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Office of River Protection  
Project Managers' Meeting Minutes

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2440 Stevens Center  
Richland, Washington

March 14, 2018



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**CONCURRENCE SIGNATURES**

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

DID NOT ATTEND Date: \_\_\_\_\_  
Wahed Abdul, DOE-ORP

DID NOT ATTEND Date: \_\_\_\_\_  
Jan Bovier, DOE-ORP

K. Gr. W. B. Date: 4/11/18  
Kaylin Burnett, DOE-ORP

Did not attend JG Date: 4/12/18  
Joni Grindstaff, DOE-ORP

Paul Hernandez Date: 4/10/18  
Paul Hernandez, DOE-ORP

N/A Date: \_\_\_\_\_  
Jeremy Johnson, DOE-ORP

C.S. 158 Date: 4-11-2018  
Chris Kemp, DOE-ORP

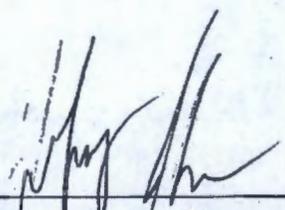
Steve Pfaff Date: 4/19/2018  
Steve Pfaff, DOE-ORP

Jeff Rambo Date: 04/10/2018  
Jeff Rambo, DOE-ORP

Dustin Stewart Date: 4/14/18  
Dustin Stewart, DOE-ORP

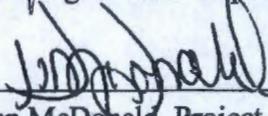
Richard Valle Date: 04/10/2018  
Richard Valle, DOE-ORP

Jason Young Date: 4/12/18  
Jason Young, DOE-ORP



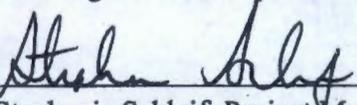
\_\_\_\_\_  
Jeff Lyon, Project Manager,  
Washington State Department of Ecology

Date: 4/24/18



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

Date: 4-25-18



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

Date: 4/24/18

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

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

#### **Upcoming Meetings**

The next project managers meeting (PMM) is scheduled for Thursday, April 19, 2018, from 9:00 a.m. to 11:30 a.m. at the ORP office in Richland, Washington. The Inter-Agency Management Integration Team (IAMIT) meeting will precede the PMM, starting at 8:30 a.m. The ORP quarterly milestone review is scheduled for May 17, 2018, from 8:45 a.m. to 11:00 a.m. at the Ecology office in Richland, Washington. The IAMIT meeting will precede the ORP quarterly review, starting at 8:00 a.m.

#### **Recent Items Entered/To Be Entered into the Administrative Record (AR)**

U.S. Department of Energy (DOE), Office of River Protection (ORP) provided the monthly TPA report for March 2018. ORP stated that due abnormally extensive review from legal and DOE-Headquarters, the February 2018 Consent Decree (CD) monthly summary was issued March 9, 2018, and the March CD monthly report has not been issued. ORP stated that the goal is to have the March 2018 CD monthly summary report entered into the AR by the end of March 2018. ORP noted that the discussions today will refer to the February 2018 CD report, but the project managers for the individual facilities will provide more current updates.

Ecology acknowledged ORP's comments about why the CD monthly summary report is being issued later than required. Ecology added that in terms of its perspective, the delay with issuing the CD monthly summary report was not acceptable, and referred to Section C-2 in the amended CD under monthly reports as follows: "DOE shall, on a monthly basis, submit to Ecology a written summary report, e.g., approximately ten-to-15 pages in length, documenting WTP construction and startup activities and tank retrieval activities covered by this decree. The monthly report shall address cost and schedule performance, earned value management system graphs for each major activity, significant accomplishments during the prior month, and significant planned activities for the next month."

Ecology stated that the expectation is the March 2018 data will be provided when the parties meet again in April 2018.

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

ORP stated that there were no changes in status to the milestones.

**Office of River Protection/Washington State Department of Ecology Tri-Party Agreement and Consent Decree Agreements, Issues and Action items – March 2018**

The action items were discussed and updated as follows (see agreements, issues and action items table):

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

ORP stated that there was no change in the status of this action. This action remains on hold.

**Action No. 2 (TF-16-11-05)**

ORP stated that the results of the four tanks that were visually inspected at ETF are in WRPS's document control, and the next step will be signature concurrence. ORP indicated that a status will be provided next month, with the goal of providing the document to Ecology at that time. This action remains open.

**Action No. 3 (TF-17-04-01)**

ORP stated that a schedule has not been developed yet for the removal of the 242-A Evaporator diesel generator. Ecology inquired about the length of time for developing the schedule. ORP responded that the schedule is not a high priority action compared to other actions. This action remains open.

**Action No. 4 (TF-17-09-01)**

ORP stated that there were no updates to provide on this action regarding discussion of the appropriate venue for requests related to DSTs. This action remains open.

**Action No. 5 (TF-18-11-01)**

ORP reported that a technical briefing on LAWPS was provided to Ecology on February 26, 2018. ORP noted that the briefing included information regarding tank-side cesium removal (TSCR) and tank farm upgrades. Ecology agreed that this action could be closed. This action was closed.

**Action No. 6 (TF-18-11-02)**

ORP stated that three or four meetings have been held with Ecology regarding SST RPP-9937 and that meetings will continue to be held. ORP suggested closing this action. Ecology agreed that this action could be closed. This action is closed.

**Action No. 7 (TF-18-11-03)**

ORP stated that there were no updates to provide today regarding the HNF-3484 DST pumping guide. This action remains open.

### **Action No. 8 (TF-18-02-01)**

ORP stated that there are internal discussions regarding the discrepancy between HNF-EP-0182 and RPP-RPT-57964, and the intent is to provide clarification to Ecology. This action remains open.

### **2.0 SYSTEM PLAN**

ORP stated that there were no changes to report on System Plan 8, which was submitted in October of 2017, and that negotiations continue with Ecology regarding M-062-45. ORP noted that its proposed starting position was submitted to Ecology last week, and more data exchanges will follow. Ecology asked if ORP received a request for the backup data on ORP's graph and if a response was provided. ORP stated that the request was received, and a response has not been provided. ORP added that the data Ecology requested is being reformatted and should be sent to Ecology within a week. Ecology noted that the request included a side-by-side comparison of ORP and Ecology cost profiles.

