

**Office of River Protection**  
**Quarterly Milestone Review Meeting Minutes**

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Department of Ecology  
Richland, Washington

May 18, 2017

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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.

Paul Hernandez  
Paul Hernandez, DOE-ORP

Date: 6/8/17

[Signature]  
Jeremy Johnson, DOE-ORP

Date: 6/14/17

[Signature]  
Chris Kemp, DOE-ORP

Date: 6/14/2017

[Signature]  
Steve Pfaff, DOE-ORP

Date: 6/9/2017

N/A  
Joni Grindstaff, DOE-ORP

Date: —

[Signature]  
Wahed Abdul, DOE-ORP

Date: 6/13/17

N/A  
Dan Knight, DOE-ORP

Date: —

[Signature]  
Jason Young, DOE-ORP

Date: 6/14/17

[Signature]  
Jeff Bruggeman, DOE-ORP

Date: 6/14/17

[Signature]  
Jeff Lyon, Project Manager,  
Washington State Department of Ecology

Date: 6/20/2017

[Signature]  
Dan McDonald, Project Manager,  
Washington State Department of Ecology

Date: 6-19-17

[Signature]  
Project Manager  
Department of Ecology

Date: 6/20/17

N/A

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Dennis Faulk, Hanford Project Manager,  
U.S. Environmental Protection Agency.

Date: \_\_\_\_\_

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

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

### **Upcoming Meetings**

The next ORP quarterly milestone review is scheduled for August 17, 2017, from 8:30 a.m. to 11:30 a.m. at the Ecology office in Richland, Washington. The next ORP project managers meeting is scheduled for June 14, 2017, from 1:00 p.m. to 3:30 p.m. at the ORP office in Richland, Washington.

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

U.S. Department of Energy (DOE), Office of River Protection (ORP) provided the monthly Tri-Party Agreement (TPA) and Consent Decree (CD) reports, which will be submitted to the Administrative Record (AR).

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

ORP pointed out that milestone M-045-82 was modified, and the new due date was changed from 2015 to 2017. ORP noted that milestones M-045-62 and M-045-83, which are related to M-045-82, were also moved from 2015 to 2017. ORP stated that M-045-82A is a new milestone that was added during the revision of M-045-82.

### **Office of River Protection/Washington State Department of Ecology Tri-Party Agreement and Consent Decree Agreements, Issues and Action items – May 2017**

(See agreements, issues and action items table).

ORP noted that there is a shorter time frame for the quarterly TPA/CD milestone review meeting, which is followed by the Inter-Agency Management Integration Team (IAMIT) meeting. ORP proposed moving discussion of the action items to the end of the meeting, if time allows, or eliminating the discussion. ORP stated that the action items are discussed with Ecology during the monthly ORP project managers meeting, and that Ecology is aware of the status of the action items and the point of contact for a particular action. Ecology responded that it was agreeable to not discuss the action items, but pointed out that in the past, the project managers would meet before the quarterly meeting to go over the information. Ecology stated that those pre-meetings are no longer being held, and requested that ORP reinstate the process. Ecology added that the more in-depth technical discussions that would have been held in another forum are now being held in the quarterlies and other meetings, which has caused the meetings to last longer. Ecology noted that the quarterlies would have been the only relevant forum in a particular time frame to have discussions and to get answers to questions that are needed.

Ecology pointed out that ORP used to transmit the meeting minutes up to two weeks in advance for review and comment, but the minutes are now being received only days in advance and there is not enough time for review and comment. Oregon Department of Energy (ODOE) stated that staffing does not allow attendance at all of the in-depth meetings, and it was important to discuss the action items and issues, but it would be acceptable if they are discussed during a pre-meeting.

Ecology suggested an action item to address the issues associated with the quarterly meetings. An action item was established for ORP and Ecology to have internal discussions regarding the process for holding the quarterly meetings.

***ORP and Ecology Action:*** *ORP and Ecology to have internal discussions regarding the process for holding the quarterly meetings and follow up with outcomes from the discussions.*

## 2.0 SYSTEM PLAN

ORP reported that modeling for the remaining 11 cases was completed. ORP stated that it is on schedule to receive the draft System Plan 8 from WRPS next week, and a meeting is scheduled with Ecology next Thursday (5/25/17) to discuss the draft System Plan 8. ORP noted that a .pdf file won't be released to Ecology during the meeting, but a draft copy from the meeting will be provided.

