **CONSENT DECREE MONTHLY SUMMARY REPORT REVIEW**

### **1.0 CONSENT DECREE MILESTONE STATISTICS/STATUS - CONSENT DECREE REPORTS/REVIEWS**

The reports, agreements, issues, and actions were discussed and updated as follows (there were no CD action items this month).

### **2.0 SINGLE-SHELL TANK RETRIEVAL**

#### **2.1 Significant Past Accomplishments**

ORP reported having removed the thermocouple out of Tank AX-103. Excavations from diversion box to Tank AX-102 A, B, C, and D pits were completed. The AX-102 02D pit extended-reach sluicer system (ERSS) was installed. The hose-in-hose transfer line to the DST receiver tank from Tank AZ-102 was installed. The A Tank Farm ventilation system manifold concrete pad was installed. The internal wiring in control room trailer POR471 was completed, and the electrical rack power supply to portable exhauster POR496 was installed.

Ecology asked if the concrete pad that was poured for the A Farm ventilation system manifold was above or below ground. ORP indicated it was aboveground, running between the A Farm tanks, with headers branching off into each tank. ORP continued that portions of the manifold should be completed beginning the next month.

#### **2.2 Ongoing Activities**

ORP stated that infrastructure installations continued. Field activities associated with long-length equipment removals at Tank AX-103 continued, as did installation of retrieval equipment at Tank AX-102 (installation of two ERSSs). An additional ERSS, a pump, a camera, and lights remain to be installed. Direct-push soil sampling at Tanks A-104 and -105 is ongoing. More infrastructure has been installed. The A Tank Farm ventilation system installation is progressing better than expected.

ORP stated that work continues on excavation from AX Tank Farm diversion box to pits AX-104A, B, C, and D, as well as installation of the AX-104 diversion box hose-in-hose transfer lines.

Pit AX-101A was found to contain contaminated equipment, but the lifting system was unavailable. The wire rope initially installed had been cut off. The contractor tested alternative methods to remove the equipment, which has been successful, and the pit should be cleaned out soon.

#### **2.3 Significant Planned Activities in the Next Month**

ORP stated near-term plans to install an additional extended-reach sluicer in AX-102 Pit 02C. Additional wiring in the second control trailer is planned for completion. Another thermocouple will be removed, and work will continue on the AX Tank Farm conduit installations for the

east/west electrical system. Finally, ORP expects to complete the A Farm exhauster structural steel installation.

## 2.4 Issues

- The use of self-contained breathing apparatuses (SCBA) continues to impact work in the tank farms.
- Discussions of status, conditions, and retrieval options for Tanks A-104 and -105 are ongoing.

Ecology asked for clarification on this issue and if ORP planned to retrieve Tank A-105 and had encountered difficulties. ORP referred to the August project manager meeting, wherein the parties discussed the issue. ORP explained that A-104 is a known leaker, and that ORP is developing a mechanical waste gathering system that they hope will be able to retrieve A-104 wastes with minimal environmental impact. A-105 has a ruptured liner. Investigations are ongoing, but a number of technical issues have arisen preventing the removal of the 360 ft<sup>3</sup> of wastes between the liner and the bulged tank bottom, making retrieval “unfeasible.” ORP said it could try deploying a remotely operated vehicle in the tank, but the tank liner may not be structurally sound enough to support that. The borehole exploration to be conducted under A-104/A-105 will identify what contaminants are in the soil.

Ecology stated that Ecology does not exclude the waste that is below the liner but inside the concrete structure from the volume of tank wastes that must be treated in accordance with the CD. Therefore, the volume of waste between the liner and the concrete structure must be included in the total tank volume. Ecology requested that if ORP defined or bound the tank contents differently, additional discussions with Ecology should be held, and asked ORP to make sure Ecology’s definition of tank contents is clear to ORP legal and engineering staff. ORP stated that the manager of the tank farms would be informed, and that general counsel already had been informed. General counsel was waiting for a response from Ecology on the subject after August 2018 discussions. Ecology committed to following up with its attorneys.