### **3.0 ACQUISITION OF NEW FACILITIES**

ORP stated that there was no change in status since last month, and the status of the milestones continues to be in abeyance.

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

ORP stated that there was no change in status to the milestones that are in abeyance.

### **5.0 DIRECT FEED LOW-ACTIVITY WASTE PROJECTS**

**Significant Past Accomplishments – Low Activity Waste Pretreatment System (LAWPS)** - ORP stated that there was no change to the status of LAWPS, and WRPS continues to evaluate a change in the design. ORP noted that originally a proposal on the design change to LAWPS was expected from WRPS on March 6, 2018, but the date has been extended to the end of March 2018.

**Significant Past Accomplishments – Tank-Side Cesium Removal (TSCR)** – ORP stated that there was no change in status from last month. ORP noted that WRPS received three vendor proposals for TSCR this past Monday (3/12/18). ORP stated that the proposals are under evaluation, and the target date to award the TSCR subcontract is the end of June 2018.

Ecology initiated a discussion regarding schedules. Ecology noted that there are project dates and contract dates, and asked if there is a definitive integrated schedule for the project and contract dates for TSCR. ORP responded that an integrated schedule is being developed for TSCR that includes tank farm upgrades as well as when the TSCR unit needs to be delivered onsite, and that date is based on meeting the contract date for the Waste Treatment Plant (WTP) on December 31, 2021. ORP added that it has to have enough waste pretreated to support commissioning of WTP as well as having waste ready for the WTP work.

ORP stated that since the tank farm upgrades proposal was received about a week ago, the new information is being integrated into the schedule, and the schedule will be updated when the

LAWPS schedule is established. ORP added that with regard to the tank farm upgrades and LAWPS, the dates need to be updated in the integrated schedule, and that effort is under way. Ecology acknowledged ORP's comments regarding the schedule, but raised a concern about potential design or date changes resulting from proposal reviews that could impact the ability of the permitting team to permit what is required. Ecology stated that it would be very helpful to the permitting team to be provided an integrated schedule with sufficient detail as soon as possible. Ecology added that depending on a temporary authorization while developing the permit is not an acceptable alternative. ORP acknowledged Ecology's concern, and stated that the permitting plan for TSCR, LAWPS and tank farm upgrades is being developed to align with Ecology's schedule.

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

Significant Past Accomplishments - ORP stated that the 242-A control room air conditioning units have been replaced. The effluent sampling station has been completed, which allows all three samples to be placed in the same location instead of different elevations throughout the facility.

Significant Planned Actions in the Next Six Months - ORP reported that the current schedule for the EC-08 campaign calls for an April 23, 2018 start date, which is a Monday, but the goal is to start on either April 20 or April 13 if all the other tank farm activities fall into place. ORP noted that the preference is to start a campaign just prior to the weekend when there are fewer personnel on site. ORP stated that samples have been taken and are being analyzed for the EC-08 campaign. The EC-09 campaign is scheduled to follow EC-08 in mid-June 2018.

Ecology asked if the monitor replacement on the vessel vent stack was associated with ammonia or radiation monitoring. ORP responded that the monitor replacement was associated with the vapor issue studies for collecting data. ORP stated that the ammonia monitor was replaced, and it has capabilities for identifying information in addition to ammonia.

Ecology noted that the lab results on the dye penetrant leak testing had not been issued, and asked about release of the integrity assessment without the lab results. ORP responded that it would follow up with Ecology's inquiry about whether the dye penetrant leak testing results were issued when the integrity assessment was released. Ecology inquired about the relevance of the dye penetrant leak testing to an integrity assessment. ORP explained that the dye penetrant that is run through the process is highly visible, and it is used to measure any migration on the clean side of the system. ORP stated that the testing results have been well under the value that would indicate a leak since the dye testing has been done.

***ORP Action:*** *ORP to follow up on Ecology's inquiry about whether the results from the dye penetrant leak testing were included in the integrity assessment.*

**Note:** See discussion under the CD section regarding the spare reboiler requirement status.

## **7.0 LIQUID EFFLUENT RETENTION FACILITY/200 AREA EFFLUENT TREATMENT FACILITY (LERF/ETF)**

ORP noted that the table for the LERF basin volumes has been revised to show the volumes in each basin and not the breakout for each of the low volume amounts. Ecology requested that

ORP change the table back to the original format that showed where all of the waste streams were coming from. ORP agreed with Ecology's request to change the table to its original format depicting all of the waste streams. ORP noted that waste was received into Basin 42 only for the month of February 2018.

ORP stated that ETF was restarted in January 2018, but it was shut down again. ORP noted that as of today, the amount of waste processed has not increased since the FY18 total of 600,000 gallons was processed.

Significant Planned Actions in the Next Six Months – ORP stated that the goal is to restart the facility and continue processing waste from Basin 43. ORP noted that the intent is to process two million gallons out of Basin 43 before pausing to do a plant cleanout, and then continue with processing two million gallons out of Basin 44.

ORP referred to the inter-basin transfer that was halted in late 2017, due to an increase in the leachate levels, and reported that the inter-basin transfer was restarted this week (3/12/18), with no indication of an increased leachate rate. ORP noted that the inter-basin transfer is tied to the issue of the increased leachate level at Basin 43. ORP stated that the leachate level continued to decrease in February and into March as well, and currently it sits at about 150 gallons per acre per day. ORP added that the threshold limit called out in the permit is 21000 gallons per acre per day.

ORP noted that the status of the Independent Qualified Registered Professional Engineer (IQRPE) integrity assessment for ETF has been included in the LERF/ETF section, in addition to the IQRPE section in the tank system update. ORP stated that the remaining activity for the integrity assessment is the camera visual inspections, and the work planning is under way for that activity to be done this summer.

ORP reported that the Basin 42 cover replacement project continues with design, procurement and fabrication. ORP stated that the permanent pump installed in each LERF basin only allowed for the removal of waste and leaves a two-foot heel. ORP noted that during the Basin 43 cover replacement project, a temporary pumping system was installed, and a temporary pumping system has been installed in Basin 42. The planning for the work package associated with the Basin 42 cover replacement has started, and the subcontractor training for the cover replacement will occur this spring.