## 3.0 ACQUISITION OF NEW FACILITIES

ORP stated that there were no changes to report, and the planning is out in the future for milestones M-047-07 and M-090-00. ORP added that the timing of the milestones is associated with the system planning and the M-062-45 milestone to develop dates for the seven areas laid out in the milestone. ORP stated that the negotiation strategy is still being drafted because there are parts of M-062-45 that can be negotiated before System Plan 8 is released. Ecology inquired about the status of the negotiation strategy in terms of DOE-Headquarters. ORP responded that the negotiation strategy is still internal to ORP, and the process has been slowed due to staff shortages. Ecology asked if the negotiation strategy will be completed by October 2017. ORP responded that it will be completed by October 2017, and the intent is to complete some of the negotiations before System Plan 8 is released. It was noted that when ORP completes the negotiation strategy, it has to be sent to DOE-Headquarters for approval.

## 4.0 SUPPLEMENTAL TREATMENT AND PART B PERMIT APPLICATIONS

ORP stated that the information from System Plan 8 is needed before it can proceed with the supplemental treatment milestones.

## 5.0 242-A EVAPORATOR STATUS

ORP reported that the EC-06 campaign is currently scheduled for late June 2017, after the radiation monitoring system replacement and the stack extension have been completed. The following EC-07 campaign is dependent on the AW-106 pump being installed, and the campaign is tentatively scheduled for July 2017.

ORP noted that a meeting was held with Ecology in November 2016 regarding the Class 2 permit modification for removal of the diesel generator, and the permitting team continues to work through the Class 2 permit mod. Ecology indicated that all of the comments have been resolved and a path forward has been established for the Class 2 permit mod. ORP reported that most of the work on the 242-A Evaporator integrity assessment has been completed, and there are two tests remaining that are tied to the restart of the evaporator. **Note:** See discussion under the CD section regarding the spare reboiler requirement status.

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

ORP pointed out that the table for the LERF basin volume was split out to clarify the volume in each basin versus what was received in the basins during the reporting period. ORP noted that approximately 3.5 million gallons of waste have been processed. The current plan is to empty LERF Basin 43 in preparation for replacing the cover. Ecology inquired about the LERF Basin 43 cover replacement field work. ORP responded that the tension towers were removed yesterday that hold the covers. The cover will be cut into sections 90 feet long and 15 feet wide, and then rolled up and placed in waste boxes. ORP noted that an email was sent to Ecology regarding the schedule sequence for the cover removal and replacement. ORP stated that after the cover is removed, the lower liner will be inspected. EPA asked where the cover will be disposed. ORP indicated that the cover will be sent to ERDF. EPA requested confirmation that there is authorization to send the cover to ERDF. ***ORP responded that it will follow up to confirm the LERF Basin 43 cover has been authorized to be sent to ERDF.***

Ecology stated that permit modifications have been tracked as part of the significant planned actions, and requested that it continue be reported in the monthly summary report as part of the RCRA actions. Ecology noted that the permit modifications are a significant part of the work for LERF/ETF, and the permitting team is in the midst of working on a Class 2 permit mod. ORP responded that it has been directed by the lawyers to include information in the monthly summary that are directly related to the milestones, and that RCRA actions are not required to be included. ORP noted that legal has authorized discussion of RCRA actions during the meeting, but the intent is to streamline the narrative in the monthly summary report. ***ORP and Ecology to continue the discussion outside of today's meeting regarding the contents of the TPA and CD monthly summary reports in terms of RCRA actions.*** Ecology pointed out that the Class 2 modification for the 242-A Evaporator is included in today's report. ORP responded that it was likely an oversight. ORP added that the TPA and CD reports are now undergoing legal review that takes about ten days, which has delayed transmittal of the reports to Ecology.

## 7.0 TANK SYSTEM UPDATE

Double-Shell Tank (DST) Integrity - ORP stated that the outcome was issued from the tank integrity expert panel meeting that was held in August 2016. ORP noted that the next tank integrity meeting is scheduled with Ecology in June 2017, and an agenda for the meeting will be shared with Ecology as soon as it's finalized. ORP reported that recent video footage of AY-102 was received. ORP stated that the area identified as the possible leak site was cleared for video, which the expert panel will review and provide input during the June 2017 meeting. Ecology asked if the expert panel has the same members from two years ago. ORP responded that the expert panel members have not changed in the last two years. ORP noted that it still plans to procure and install a high-definition camera in AY-102 as part of the inspection requirements from the settlement agreement.