- The as-found condition of abandoned equipment in the tank farms is a new issue. Several thermocouples and a shield plug were found stuck and could not be removed.
- Removal of the contaminated equipment skids has been delayed due to the existing conditions. Ecology asked ORP to clarify which skids, and ORP referred to the ongoing activity, “Continue work on AX01A pit cleanout.” The skids were blocking access to the closed floor drain. As a result, ORP was unable to wash the contamination out and down into the tank, which has impacted cleanout of that pit.

Ecology asked ORP to explain what a shield pit is. ORP stated that in 02A center pit, there is a shield plug with a concrete plug attached to a 32-inch riser. Multiple layers of fixative appear to have been applied (possibly epoxy), which is preventing removal of the plug. The contractor has taken steps to remove the plug, but with no success. Oil and wedges have been used. Engineering is working to develop another approach.

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

Tank waste retrieval work plans for AX-101, AX-102, AX-103, and AX-104 were previously completed. There were no new updates.

### **4.0 SINGLE-SHELL TANK RETRIEVAL MONTHLY FISCAL YEAR EARNED VALUE MANAGEMENT SYSTEM DATA**

ORP stated that EVMS performance for October indicated an underperformance of work scheduled, and that actual costs were greater than what were budgeted, partly due to requirements for alternative respiratory protection during installation of the exhaust pad manifold in A Farm. A shortage of available electricians delayed some of the work. Overtime is being utilized to compensate for that shortage, which is increasing cost variance. In addition, substantial resources have been expended on three stuck thermocouples in AX Tank Farm.

Ecology asked for clarification on what respiratory protection program issues ORP was referencing. ORP explained that an employee had raised a concern about working around the tanks with no running exhausters. As a result, workers switched from using air-purifying respirators (APR) back to using SCBAs.

Ecology asked ORP to confirm that normally exhausters would be running, but because the exhausters were being worked on, they were not operating and therefore there was no active ventilation. ORP explained that when employees began using APR, the employees expected active ventilation systems to be operating in addition to the APRs when performing work anywhere near a tank farm.

ORP explained the workers now are working near the A Farm gate, where SCBAs are not required. Ecology asked when the exhausters will be running, and ORP stated April or May of this year, but dependent upon Ecology issuing a permit. ORP explained they are working to stage A Farm so that when construction is complete, all the tanks will be ready for retrieval. The AX Tank ventilation system is installed and operating in test mode.

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

ORP explained that as of October, the project was 55 percent complete, engineering design was 88 percent complete, and procurement was 53 percent complete. Significant accomplishments for the month include ongoing discussions between ORP and Ecology on the high-level waste (HLW) treatment path forward.

ORP recalled discussion prior to the October PMM related to project replanning efforts, and reiterated that no change to the contract end dates or contract milestone schedules are planned to result from the work resequencing. Bechtel National, Inc. (BNI) will retain any cost and/or schedule variances incurred since the March 2018 target schedule was established.

Some work was moved from 2019 to 2020, which resulted in a \$33 million negative schedule variance (cumulative March–October). Ecology asked if, and ORP confirmed that the replan primarily includes a resequencing of work. ORP confirmed that it was.

Prior to the replan, a large portion of work (slightly more than 50%) was managed as level of effort (LOE), in which the value of work is earned as time passes. The project, however, had not been fully staffed, so less work was completed than was planned. Therefore the cost variance was calculated as positive, which did not accurately reflect the actual work completed or any realized efficiencies. This month's report removes the "false" positive cost variance. The project has been evaluating the LOE versus discrete accounts, and is working to reduce the total number of LOE accounts so the project can be managed more accurately.

ORP expects November and December reports to have more realistic data, and that after 90 days, the project will have much more accurate EVMS data that reflect actual project performance. January data, which are reflected in the March report, should be aligned with actual project performance.

Ecology asked when ORP will complete its review of the U.S. Army Corps of Engineer's report, and stated a desire to discuss the report. Ecology continued that it had completed its review of the report, and the results of the reviews will contribute to decisions associated with HLW optimization, system plan negotiations, etc., and that a timely review and discussion is critical. ORP stated that Headquarters is reviewing the report, and that ORP had little control over when they would complete their review. ORP said will discuss with its management, as will Ecology with its.