Issues – ORP noted that the inter-basin transfer from Basin 42 to Basin 43 restarted this week after being halted in late 2017 because of increased leachate levels. ORP stated that some operability evaluations were done and discussions were held with the vendor before restarting the inter-basin transfer. ORP noted that the leachate level has continued to decrease through February and March. Ecology inquired about the cause of the increased leachate level. ORP responded that the cause has not been identified and is being called an anomaly. The vendor indicated that an increased leachate level was to be expected, and it was not unusual to see a leachate level increase following significant work to a basin or surface impoundment.

ORP stated that the Basin 42 cover replacement will occur with more controls in place to include entering and exiting the basin and ensuring no sharp objects are present. ORP noted that those controls were in place for the Basin 43 cover replacement, but there will be additional

supervisory checks to ensure the crew is working towards the work package and its requirements. Ecology clarified that ORP is taking lessons learned from the Basin 43 cover replacement project and the increased leachate levels into account while preparing for the Basin 42 cover replacement. ORP concurred with Ecology's statement. Ecology asked if the Basin 42 cover replacement is still planned for May 2018. ORP responded that the schedule is still May, with the working leading up to the cover replacement currently under way.

## **8.0 TANK SYSTEM UPDATE**

Double-Shell Tank (DST) Integrity – Significant Past Accomplishments: ORP noted that the contract was awarded for corrosion testing associated with DFLAW. Ecology referred to the new specification development to accommodate DFLAW returns, and asked if they are returns anticipated as part of the normal processing or emergency returns or something else. ORP responded that it would be returns as part of the normal process.

DST Integrity - Significant Planned Actions in the Next Six Months: ORP noted that the enhanced annulus visual inspection was performed on AY-101, and the tanks scheduled for inspection in FY 2018 are listed in today's monthly summary report. ORP stated that the ultrasonic (UT) inspection on AY-101 is nearing completion, and the decision was made about two weeks ago to swap out the UT inspection for AZ-101 with AZ-102. ORP added that AP-107 will be the third tank to undergo UT inspection, and it should be done at the end of this summer or early fall. Ecology clarified that the UT inspection will not be done on AZ-101. ORP concurred with Ecology's statement.

Secondary Liners – Significant Planned Actions in the Next Six Months: ORP stated that there were no updates to secondary liners, and the plan of action remains the same. Ecology referred to the schedule and inquired about testing a small crawler to access the vents. ORP responded that the crawler will access the air slots within the refractory in order to look up at the primary tank bottom. ORP noted that it is not specifically for the secondary liners, although the technology and the tools may be slightly modified to obtain inspection information on the secondary liners. ORP added that the crawler is not currently in a definitive schedule, although the plan is to test the crawlers that go in the air slots of the refractory when the crew performs UT on AP-107 in late summer 2018.

Single-Shell Tanks (SST) Integrity – Significant Planned Actions in the Next Six Months: ORP noted that all of the video inspections listed in today's monthly summary report have been completed, and the crew will move to the DST enhanced annulus video inspections, using the same set of resources.

Independent Qualified Registered Professional Engineer Activities – Ecology noted that the ETF integrity assessment is now being updated under the LERF/ETF section. ORP stated that the 219-S and the SST integrity assessments are progressing on schedule.

## **9.0 SINGLE-SHELL TANK INTEGRITY ASSURANCE**

ORP noted that the SST integrity assessment is in progress and on schedule.

## **10.0 IN-TANK CHARACTERIZATION SUMMARY**

Significant Planned Actions in the Next Six Months – ORP noted that sampling is planned this month on AW-106 and AW-105 in support of the upcoming 242-A Evaporator campaigns.

Ecology initiated a discussion regarding tanks that contain salt cake. Ecology referred to the report for solid phase characterization of AP-106, and noted that a couple of the tanks that are planned for early feed to DFLAW and TSCR contain a small amount of salt cake. ORP responded that AP-106 was chosen as the feed tank for LAW because it has a low amount of sludge or salt cake, and the condition of the tank will require less work than a tank that has a significant amount of sludge or salt cake. ORP added that there is material in AP-106 that will be transferred to AP-107 and be processed.

Ecology stated that there are a couple of tanks that contain salt cake, and asked if there is a plan to try to dissolve the salt cake before starting TSCR. ORP responded that conditioning will have to be done to AP-106 for it to be the feed tank. ORP added that conditioning also needs to be done to the prep tank chosen to transfer into AP-107 in order to feed TSCR or LAWPS. ORP indicated that the prep tank to feed AP-107 will be either AP-105 or AP-108. ORP stated that AP-107 has been conditioned or flushed, and it is full of feed and ready to feed TSCR. ORP added that AP-107 has already been sampled, and that all of the prep work to get AP-107 ready to feed was done before the tank farm upgrade activities start. Ecology asked if the plan is for AP-107 to sit for three years. ORP responded that was the plan, and the process is under way to finalize the test results for qualification of the feed. ORP noted that under the TSCR scenario, it will be processing at five gallons per minute, which amounts to a little over two inches per day. ORP added that current estimates are that with TSCR running at five gallons per minute, feed will be available until the 2024-2025 time frame.

Ecology clarified that it was asking about what will happen to the salt cake. ORP responded that it did not have a current response to Ecology's question about the salt cake.

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

ORP stated that there were no changes to report this month. Ecology indicated that it had no questions.

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

ORP stated that there were no changes in the report from last month.

## **13.0 TANK OPERATIONS CONTRACT OVERVIEW**

ORP noted that the favorable schedule variance for base operations (5.01) was primarily due to the DST integrity improvement plan, and the robotic crawler was received sooner than expected. ORP stated that the main driver for the unfavorable cost variance was due to the inefficiencies at ETF associated with shutting down operations and some equipment failures.

ORP noted there was an unfavorable schedule variance for waste feed delivery/treatment (5.03), due to delays with projects associated with DFLAW. ORP stated that some of the positive cost variance was due to delays associated with DFLAW and money not being spent. ORP added that there were some efficiencies associated with completing work in three projects. Ecology inquired about the current funding status and whether ORP is receiving less money than requested for the FY18 budget. ORP referred to the statement in the CD report, which has been approved by the attorneys, which states that the fiscal year 2018 funding was maintained at the fiscal year 2017 level. Ecology stated that a briefing with ORP has been requested, and that according to the TPA, a budget briefing is required within 30 days of the President's budget being delivered to Congress. ORP stated that a briefing to Ecology is being planned when the budget is received. Ecology responded that ORP doesn't have a budget, but the budget has been sent from the President to Congress, which triggers the 30 days to provide a briefing.