ORP reported that the ultrasonic testing (UT) for AN-106 was completed. ORP pointed out that the field preparations noted for AY-101 should be moved to AZ-101. ORP noted that the floor of AZ-101 is being scanned, and then the crew will move to SY Farm to scan the accessible areas of the secondary liner in the three SY tanks before moving to AY-101. Ecology asked if

the scanning activity in SY Farm is a new activity. ORP responded that it is a new activity that wasn't in the initial plan for the year, and it will be added to the monthly summary report.

Ecology inquired about ORP's follow-up actions regarding recommendations from the Independent Qualified Registered Professional Engineer (IQRPE) integrity assessment of the DSTs. ORP responded that after the DST IQRPE assessment that was done in 2006, a stand-alone document was prepared that addressed each one of the IQRPE's recommendations. The current IQRPE assessment reviewed the document and evaluated whether ORP had adequately addressed the previous recommendations. ORP indicated that it would follow the same procedure with the 2016-2017 IQRPE assessment and track the recommendations. Ecology asked if ORP develops an implementation plan from the IQRPE's recommendations. ORP responded that it would follow up with Ecology's inquiry about developing and tracking an implementation plan. Ecology requested updates in the monthly summary report about how ORP is following up on the IQRPE's recommendations.

***ORP Action: ORP to follow up with Ecology regarding the process for implementing the IQRPE's DST integrity assessment recommendations.***

Ecology stated that there was a Rev. 0 of the 2016 DST integrity assessment report that included a response to the recommendations in the report. Ecology added that a Rev. 1 DST integrity assessment report was issued, and surmised that there was a revised response to the recommendations. ORP responded that Rev. 1 is final, and if any of the responses to the recommendations were changed, it should be in Rev. 1. Ecology requested that ORP follow up on whether there was a revised response plan or implementation plan. ORP agreed to follow up with Ecology's request. Ecology referred to the integrity assessments being done for the DSTs, SSTs, the 242-A Evaporator and 222-S, and suggested advance information sharing to improve planning. Ecology noted that ORP sent the integrity assessment plan for the 242-A Evaporator in advance. ORP agreed to share the plans with Ecology as they are being developed.

Single-Shell Tanks (SST) Integrity – ORP noted the four IQRPEs that are being planned.

ORP stated that the status of the intrusion mitigation for T-111 hasn't changed much since the maintenance issues with the exhauster. ORP noted that the report documenting the success with T-111 and how well the exhauster worked was released. Ecology stated that the report was clear on the goal to test evaporation, but there was a failure to address removing enough liquid to address a potential leak. Ecology added that the report indicated somewhere between five and 21 inches of liquid in T-111, and there was no way to know if the leak had been addressed. ORP responded that it's too early to know whether or not the leak was stopped. ORP stated that there is a lot of data leading up to when the exhauster was installed, and there was mobile monitoring data during the operation. ORP added that a few more months of the liquid observation well readings are needed before a comparison can be made of pre versus post exhauster operations.

ORP reported that an interim measures report for proposed operation on the T-112 exhauster will be submitted to Ecology within the next week.

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

ORP noted that planning continues for the 2018 IQRPE assessment of the SSTs structural integrity.

## 9.0 IN-TANK CHARACTERIZATION SUMMARY

ORP stated that AP-105 grab samples were completed. ORP noted that several samples were sent to PNNL for testing, and the AZ-101 leak detection pit sample was sent to the lab for analysis.

## 10.0 SINGLE-SHELL TANK CLOSURE AND RETRIEVAL PROGRAM

Closure Program – ORP reported that M-045-84 was completed to initiate negotiations for interim milestones for closure of a second SST waste management area. ORP noted that milestone M-045-61 was completed, which is the phase 2 RCRA facility investigation report for Waste Management Area C (WMA-C), as well as the phase 2 corrective measures study report.

ORP stated that the draft tier 2 closure plan for WMA-C and the draft tier 3 closure plan for the C-200 tanks were submitted to Ecology this week (M-045-82 and M-045-82A).

Ecology referred to the significant planned activities, and asked what is meant by begin resolution and begin discussions. ORP responded that it will be contacting Ecology to schedule meetings to discuss Ecology's comments on the tier 1 closure plan and to start discussions on barriers 3 and 4.

Retrieval Program – ORP noted that the C-111 retrieval data report (RDR) is on schedule to be submitted by September 2017.