## **6.0 PRETREATMENT FACILITY**

ORP stated that work continued on the resolution of technical issue T4. Resolution of T5 was almost completed with the exception of some documentation. There was a setback on T4 in December when the Consortium for Risk Evaluation with Stakeholder Participation (CRESP) returned a significant number of comments on the BNI's report, stating that the document itself was incohesive. Because a bulk of project resources are currently allocated to DFLAW activities, BNI is projecting that work to refine the T4 documentation will occur at the end of March.

Ecology asked if the content of the report supports ORP's assertions, and ORP stated that the report does support the Department's conclusions. ORP reiterated that CRESP's comments pertained to the completeness and cohesiveness of the report, not the conclusions contained therein.

ORP stated that BNI identified one error in a calculation in the T5 report, and that BNI estimates the report will be corrected within a month. Ecology asked if ORP is confident that is the only error in the T5 report, and ORP stated that the error was the only error identified in an external review.

## **7.0 HIGH-LEVEL WASTE FACILITY**

ORP stated that work continued toward completing the radioactive liquid waste disposal (RLD) system and offgas system designs. Additional work continued to resolve the hydrogen mitigation issue – a key open item identified in the preliminary documented safety analysis issued several years ago. Resolution of this issue will affect the rest of the system design.

Because much of the project resources are allocated to DFLAW, there is a shortage of resources to complete this work. BNI has opened several positions to alleviate the resource shortage.

Ecology asked if ORP expects to lose additional float on the project. ORP stated that for the hydrogen mitigation issue, BNI still plans to complete the work by the planned date of the end of March. BNI still plans to complete the RLD 60-percent design review by the end of the year. BNI may have to move out the offgas issue to the next year due to a lack of resources.

Oregon stated that the issue is staffing, not funding. ORP confirmed there is budget for the HLW work, and confirmed the staffing shortage was the primary issue. ORP stated that BNI had around 300 positions open project-wide, many of which will support DFLAW commissioning, but around 30 positions were specific to HLW.

Ecology stated that project success is dependent on when staff are brought in and how quickly they can get up to speed. ORP agreed that is the case anytime new staff are brought on a project. Ecology stated that it remains to be seen how quickly the project recovery can take place. ORP stated that the best possible scenario would be DFLAW releasing existing, trained engineers to support other portions of the WTP Project.

## **8.0 LOW-ACTIVITY WASTE FACILITY**

ORP stated that system turnover to startup was going well, with some of the systems being transferred to commissioning. A key accomplishment in October was the handoff of the Annex Building, which houses the administrative and control room for all of DFLAW, to commissioning. A media event is planned for the later part of the month, when the commissioning and control room teams will occupy the facility.

In addition, ORP stated a number of commercial grade dedication documents were completed for the offgas systems, and a number of procurements were received. Melter No. 1 power supply was received and is being installed. The power supply for melter No. 2 should be received next week.

ORP stated a number of pre-turnover walkdowns were completed for the ventilation, breathing service air, and container pour-handling systems. The C5 ventilation system (part one) and melter handling system (part one) have been turned over from construction to startup.

Next month, ORP plans several key procurements, including for the gas analyzers and power supply. Several other systems are planned for turnover to startup, including the container receipt handling, process and mechanical handling closed circuit television, melter support handling, and radioactive solid waste-handling systems.

ORP reported that BNI is completing only 60 to 70 percent of work scheduled each month, which is a known issue. BNI has taken action to resolve the issue. Ecology asked if this underperformance of work is a result of overoptimistic expectations or some other problems. ORP stated that the underperformance is likely a result of both. Ecology asked if ORP felt the trend could be turned around, and ORP stated the contractor would like to show improvement over the next couple of months. Ecology asked for clarification on the contractor's schedule expectations, ORP explained that the contractor is falling behind early completion of the contract, but is not falling behind the Consent Decree deadlines.

Oregon asked if ORP felt there were any “show stoppers.” ORP explained the procurement system on the startup and commissioning side may be a show stopper, and that BNI has been putting a lot of effort into addressing the issue for more than a year. For example, when equipment fails, it takes the contractor a long time to correct. As they go through testing, they will find many things that will fail and will need to be replaced.