ORP noted that there was an unfavorable schedule variance for Treat Waste (5.05), primarily due to the change in direction associated with the LAWPS design. The small cost variance is below the reporting threshold.

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

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

ORP stated that the Consent Decree (CD) monthly summary report that is provided for today's discussion is the approved February 2018 report, and it was issued on March 9, 2018. The February CD report covers the status from January 2018 and the earned value management system (EVMS) data from December 2017. ORP noted that today's discussion will be briefed to the February report, and current updates will also be provided. ORP added that the final CD report for March 2018 is expected to be issued by the end of this month.

Ecology provided its perspective regarding the delay in issuing the CD monthly summary report, and referred to Section C-2 in the amended CD, titled monthly reports, as follows: "DOE shall, on a monthly basis, submit to Ecology a written summary report, e.g., approximately ten to 15 pages in length, documenting WTP construction and startup activities and tank retrieval activities covered by this decree. The monthly report shall address cost and schedule performance, earned value management system graphs for each major activity, significant accomplishments during the prior month, and significant planned activities for the next month."

Ecology stated that its expectation is that the required information for the prior months will be available during the project manager meetings. Ecology pointed out that the information provided today for January 2018 is not acceptable, and the expectation is that next month during April's meeting, the reports will be available for the preceding month.

ORP stated that the obligation is to provide the monthly summary report at the end of the month, and the delay with issuing the report was due to a change in status for eight of the 17 milestones to under analysis. ORP added that there was a discussion between ORP and Ecology senior management during which Ecology management was advised about the change in status to the milestones. ORP noted that the EVMS data is not available for a period of two months, which has always been the case for the monthly summary reports. ORP acknowledged Ecology's position about having the previous month's information available during the meetings regarding past accomplishments, future planned activities, and issues, but that it does not mean ORP agrees with providing the EVMS data for the previous month.

Ecology stated that the milestone status of under analysis is a new term, and asked ORP for more details. ORP responded that reading the footnote on page 4 of today's CD report would be the best way to answer Ecology's question and start a discussion about the new term. ORP added that one perspective is that the determination of the term under analysis was made through the legal team, DOE-Headquarters, and the Deputy Assistant Secretary for EM. ORP noted that the new terminology of the milestones being under analysis was first introduced in the February 2018 monthly CD report, and it will be in the next quarterly CD report.

ORP read the footnote from page 4 of the CD report as follows: As described in significant planned activities in the next three months in the Pretreatment and HLW facility sections, DOE

is considering an option to continue preservation and maintenance of the Pretreatment and HLW facilities for a period of three to five years while DOE is focusing its efforts on bringing Direct-Feed Low Activity Waste into operation. Accordingly, certain milestones in this table are marked as under analysis. As discussed in the Pretreatment and HLW facilities' sections, DOE has asked the U.S. Army Corps of Engineers to perform an initial parametric analysis of certain options and funding scenarios to evaluate the likelihood of achieving certain Pretreatment- and HLW-related milestones. DOE is considering Milestones A-1 and A-17 as being under analysis because the definition of Section IV-A-2 states hot start of Waste Treatment Plant means the initiation of simultaneous operation of the Pretreatment, High Level Waste Facility and Low Activity Waste facility, including, as needed, the operations of the Analytical Laboratory and Balance of Facilities, treating Hanford tank wastes and producing a waste glass product. Hence, if one of the five facilities is under analysis, DOE is conservatively considering the WTP milestone as under analysis.

ORP stated that the U.S. Army Corps of Engineers is performing an evaluation regarding the current status of the WTP, what the focuses are, what maintenance and preservation activities need to occur in the near term, the time frame that would be beneficial to continue those activities, and when the engineering, procurement and construction activities would need to be restarted to achieve the milestones. ORP added that during the U.S. Army Corps of Engineers' analysis, the milestones are being declared as under analysis.

Ecology stated that when the analysis is done, the assumption is that would be a decision point. ORP responded that it would be a decision point, and beyond that would be a decision about whether the milestones would be back on schedule, at risk or to be missed, or there would be a change to the plan. ORP added that Ecology senior management was briefed by ORP senior management last Friday (3/9/18) on the new milestone terminology of under analysis, so it is a fairly new status.

Oregon Department of Energy (ODOE) asked if the change in milestone status is part of the regulatory reform under way at DOE-Environmental Management (EM) regarding general counsel decisions being brought down to the EM-1 level. ORP responded that it had not heard of the term regulatory reform. Ecology stated that the regulatory reform initiative is a larger order initiative for all of the sites to conduct an overview of the regulatory constraints on doing business in general. Ecology indicated that the regulatory reform is mostly likely independent of the change in milestone status because it is more of an operations-driven decision process, and regulatory reform is more programmatic in nature.

The reports, agreements, issues, and actions were discussed and updated as follows:

**Action No. 1 (WTP-15-01-01)**

ORP noted that this action is tied to technical issue T5, which has been delayed, and an evaluation of T5 is currently under way. ORP assembled an independent team at the end of January 2018, and the team has been evaluating T5 and providing periodic status updates. ORP indicated that a time frame for early April 2018 has been targeted for the team to report on the status of T5 and whether it will be resolved at that time. This action remains open.

### Action No. 2 (WTP-17-08-01)

This action is tied to T5 (see action No. 1 WTP-15-01-01). This action remains open.

### Action No. 3 (WTP-17-10-01)

ORP stated that the long-term maintenance plan relates to some of the discussion about the Pretreatment (PT) and High Level Waste (HLW) facilities and those facilities continuing in a maintenance and upkeep type of time period. Ecology asked if the request by ORP to the Army Corps of Engineers to conduct a review could impact the timing of this action item to provide a copy of the maintenance plan. ORP responded that the purpose of the Army Corps of Engineers' involvement is to inform the process, to review the existing scope and the scopes that will exist, tie in the time frame between now and when the Waste Treatment Plant will need to be operational, and then determine the best approaches going forward. This action remains open.

## **2.0 SPARE REBOILER REQUIREMENT STATUS**

ORP reported that the spare reboiler is being fabricated at ABW Technologies, and the reboiler shell has been completed. The nozzles have been welded, and the tube sheets and the tubes are being installed. ORP stated that delivery of the reboiler is anticipated in late spring, early summer 2018, well ahead of the milestone due date of December 2018.