## 11.0 TANK WASTE RETRIEVAL WORK PLANS

ORP stated that the TWRWPs for AX Farm will be finalized within the next three months. ORP noted that there is a bit of uncertainty with some of the schedule dates due to recent impacts.

## 12.0 TANK OPERATIONS CONTRACT OVERVIEW

ORP noted that two new paragraphs were added to the EVMS overview in the monthly summary report (pg. 23), and they are identical to the paragraphs in the CD portion of the EVMS overview. The paragraphs provide an explanation of the EVMS for readers that may not be familiar with the project activities.

ORP stated that in March 2017, tank farms performed more work than planned, but the work cost more than planned. ORP noted that base operations reflected a similar pattern as tank farms for March 2017. Ecology asked if the flow instrumentation that is being installed in AP Farm is new or a replacement. ORP responded that the flow instrumentation is new, but the planning to install the equipment has been under way for the last few years in response to a Defense Nuclear Facilities Safety Board (DNFSB) resolution to ensure there is enough flow through the tanks to mitigate a hydrogen release.

Ecology inquired about the base operations and tank farms unfavorable cost variance associated with the bottle change-out tent in AW Farm. Ecology noted that bottle change-out has been ongoing, and asked if there was an issue or new activity. ORP responded that a heated/cooled bottle change-out tent was built to eliminate the need to constantly bring air bottles back and

forth. Construction of the tent was in response to the vapor issues and to accommodate the demand for air bottles.

ORP noted that retrieve and close SSTs EVMS was covered during the CD portion of today's discussion.

ORP stated that the scale of work for waste feed delivery represents a small portion of the overall contract, performing roughly five million dollars worth of work compared to \$40 million in base operations.

ORP reported that the treat waste EVMS, which is associated with the Low Activity Waste Pretreatment System (LAWPS), reflects an improved cost performance in March 2017 from past months. ORP stated that the 60 percent design review was divided into Part A and Part B design reviews, and it represented time-consuming activities for the team. ORP noted that the Part A and Part B design reviews have been completed, and the team is moving toward the 90 percent review. ORP stated that there will be two design reviews scheduled towards the end of this calendar year for LAWPS, and Ecology will be invited to attend.

## CONSENT DECREE MONTHLY SUMMARY REPORT REVIEW

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

Ecology initiated a discussion regarding the Consent Decree (CD) requirement for ORP to issue a quarterly report of activities. Ecology stated that it has significant concerns about what is in the quarterly report. Ecology pointed out that in addition to the 90 days' worth of activities in the report, there are letter reports that have been issued during that time period. Ecology handed ORP a copy of the last quarterly report with eight yellow tags marking items of concern. Ecology stated that all but one of the eight tags have to do with current noted delays in the Waste Treatment Plant (WTP), and primarily with LAW, BOF and LAB (LBL), but there are some delays noted at the PT and HLW facilities. Ecology stated that the general commentary in the quarterly CD report indicates that the delays will not cause the CD milestones to be missed, but there is no indication of what the recovery plans are going to be.

Ecology expressed concern about the ability for LBL to be completed and to meet the CD milestone dates, based on the CD quarterly report. Ecology added that it would retract its position when enough information has been provided and recovery plans have been issued to indicate the CD dates can be met.

ORP responded that there is a year between the contract date and the CD date, and the dates that it reports to are the contract dates and project baseline dates. Ecology stated that it understands the difference between the two dates, but there is still a high level of concern about the number and significance of the items that have been tagged.

Ecology referred to ORP's statement regarding the contract date and the CD date, and clarified that ORP's position is that there is a year of positive float, but Ecology's concern and position is the eight tagged schedule elements are eroding the year of positive float. ORP responded that the dates are against the contract and baseline dates and not the CD date. Ecology reiterated its position that the eight items are eroding the positive float.

Ecology pointed out that if there are delays, typically one of the last items that get considered are the permitting actions or the revisions of permitting actions. Ecology added that it is not obligated to meet the durations of the contract schedules, and there are certain activities that Ecology is required to do, so the parties cannot necessarily rely on the positive float.

Ecology requested a meeting with ORP to discuss the eight tagged items. Ecology stated that a discussion may alleviate its concerns. (See more discussion under 5.0).