ORP explained that BNI’s business model is set up for engineering, procurement, and construction, not startup and commissioning, which requires a much higher amount of flexibility. Ecology asked if ORP had identified a point in time in which serious intervention will be necessary. ORP explained there is not much intervention that can be done, and that its own external review of BNI’s performance agrees with BNI’s conclusions, but that the contractor is actively seeking a solution.

ORP described BNI’s corporate performance metric, explaining that performance is measured against a rolling schedule that cost account managers update every 1 to 1½ months. Performance, therefore, is measured against the 1-month plan. ORP continued that BNI is aggressively pursuing opportunities to improve their cost and schedule performance.

## **9.0 BALANCE OF FACILITIES**

ORP stated that the Balance of Facilities (BOF) facilities are working through the startup phase, but that no major accomplishments were completed in October.

ORP recapped highlights of BOF accomplishments for 2018. The electrical distribution system, water treatment facility, and nonradioactive liquid drains facility are all operational and under the control of the Operations organization. The 1-million-gallon cooling tower is not yet operational, pending only the finalization of water chemistry and passivation of piping, after which time the tower will be turned over to operations.

ORP reported significant compressor testing activity in the chiller/compressor plant. All four compressors have been tested. Integrated testing has yet to be performed, but initial tests indicate the system can maintain pressure. The system’s interdependencies with other systems/facilities make the chiller/compressor plant testing probably the most complicated startup testing that has been done to date on the project.

ORP stated that significant efforts are being placed on getting the steam plant ready for startup. Planned accomplishments include steam plant boiler testing in February. The steam plant’s piping is being hydrolased to reduce corrosion and eliminate the need for additional flushing.

ORP recapped Effluent Management Facility (EMF) accomplishments for 2018, including the completion of structural steel installations to support the roofs of the C3 and C5 areas. The low-point drain tank has been placed, as has the structural steel surrounding the drain and the associated stairwell. ORP suggested that Ecology join in a walkdown of EMF.

ORP stated that piping in the EMF is being installed somewhat inefficiently compared to other BNI projects, in part due to the confined spaces in the facility. Other challenges include untimely receipt of bulk materials from vendors. ORP reiterated that a walkdown would help illustrate the current status and issues at EMF.

ORP stated that the evaporator feed vessel had been received, and that the project plans to receive large lag-storage vessels during the next 1-2 months via barge shipment on the Columbia

River. These vessels will not be installed in their respective cells until after piping and valve installation is complete. Ecology asked for ORP's thoughts on how to prevent vessel degradation before the vessels are installed. ORP explained that the tanks are designed for outdoor use, that they will be installed in rooms without roofs, and they will not show any appreciable degradation. Ecology asked ORP to estimate the time between receipt and installation of the tanks. ORP stated that BNI is targeting June, but that BNI is taking every opportunity to accelerate the project schedule when it is safe to do so.

Oregon asked if ORP is worried about a potentially jeopardized timeline. ORP stated that construction, startup, and completion of the EMF is a key element of the WTP Project's critical path, and receiving materials piecemeal is unquestionably an issue, but that BNI is being as proactive as possible to accelerate schedule, including using bulk delivery.

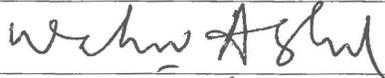
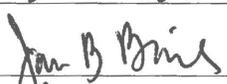
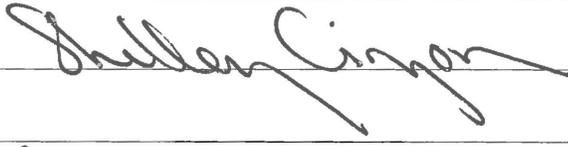
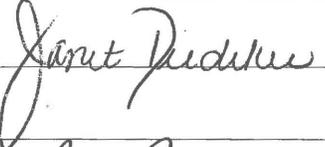
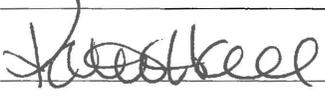
## **10.0 ANALYTICAL LABORATORY**

ORP stated that 34 of 35 Analytical Laboratory (LAB) systems have been turned over to the Startup organization. ORP noted that although the LAB systems have been indoors, the systems have been sitting for quite some time. The project is focusing on ventilation system testing. The project completed the general handover of the facility to operations, which allows some analytical equipment to be moved in. Methods development and testing will occur concurrently at the LAB and at Columbia Basin College.