## **3.0 SINGLE-SHELL TANK RETRIEVAL**

Significant Accomplishments During the Prior Three Months (Nov-Dec 2017/Jan 2018) - ORP stated that the crew continues to remove obsolete equipment out of AX-102 and AX-104. ORP noted that the redesign for the A Farm exhauster system and pads was completed and that construction has been initiated. ORP stated that the equipment removal design was completed for A-101, A-102, A-103 and A-106, and noted that tanks A-104 and A-105 are on hold pending resolution of issues with tank integrity and the plan for retrieving those two tanks. Ecology noted that the integrity of A-104 and A-105 was not mentioned in today's monthly summary, and requested a further update. ORP responded that the equipment removal design has been completed for the four tanks listed but not for A-104 and A-105, which were not included in the bullet in today's monthly summary, and that was the reason it was pointed out today. ORP stated that due to the integrity issues with those two tanks, video inspections have been done and methods to retrieve those two tanks are being evaluated, including the testing of new end effectors.

Ecology referred to the last bullet, which talks about transuranic (TRU) waste, and stated that a request for a document had been sent via email to ORP. Ecology stated that the document requested is cited in a report that indicates ORP has confidence that there are TRU tanks. Ecology noted that the bullet in today's monthly summary mentions engaging Ecology's participation in the discussions regarding TRU waste, and that Ecology would like to be informed before having those discussions. ORP asked Ecology to forward its document request, and Ecology agreed to resend the request.

Significant Planned Activities in the Next Three Months (Feb-Mar-Apr) - ORP stated that removal of obsolete equipment from AX-102 and AX-104 will continue, and construction on the A Farm exhauster pad has started. ORP stated that the video of the waste volume measurement

in C-105 was completed. ORP noted that the calculation for the residual waste is about 75 percent complete, and the report expected to be released next month.

Issues – ORP stated that the issue remains regarding inefficiencies with the workers on self-contained breathing apparatus (SCBA), and there were a couple of stop works related to skin irritations and using SCBA. The issue with debris in a mask was resolved when it was identified as part of the webbing that holds the mask to the face.

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

ORP stated that there was no change in status to report.

#### **5.0 SINGLE-SHELL TANK RETRIEVAL MONTHLY FISCAL YEAR EARNED VALUE MANAGEMENT SYSTEM (EVMS) DATA**

ORP noted that the unfavorable schedule variance for December 2017 had caused some confusion, since work was completed ahead of schedule. ORP explained that with the work already completed, the EVMS system sees no charges and no progress against the scheduled work and it generates an unfavorable schedule variance. ORP stated that at the end of the reporting period when the work should be done, the unfavorable schedule variance will be corrected.

ORP stated that one of the drivers for the unfavorable cost variance was due to extra costs associated with excavation being done by hand and the workers being on SCBA. Ecology referred to the unknown ground interference as the reason for hand excavation, and asked if it is assumed the radar scan has not captured everything underground. ORP responded that radar does not always capture everything, although it oftentimes does show something and hand excavation is done. ORP noted that the as-builts for the underground materials do not always indicate what the material is, and recently a lead brick and highly contaminated pieces of steel were found. ORP stated that the as-built identified that items were in the area, but it wasn't known what they were. ORP added that some of the conduit or small diameter pipes don't show up too well on the scans, especially if it's a fairly busy area.

Ecology asked if the contaminated equipment was able to be retrieved disposed. ORP responded that the work around the contaminated steel was stopped to redo the work package and the necessary controls were put in place to address the high contamination. ORP stated that work was also stopped in the area of the lead brick and roped off while the work package was redone to address the lead. ORP added that the contaminated steel and lead brick were removed.

Ecology stated that during a site tour six weeks ago, about 25 percent of the trench was excavated to the AX Farm by the A-205 Building. Ecology inquired about the current status of the trench excavation. ORP responded that the excavation is complete for the pipelines, and additional excavation is being done for the cathodic protection. ORP stated that one caustic line has been placed in the trench along with some other lines. Ecology stated that during the tour, there were pipes and conduit that that went across the trench, and asked how the pipe would be installed. ORP responded that the electrical conduit is being placed on the west side of the road, and this week the trench running to the fence line is empty except for one caustic line. ORP added that generally the water lines and caustic lines are placed below electrical lines so if there's a leak, it won't go through the conduit.

Ecology inquired about the status of the expansion barrier for SX Farm, including ORP's evaluation of additional costs associated with the north and south barriers due to labor issues and the use of SCBA. ORP responded that it would follow up with Ecology's inquiries about construction of the SX expansion barrier. Ecology noted that the design documents refer to the barriers as north, south and expansion, and requested that ORP include the designation of north, south and expansion in lieu of barriers 1, 2 and 3 in the monthly summary reports.

***ORP Action: ORP to follow up with Ecology's inquiry regarding the construction of the SX Farm expansion barrier. ORP will designate the barriers in the monthly summary report as north, south and expansion in lieu of Nos. 1, 2, 3 and 4.***

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

ORP stated that the focus continues to be on the DFLAW aspects of the WTP, with procurement and construction numbers starting to change over the next coming year. ORP stated that the Effluent Management Facility (EMF) will be bringing in the majority of its procurements this next year and making good progress with construction. ORP noted that EMF is the main driver in the overall DFLAW control account, which is reflected in DFLAW startup and commissioning at 0 percent. ORP added that an aggressive startup and commissioning approach is being taken with the Balance of Facilities (BOF) and the Analytical Laboratory (LAB), but those facilities are in other control accounts. ORP stated that about 75 percent of the BOF systems are with the startup organization to initiate startup and testing, and about 30 percent of the LAB systems are with the startup and testing organization.

Significant Planned Activities in the Next Three Months (Feb-Mar-Apr) – ORP stated that the project performance review (PPR) that was conducted in the September 2017 time frame resulted in action items that have been reported to Ecology on a regular basis, and that most of the well-defined actions have been closed out.

Earned Value Management System (EVMS) – ORP referred to the December 2017 EVMS data, noting there was a net unfavorable schedule variance of \$8.6 million, and provided a brief overview of the key drivers. ORP stated that in general, there has been a deferment of procurements for the EMF as Bechtel was balancing its fiscal year funding distribution. ORP pointed out a specific area of procurement deferment was for the transfer lines between LAW and EMF, and then from EMF toward the eventual intersect with the incoming feed from tank farms. ORP stated that the deferment causes a slight misalignment from a schedule perspective on a day-to-day basis and what the EVMS cost and schedule performance index numbers reflect. ORP stated that the procurement deferment and then rearranging the construction sequence for the EMF and associated transfer lines resulted in the fairly significant negative schedule variance.