***Action: ORP and Ecology to schedule a meeting to discuss Ecology's concerns regarding the eight items tagged in the CD quarterly report and how to address the differences between the quarterly and monthly CD reports.***

### SPARE REBOILER REQUIREMENT STATUS

ORP stated that the vendor is continuing with the design of the spare reboiler, and they are currently working on the nozzle load calculations. ORP reported that the due date for onsite

receipt of the spare reboiler is December 2018, and it is anticipated the reboiler will be delivered ahead of schedule this fiscal year.

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

ORP stated that in the past three months, many of the impacts have been addressed that were due weather, beryllium concerns, and the self-contained breathing apparatus (SCBA) inefficiencies. All of the corrective actions have been completed to address the beryllium concerns, including updating work packages and developing new work packages, and the team has adapted to the SCBA inefficiencies. Personnel have been trained and deployed to the field, and a lot of work has been done in the past month.

ORP stated that AX Farm portable exhausters 126 and 127 are still in operational testing, and portable exhauster 127 is running. Portable exhauster 126 is down, and the electrical cabinet needs to be replaced where the three-phase power comes into the exhauster. ORP noted there is a minor issue with the demisters, which have been loading and unloading on their own. The issue needs to be identified and corrected before the portable exhausters go operational.

ORP reported that both of the extended reach sluicer systems (ERSSs) have been placed in tank C-105. The ERSS electrical and hose connections are being done, which will be followed by testing of all those systems. ORP stated that in the next three months, all of the systems should be connected and tested and operational. ORP stated that the schedule for C-105 startup has slipped from July into the first week of August 2017, but efforts are under way to pull the startup schedule back to July 2017. ORP noted that operational testing will be the most time consuming aspect before startup, but no issues are anticipated since the same types of systems have been in place in the past.

Ecology noted that C-105 retrieval is not anticipated to take a long time, and asked if the planning is based on previous knowledge. ORP concurred with Ecology's comment, and stated the issue that could affect C-105 retrieval is the HAMTC union's position on waste disturbing activities and whether retrieval would be allowed 24/7 or would be restricted to nights and weekends. ORP added that the issue is still in discussion with the union. Ecology asked about the schedule for C-105 retrieval. ORP responded that the schedule is dependent on the hours the crew is allowed to work. ORP stated that retrieval could be done by the end of December 2017 or the first part of January 2018 if retrieval runs 24/7, but if retrieval is restricted to nights and weekends, it could go until the end of February or run into mid-March 2018. ORP noted that work will be going into the winter, which could affect retrieval.

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

ORP stated that the C-105 TWRWP is expected to be finalized shortly. The change notice is in review, and the AX Farm TWRWPs will be finalized first.

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

ORP stated that the baseline change request in March 2017, based on a full year continuing resolution (CR), resulted in a single point adjustment. The adjustment resulted in a favorable schedule variance, which did not reflect an accurate representation of what was done in the field.

With the end of the CR and full funding, another baseline change request will be processed that will readjust the baseline schedule amount. ORP added that the issues are not reflected in the numbers regarding the SCBA inefficiencies and beryllium concerns, and there have been impacts due to limited personnel and funding restrictions. ORP stated that work in AX Farm has been impacted by the recent PUREX tunnel issue, and trained construction personnel were sent over to PUREX. ORP indicated that PUREX has sufficient staff at this time, but the situation at PUREX is subject to change. ORP noted that the second shift at C-105 is expected to end in early June 2017, and the crew will move over to A/AX Farm work, which will improve the cost and schedule variance numbers.

Ecology inquired about the impacts due to limited personnel. ORP responded that staff has not been increased in accordance with the original baseline plan, due to the CR, which puts a strain on resources. ORP stated that there is a shortage of HPTs and IHTs, work planners and various types of operating engineers, and some of the planned work had to be scaled back. ORP added that WRPS is in the process of hiring additional personnel, including HPTs and IHTs.

## 5.0 WASTE TREATMENT AND IMMOBILIZATION PLANT PROJECT

ORP noted that the WTP was shut down for a couple of days due to the PUREX tunnel event, and there are travel restrictions in the area.

ORP stated that the LBL/DFLAW unfavorable schedule variance was due in part to implementing the Waste Treatment Completion Company (WTCC) subcontract into the baseline, which is a one-time activity, and it does not impact the overall schedule variance. ORP noted the four bulleted items associated with the unfavorable cost variance.