Ecology asked about the methods validation schedule, and ORP stated it is ahead of schedule, and that no schedule challenges are anticipated. ORP continued that the effort is not typical. The problem is more of a sizing issue than developing new methods, and ensuring processes and procedures are reproducible and certifiable.

Oregon stated that only a portion of the LAB will be brought online. ORP stated that for DFLAW, only the radiological laboratory portion of the LAB is impacted, not the hot cells. ORP stated that the hot cells are nearly complete, with the exception of the analytical equipment, the shield windows, and the control arms. The shield windows and control arms have already been procured. ORP continued that an inner shield will be used to seal the hot cells during DFLAW operations because the hot cells are the primary intake point for the C5 ventilation system.

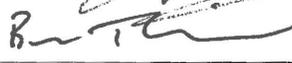
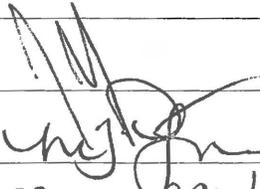
January 3, 2019  
Office of River Protection  
Tri Party Agreement Consent Decree Meeting

	PRINT NAME	SIGN NAME	ORG
②	Abdul, Wahed		ORP
	Alzheimer, Jim		ECY
	Barnes, Mike		ECY
②	Beehler, Steve		ORP
	Bovier, Jan		ORP
1 & 2	Brasher, Stephanie		MSA
	Brown, Dennis		ORP
	Burnett, Kaylin		ORP
	Cameron, Craig		EPA
	Carlson, Annette		ECY
1 & 2	Cimon, Shelley		OR State
	Decker, Jay		ECY
	Diediker, Janet		ORP
	Einan, Dave		EPA
	Evans, Rana		ORP
	Fletcher, Tom		ORP
	Gao, Tracy		ECY
	Grindstaff, Joni		ORP
	Hall, Katie		ECY
	Harkins, Brian		ORP
	Hastings, Rob		ORP
	Hernandez, Paul		ORP
	Johnson, Jeremy		ORP

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PRINT NAME	SIGN NAME	ORG
Jones, Mandy		ECY
Joyner, Jessica		WRPS
Keith, Colleen		ORP
Kemp, Christopher	<i>CKemp</i>	ORP
Knox, Kathy		Court Reporter
Lowe, Steven	<i>SLowe</i>	ECY
Lucatero, Yoana		ECY
Lyon, Jeffery	<i>JLyon</i>	ECY
Martell, John		DOH
Mathey, Jared		ECY
182 McDonald, Dan	<i>DMcDonald</i>	ECY
Menard, Nina		ECY
Mulkey, Charles		WRPS
Parker, Dan		WRPS
Pfaff, Stephen H	<i>SPfaff</i>	ORP
Pomiak, Andrew		ECY
Price, John		ECY
Rambo, Jeffrey	<i>JRambo</i>	ORP
Richardson, John		ECY
Rochette, Beth		ECY
Schleif, Stephanie		ECY
Schmidt, John		DOH
Serafin, Shane		ORP

January 3, 2019  
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PRINT NAME	SIGN NAME	ORG
Skorska, Maria		ECY
Smith, Alex		ECY
Smith, Sahid		ORP
Stewart, Dustin		ORP
1 & 2 Trimberger, Bryan		ORP
1 & 2 Turner, Michael		MSA
Turner, Vanessa		ORP
Utley, Randell		DOH
Valle, Richard		ORP
Van Mason, Eric		WRPS
Walmsley, Mign		ECY
Wang, Oliver S		ECY
Whalen, Cheryl		ECY
Whitelely, Craig		ORP
Wold, Kristi		ECY
Yasek, Donna		BNI
② Young, Jason		ORP
Lopez, Maria		WRPS
Mona Nickerson		<del>WRPS</del> <i>WRPS</i>