ORP noted that the statement about delays with procurements has been in the CD monthly report for some time and started in the early to mid-2016 time frame, and that there are no current delays.

ORP reported that there was a favorable cost variance, primarily due to fewer personnel to accomplish needed support services, although the support services may need to be extended, which would reduce the favorable cost variance.

ORP noted that an area of unfavorable performance is associated with working through punch list item completion in BOF during the startup effort, and there have been similar challenges in LAW, which has extended the duration for turnover activities. Ecology asked if the punch list items need to be managed differently than initially planned. ORP responded that a progressively more refined approach is being taken towards the punch list management, and Bechtel is starting to streamline the process for turnovers to better refine how the punch list items should be categorized. ORP noted that a follow-on activity to the PPR was to ensure all the punch list items were properly coded, with agreement from construction and startup, as an A item, B item or C item. ORP stated that an A item needs to be worked off the punch list and completed prior to transition of a particular system from construction to the startup organization, which facilitates a better turnover process and requires less punch list work. ORP noted that whenever a system undergoes startup testing, items will be identified, particularly with older equipment.

Ecology inquired about the ratio in terms of A, B and C items. ORP responded that it did not have a ratio, and the category of item is very system-dependent. ORP added that there is a high percentage of B items and a small number of C items, and as the process gets closer to the three-week walk-down or even the eight-week walk-down, there is a very narrow number of A items. ORP stated that the focus is on resolving the B items. ORP noted that although the startup organization can accept a system with B items, it would not be advantageous to accept a system that needs a lot of work before testing can be started.

Project Performance Review (PPR) – ORP highlighted some of actions from the PPR that included completing the design freeze for LAW, BOF and LAB (LBL). ORP stated that there was an acceleration of the test matrix development for BOF, which was very helpful in terms of preparing procedures up front and to be more effective when startup testing is initiated. ORP stated that Bechtel continues to evaluate the most efficient and appropriate skill mix. ORP cited the example of the evaluating the project controls division and the amount of change needed for the month-to-month basis and the required personnel. ORP stated that the intent is not necessarily to shrink the organization, but to ensure the right skill mix and to gear towards startup and commissioning of the plant.

## **7.0 PRETREATMENT FACILITY**

ORP stated that the focus for PT continues to be with technical issue resolution and the progression through the remaining technical issues, in addition to evaluations with regard to moving forward, the needs for preservation and maintenance, and aligning with the Army Corps of Engineers' review. ORP stated that PT and HLW are in a preservation and maintenance mode, and the EVMS data is being driven by project metrics. ORP stated that the impacts will be analyzed regarding delayed resolution of technical issues, any continuations with both PT and HLW, and the parametric analysis by the Army Corps of Engineers.

Ecology asked whether the technical issue resolution will be part of the Army Corps of Engineers' analysis, or if a separate evaluation will continue regarding moving forward with technical issue resolution. Ecology explained that the question is based on funding constraints and the variety of priorities in terms of technical issue resolution, and asked if there has been any change in the integrated path forward for technical issue resolution. ORP responded that different technical issues need to be resolved in order to allow certain activities to move forward at different time frames. ORP added that there will be a priority with technical issues that impact

design and design decisions that will be initiated when the engineering, procurement and construction process is restarted.

Ecology clarified ORP's comment by stating that it would not be unreasonable to consider, if preservation and maintenance continues with PT and HLW, the potential associated technical issues would have a lower priority until engineering, procurement and construction are restarted. ORP responded that technical issues that support earlier activities would be prioritized first. ORP referred to Ecology's question about any role the Army Corps of Engineers' would have with technical issue resolution, and indicated that its understanding is that the Army Corps is not to weigh in or have any involvement with technical issues or their path forward. ORP stated that the Army Corps is to review the overall project and provide options on how funding will be allocated year to year, the impacts of a three- to five-year preservation and maintenance mode, and the best time to start various activities.

ORP pointed to the second-to-last bullet on page 22 of the CD report that states technical issue resolution is expected for T4 through T8 in the May/June 2018 time frame, adding that the Army Corps is not involved with technical issue resolution.

## **8.0 HIGH-LEVEL WASTE FACILITY**

(See discussion under PT facility).

## **9.0 LOW-ACTIVITY WASTE FACILITY**

Significant Accomplishments During the Prior Three Months (Nov-Dec-Jan) - ORP noted that the freezing of the LAW facility design was completed. ORP stated that the contract was awarded for the programmable protection system software, which had been a challenge for the project critical path and represents a significant accomplishment.

ORP stated that the system walk-downs have been an ongoing and lengthy process, and there has been a transition within the LAW facility systems that are complete, with punch list items well lined out, and getting systems turned over where possible to the startup and testing organization.

ORP reported that a key upcoming activity in the next week will be bringing in 13.8 kV, which is the energization of the medium voltage switch gear for the LAW facility. ORP noted that having medium voltage electricity will reflect good progress with LAW with regard to testing.

Significant Planned Activities in the Next Three Months (Feb-Mar-Apr) - ORP stated it is in the process of reviewing the 85 percent documented safety analysis (DSA) that was submitted by Bechtel.

ORP stated that Bechtel was requested to provide a schedule that is detailed enough to ensure confidence of completion to meet the CD milestones, taking into consideration annual funding and the remaining work scope. ORP held an initial meeting with Bechtel on February 7, 2018, and a schedule was provided that was potentially as far out as November 2022. ORP acknowledged that the November 2022 date is within the CD milestone window, but Bechtel is being encouraged to meet the target date within the contract of January 2022, with incentives for acceleration and cost penalties for delays.

ORP stated that since the February 7 meeting, Bechtel updated the schedule, utilizing additional staff with significant experience, and made revisions to startup and commissioning. ORP stated that another briefing on the revised schedule was provided by Bechtel on March 7, 2018, and the path forward is closer to the January 2022 target. ORP noted that there is still a lot of effort remaining to ensure better clarity of schedule activities and the logic of one step to the next step. ORP added that Bechtel will need to identify efficiencies and improve processes wherever necessary to drive the schedule towards the January 2022 target. ORP noted that the effort towards the revised schedule has been very time consuming over the last couple of months.