Ecology referred to its concern regarding items in the CD quarterly report (see discussion under 1.0), and pointed out that the quarterly CD report goes into the details of the cost and schedule variances, and speaks to the potential for cascading problems resulting from negative variances. Ecology noted that there are indications in the quarterly CD and the associated letter reports that are not in the monthly CD report that is used for the quarterly milestone review meeting. Ecology cited schedule risk maintenance as an example in the letter reports that is not seen in the monthly CD report. ***ORP responded that it would follow up on Ecology's point about the differences between the CD quarterly and monthly reports and the need to reconcile the differences.*** Ecology stated that the CD quarterly report presents a different reflection on activities than the monthly summary report.

## 6.0 PRETREATMENT FACILITY

ORP stated that the focus continues to be technical issue resolution in PT. The controls testing was completed for the T4 vessel mixing issue, and preparations are under way for the mixing testing to start up in mid-June 2017. ORP stated that the National Engineering Technology Lab is gathering additional information to support the mixing testing. ORP noted that the corrosion testing is currently under way for the T5 erosion/corrosion issue. ORP is preparing a letter to send to Bechtel next week providing direction and clarifying some of the end points for the five technical issues that are still open, T4-T8. ORP noted that the letter will be shared with Ecology when it is issued.

## 7.0 HIGH-LEVEL WASTE FACILITY

ORP stated that the majority of the current activity is focused on supporting full authorization for engineering, procurement and construction (EPC), which is tentatively targeted for September 2017. ORP has reviewed Bechtel's issue resolutions on the design and operability (D&O) review. ORP stated that a key activity is the Preliminary Design Safety Analysis (PDSA) update for HLW, and Bechtel has submitted a second version of the PDSA. ORP stated that approval of the PDSA by September 22, 2017 is the critical path to the September 30, 2017 target for full production authorization (D2). Ecology asked if there are sufficient resources for the PDSA and other activities. ORP responded that the PDSA is a key activity needed for D2 authorization, but the D2 authorization may be delayed if the PDSA is not completed in September.

## 8.0 LOW-ACTIVITY WASTE FACILITY

ORP referred to the discussion with Ecology regarding its concern with schedule delays, and noted that receipt and installation of the caustic scrubber internals represented a performance-based interim contract milestone that was met on schedule.

ORP reported that the repairs on the wet electrostatic precipitator vessel completes all the vessel repairs per the sampling plan for LAW, and the last of the hydrostatic approval letters will be sent to Bechtel.

Ecology inquired about the jack bolt issue. ORP responded that the issue with the jack bolts was resolved, and all of the jack bolts have been installed in melter 1. ORP added that the assembly in melter 1 has been completed, and Bechtel submitted the completion package for melter 1 three days ahead of the contract milestone date. ORP noted again the discussion with Ecology regarding milestone contract dates versus CD milestone dates.

ORP stated that all of the redesigned jack bolts were received for melter 2, and the jack bolts will be examined for any issues as they are being installed. ORP noted that melter 2 assembly is anticipated to be completed about two months ahead of the contract date, and those are interim milestones that feed into the LAW construction complete milestone. Ecology asked if ORP might issue a new schedule since some of the contract dates are being met ahead of time. ORP responded that the baseline schedule will not be reset, and the baseline schedule is a mechanism for tracking cost and schedule variances.

ORP noted that the cooling jackets on the melter feed process vessels are an added feature due to temperature concerns and the agitation and mixing in the vessels. ORP stated that there was an issue with the epoxy that holds the cooling jackets to the vessel, and the initial epoxy did not adhere to the vessel. ORP added that was also an issue with the curvature of the cooling jacket panels matching up with the vessels. ORP indicated that there will probably be some NCRs written up to get those issues resolved.

ORP stated that Bechtel submitted the preliminary hazard calculation for LAW, which reflects a HazCat 3, and it will be folded into the PDSA and DSA updates. ORP indicated that so far there have been no issues with the calculation.

ORP noted that a recovery schedule to meet the August 2018 contract date has been developed regarding the process for updating the PDSA and ultimately getting to a DSA.

## **9.0 BALANCE OF FACILITIES**

ORP stated that the two areas of focus for BOF are turnover to startup, and construction of the Effluent Management Facility (EMF). Building 91 has been energized with low and medium voltage power. Permanent power has been sent over to the water treatment building and the nonradioactive liquid drain system facility. ORP noted that the concrete slab for the utility building has been placed, with the exception of some miscellaneous slabs for the stack, etc. The concrete placement of the main process building has been completed, including the truck bay slab.

ORP stated that the sole source vessel award is being worked for Harris Thermal, which will be for the four PT facility vessels that are being repurposed for EMF. Ecology asked if the PT vessels can be used. ORP responded that approval has been sent to Bechtel to use the PT vessels, and Bechtel is working on the design changes to the vessels since the nozzles are different. Ecology inquired about the system for tracking the PT equipment that will be used for other facilities. ORP responded that currently the four PT vessels and the evaporator materials are the only items that have been approved. ORP added that the process for transferring all of the property is with the budget and real property contract personnel, and there will be a clear documented process for transferring the property.

ORP stated that the cathodic protection system is in testing, and preparations are under way to bring up the original system with the supplemental cathodic protection system to start balancing them together. ORP reported that the steam plant DFLAW modifications are about to be issued, and those will be some of the last modifications needed for DFLAW.

## **10.0 ANALYTICAL LABORATORY**

ORP stated that there hasn't been a lot of activity in LAB. There have been some minor turnovers, and floor coatings were recently placed. ORP noted that the current plan for DFLAW is to run the majority of the C5V system to support the RLD pits. Ecology inquired about the award for the temporary lab space. ORP responded that the request for proposal for the temporary lab has been issued.

**(See Agreements, Issues and Action Items Table):**

### **Action No. 1 (WTP-14-06-02)**

This action was closed 4/20/17.

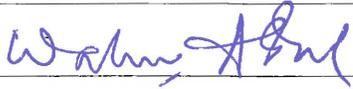
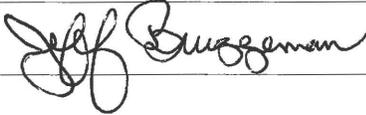
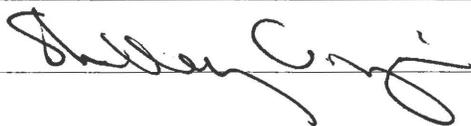
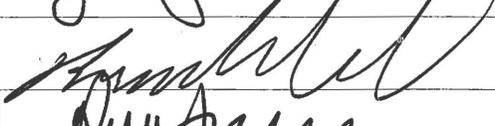
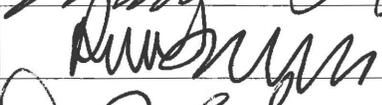
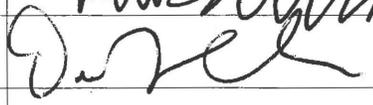
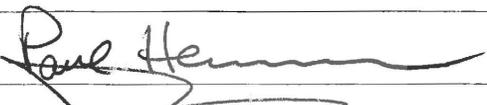
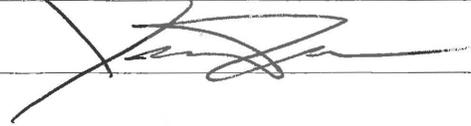
### **Action No. 2 (WTP-15-01-01)**

ORP is planning a presentation to Ecology regarding the SHSVD in the July 2017 time frame. This action remains open.

### **Action No. 3 (WTP-17-02-01)**

The WTP Certification Plan was updated. ORP stated that discussion regarding the Certification Plan will be moved to another forum, and ORP will provide the latest information on the plan. This action remains open.

May 18, 2017  
 Quarterly Meeting at Ecology  
 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		MSA
Brown, Dennis		ORP
Bruggeman, Jeff		ORP
Burnett, Kaylin		ORP
Chandran, Nitya		ECY
Cimon, Shelley		OR State
Curn, Barry		BNI
Diediker, Janet		ORP
Doughty, John		WRPS
Eakins, Reggie Jr ✓		ORP
Evans, Rana		ORP
Faulk, Dennis		EPA
Gao, Tracy		ECY
Grindstaff, Joni		ORP
Hamilton, James		WRPS
Hernandez, Paul		ORP
Jeremy, Johnson		ORP
Jones, Mandy		ECY

May 18, 2017  
 Quarterly Meeting at Ecology  
 ORP TPA CD Meeting

PRINT NAME	SIGN NAME	ORG
Joyner, Jessica		WRPS
Keith, Colleen		ORP
Kemp, Christopher		ORP
Knox, Kathy	<i>Kathy Knox</i>	Court Reporter
Kriskovich, Ellen		ORP
Lobos, Rod		EPA
Lowe, Steven	<i>Steven Lowe</i>	ECY
Lyon, Jeffery	<i>Jeffery Lyon</i>	ECY
Martell, John		DOH
Mathey, Jared		ECY
Mattlin, Ellen		ORP
McCartney, Anne	<i>Anne McCartney</i>	ORP
McDonald, Dan	<i>Dan McDonald</i>	ECY
Menard, Nina		ECY
Parker, Dan		WRPS
Pfaff, Stephen H	<i>Stephen H Pfaff</i>	ORP
Piippo, Robert E	<i>Robert E Piippo</i>	MSA
Pomiak, Andrew		ECY
Price, John	<i>John Price</i>	ECY
Rambo, Jeffrey	<i>Jeffrey Rambo</i>	ORP
Rochette, Beth		ECY
Schleif, Stephanie	<i>Stephanie Schleif</i>	ECY
Schmidt, John		DOH