Ecology stated that with the effort towards driving the schedule to the left and the January 2022 target date, there is a certain requirement for permitting as part of the process. Ecology pointed out that driving the schedule to the left does not require driving permitting to the left, and there is a certain amount of time needed for permitting to be completed and done correctly. Ecology stated that it is aware of two letters that ORP senior management have written regarding moving schedule dates to the left, but Ecology is not bound by the same direction. ORP responded that it has observed an acknowledgement by Bechtel regarding Ecology's comments on the timing of the schedule and permitting. ORP stated that the Bechtel permitting team has been working closely with the Ecology permitting team in an effort to closely align the construction build-out plan for EMF to when the permits are likely to be received from Ecology, rather than establishing a build-out plan for Ecology to comply with. ORP cited the example of the EMF group 2 permit package where Bechtel has aligned the installation of the equipment to receipt of the permit.

ORP expressed appreciation regarding the efforts between the permitting teams on the group 2 permit package, and noted there has been a strong working relationship as the permitting teams have worked through the group 1, 2 and 3 permit packages. ORP added that there has been a significant amount of effort by the permitting teams over the past two years, and Bechtel is close to getting a laboratory operating permit. ORP noted that a workshop is scheduled with the permitting teams on April 10, 2018, on the construction certification. Ecology expressed kudos and encouragement to ORP regarding a Bechtel request for equitable adjustment on one of its permit submittals, and noted that when ORP recognized the submission did not meet certain standards, it ensured Bechtel was made aware of its determination.

Ecology referred to page 18 of the CD report regarding the greater than estimated repairs on the C5V ventilation system in LAW. *ORP took an action to follow up via email regarding Ecology's inquiry about the repairs to the C5V ventilation system in LAW.*

## **10.0 BALANCE OF FACILITIES**

ORP noted that engineering design is at 92 percent complete, and the focus has been to get to the point of being able to freeze the design. ORP stated that about 75 percent of the systems have been turned over from construction to startup, and those systems are currently in some level of startup testing. ORP noted that startup testing is the point where potential additional risks are identified.

ORP reported that the EMF design is at 77 percent. Bechtel has been focused on accelerating the design, reaching the committed design status 11 months ahead of schedule and continuing to work towards confirmed design status. ORP noted that the next step to confirmed status will

take some time and involves interaction with the vendors and getting the final documentation completed.

ORP stated that the EMF permit package No. 2 was formally submitted to Ecology, and it is currently in the public review period until April 20, 2018. ORP reported that package No. 1 for the permit modification has been approved, and it had an effective date of March 5, 2018. ORP added that packages No. 2 and No. 3 for permit modifications are in informal review.

ORP stated that the main focus at EMF is concrete and rack placement. The second lift walls are being placed for the processing facility, and completion of the second lift walls is anticipated by the early part of April 2018. ORP noted that the wall placement is a key activity for the project critical path work, and currently the concrete placement is about 95 percent complete for the processing facility.

ORP noted that another key area for the EMF is procurements, and all of the procurements were awarded by the end of 2017. The majority of the procurements are anticipated to be received in 2018, with vessels starting to arrive in the April time frame and continuing through the October 2018 time frame. Racks are starting to be received and placed, which will facilitate the installation of the group 1 piping that's in the group 1 equipment package. Ecology inquired about application of the special protective coatings. ORP responded that the special protective coatings are being applied to one cell that is tented off, and the special protective coatings will have to be applied as piecemeal to work around the facility activities without closing down the facility. ORP noted that the critical path will be the work done on the process cell.

## **11.0 ANALYTICAL LABORATORY**

ORP stated that the focus in the LAB is startup testing, and currently ten of 33 systems have been turned over from the construction organization to the startup organization to start testing through the systems. ORP noted that in general, the size of the punch list items for the LAB systems is much smaller than BOF, and Bechtel recently completed the punch list items. ORP stated that as the work occurs within the LAB, the external lab space has been leased at Columbia Basin College (CBC), and during this last week efforts are under way to move equipment and personnel into the lab space. The work that will be done in the lab space at CBC will be methods development testing and procurement of equipment for the LAB.

Ecology asked if there is a schedule of events for the lab activities at CBC. ORP responded that there won't necessarily be a detailed schedule. ORP stated that the lab space is needed to start working with methods to determine how long a certain method will take, how reproducible the results are with a method, how many analyses will be needed in a given time period during operations. ORP added that based on those results, equipment sizing will be determined. Ecology asked if ORP was confident that the full suite of methods needed have been defined. ORP responded that none of the method processes will be new or unusual or something that hasn't been done previously on the Hanford site, and there is full confidence regarding methods development. ORP added that methods development will be a matter of right-sizing the methods that have been used in the past and then determining the size of a particular instrument.

Ecology asked if the requirements criteria will be developed at the lab space at CBC. ORP responded that the criteria are already developed, and it will be a matter of looking at the

process, identifying the appropriate efficiencies within each method, and then right-sizing the methods. ORP noted that the methods won't be right-sized to a DFLAW configuration since all the DFLAW work will be done in the LAB portion and not the hot cell, which are separate processes.

## **ORP/Ecology TPA and CD Agreements, Issues, and Action Items –March 2018**

### **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. Senior management will continue to be briefed if any follow-on actions arise.

### **Issues:**

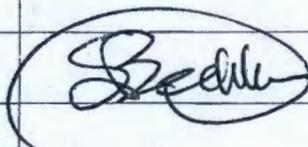
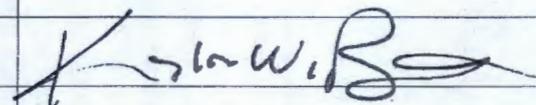
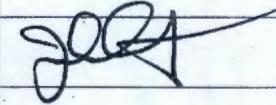
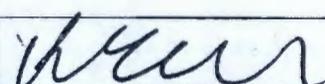
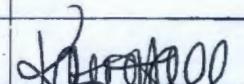
**ORP/Ecology TPA and CD Agreements, Issues, and Action Items –March 2018**

#	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. (01/18/2018)	Dusty Stewart	On Hold
2	TF-16-11-05	11-17-16	ORP to provide Ecology results of the four tanks that were visually inspected at ETF	In clearance process This has been elevated to the Engineering Manager. Will be available at the end of January 2018 (01/18/2018)	Richard Valle	Open
3	TF-17-04-01	4-20-17	ORP to provide Ecology with schedule updates on the removal of the 242-A Evaporator diesel generator.	Provide layout of phased plan to include short and long term activities.(01/18/2018)	Paul Hernandez	Open
4	TF-17-09-01	9-20-17	ORP and Ecology will meet to discuss appropriate venue for requests related to DSTs	TBD. Discussion will be added to either the TPA or the permitting meeting.	Bryan Trimberger	Open
5	TF-18-11-1	11-16-17	ORP to brief Ecology on the LAWPS technical scope changes	TSCR briefing in February 2018 on LAWPS and AP Farm upgrades. Include Dan McDonald, Jeff Lyon, Jay Decker, Cheryl Whalen and Steve Lowe (01/18/18)	Steve Pfaff/ Janet Diediker	Open
6	TF-18-11-2	12-1-17	ECY requests ORP to meet on SST RPPP-9937 LDMM		Jeremy Johnson	Open
7	TF-18-11-3	12-1-17	ECY requests ORP to meet on HNF-3484 Double Shell Tank Pumping Guide		Jeremy Johnson	Open
8	TF-18-02-01	02-15-18	ORP to clarify why there is a discrepancy between the HNF-EP-0182, <i>Waste Tank Summary Report</i> (Hanlon) and RPP-RPT-57964, <i>Vadose Zone Characterization Report</i> for 241-TX Tank Farm (leak loss report)		Jeremy Johnson	Open

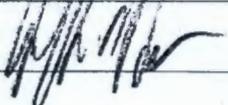
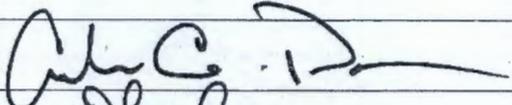
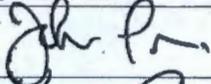
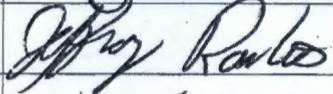
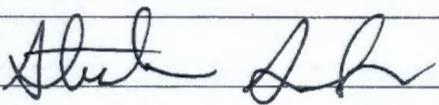
**ORP/Ecology TPA and CD Agreements, Issues, and Action Items –March 2018**

#	Action ID	Start Date	Action	Updates / Needs for Closure	Actionee(s)	Status/ Date Closed
1	WTP-15-01-01	1/22/15	Ecology requests a presentation on standardized high-solids vessel design (SHSVD) to include impacts and optimization in planning area 2, 3, and 4 and DNFSB issues	Conceptual design study from Bechtel is expected around Sept 2018 Ecology is requesting a summary briefing in February 2018 as soon as the testing results are available. Discussion will include path forward. (12/20/17) T5 is delayed. Meeting might be rescheduled until T5 information is available. (01/18/18)	Wahed Abdul	Open
2	WTP-17-08-01	8/17/17	Ecology requests ORP to set up a meeting to discuss how the margins were developed for the T5 corrosion report.	Plan for a meeting in February. T5 is delayed. Meeting will be postponed if necessary until T5 information is available. (01/18/18)	Wahed Abdul	Open
3	WTP-17-10-01	10/19/17	ORP to provide Ecology a copy of the maintenance plan	Overall long-term maintenance plan not approved by DOE yet. Waiting for final long-term preservation plan (pending internal legal review). Maintenance (what needs to be done) vs Preservation mode (why it needs to be done) (12/20/17)	Wahed Abdul	Open

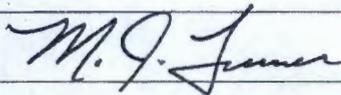
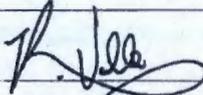
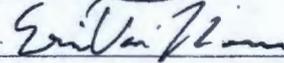
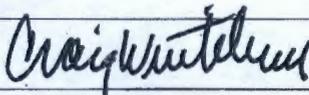
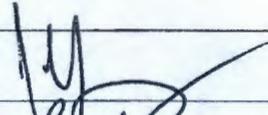
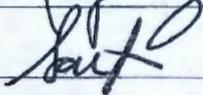
March 14, 2018  
 ORP TPA CD Meeting

PRINT NAME	SIGN NAME	ORG
Abdul, Wahed		ORP
Alzheimer, Jim		ECY
Barnes, Mike		ECY
Beehler, Steve		ORP
Bovier, Jan		ORP
Brasher, Stephanie	<i>Stephanie Brasher</i>	MSA
Brown, Dennis		ORP
Burnett, Kaylin		ORP
Cameron, Craig		EPA
✓ Cimon, Shelley		OR State
Curn, Barry		BNI
Decker, Jay		ECY
Diediker, Janet		ORP
Doughty, John		WRPS
<del>Eakins, Reggie Jr</del>		ORP
Einan, Dave		EPA
Evans, Rana		ORP
Gao, Tracy	<i>Tracy Gao</i>	ECY
Grindstaff, Joni		ORP
Hall, Katie		ECY
<del>Hernandez, Paul</del>	<i>Paul Hernandez</i>	ORP
Jeremy, Johnson		ORP
Jones, Mandy		ECY

March 14, 2018  
 ORP TPA CD Meeting

PRINT NAME	SIGN NAME	ORG
Joyner, Jessica		WRPS
Keith, Colleen		ORP
Kemp, Christopher	CT-5	ORP
Knight, Dan		ORP
Knox, Kathy	Kathy Knox	Court Reporter
Kriskovich, Ellen		ORP
Lobos, Rod		EPA
Lowe, Steven	Steven Lowe	ECY
Lyon, Jeffery		ECY
Martell, John		DOH
Mathey, Jared		ECY
Mattlin, Ellen		ORP
✓ McDonald, Dan		ECY
Menard, Nina		ECY
Parker, Dan		WRPS
Pfaff, Stephen H		ORP
Pomiak, Andrew		ECY
Price, John		ECY
Rambo, Jeffrey		ORP
Richardson, John		ECY
Rochette, Beth		ECY
Schleif, Stephanie		ECY
Schmidt, John		DOH

March 14, 2018  
 ORP TPA CD Meeting

PRINT NAME	SIGN NAME	ORG
Serafin, Shane		ORP
✓ Skorska, Maria	Here <del>is</del>	ECY
Smith, Alex		ECY
Stewart, Dustin		ORP
Trenchard, Glyn		ORP
Trimberger, Bryan		ORP
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
Whiteley, Craig		ORP
Wold, Kristi		ECY
Young, Jason		ORP
Smith, SAHID		ORP