May 18, 2017  
 Quarterly Meeting at Ecology  
 ORP TPA CD Meeting

PRINT NAME	SIGN NAME	ORG
Serafin, Shane		ORP
Skorska, Maria		ECY
Smith, Alex		ECY
Stewart, Dustin		ORP
Trenchard, Glyn		ORP
Trimberger, Bryan		ORP
Turner, Michael	<i>M. J. Turner</i>	MSA
Utley, Randell		DOH
Valle, Richard		ORP
Walmsley, Mign	<i>MW</i>	ECY
Wang, Oliver S		ECY
Whalen, Cheryl	<i>Cheryl Whalen</i>	ECY
Wilson, Katie ✓	was here	ECY
Wold, Kristi		ECY
Wrzesinski, Wendell		ORP
Young, Jason		ORP
<i>Skinnerland, Ron</i>	was here	<i>ECY</i>

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## **ORP/Ecology TPA and CD Agreements, Issues, and Action Items –May 2017**

### **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:**

1. Ecology disagrees with ORP's letter 15-WSC-0027 and the System Plan.

## ORP/Ecology TPA and CD Agreements, Issues, and Action Items –May 2017

#	Action ID	Start Date	Action	Updates / Needs for Closure	Actionee(s)	Status/ Date Closed
1	TF-16-01-02	1-21-16	Ecology would like DFLAW program interface information to include mass & energy balance and process flow information.		Kaylin Burnett	Closed 4/20/17
2	TF-16-07-05	7-21-16	Ecology requests ORP to provide the configuration parameters for the SST and DST exhausters.	ECY would like to see design and controls on exhauster. Jeremy has action to check with WRPS. Meeting pending. (4/20/2017).	Dusty Stewart	Open
3	TF-16-09-01	9-20-16	Ecology request a list of all the IQRPE reports that have been generated and/or are in the operating record since 2010	The list is still in development. Hope to have finalized by next meeting. (4/20/2017)	Dusty Stewart	Open
4	TF-16-09-02	9-20-16	Ecology request that ORP schedule a meeting on DST permitting (DFLAW related)	ECY to discuss internally. (4/20/2017)	Dusty Stewart	Open
5	TF-16-11-01	11-17-16	ORP to provide Ecology the waste designation work sheets for the AZ-301 sample collected in the July/August 2016 time frame.	ECY requests a tour of tanker loadout facility at AZ-301 (Conducted 4-18-17) ECY would like to know how spill (from Nov) was resolved. ORP is reviewing information prior to release to Ecology.(4/20/2017)	Richard Valle/Dusty Stewart	Open
6	TF-16-11-04	11-17-16	ORP to provide Ecology the T-112 work plan	In legal review. (4/20/2017)	Dusty Stewart	Open
7	TF-16-11-05	11-17-16	ORP to provide Ecology results of the four tanks that were visually inspected at ETF	Currently there are three draft versions in review, fourth report is being drafted. Waiting to have all four final version before providing to Ecology (4/20/2017)	Richard Valle	Open
8	TF-17-02-03	2-16-17	ORP to follow up on Ecology's inquiry regarding the current path forward for the sinkhole by AZ-102.		Jeremy Johnson	Closed 4/20/17

**ORP/Ecology TPA and CD Agreements, Issues, and Action Items –May 2017**

#	Action ID	Start Date	Action	Updates / Needs for Closure	Actionee(s)	Status/ Date Closed
9	TF-17-03-01	3-15-17	SST Tier 1 closure plan: Ecology to schedule internal meeting with Ecology management and then schedule meeting with ORP.		Jeff Lyon	Closed 4/20/17
10	TF-17-04-01	4-20-17	ORP to provide Ecology with schedule updates on the removal of the 242-A Evaporator diesel generator.	Pending permit mod.	Paul Hernandez	

#	Action ID	Start Date	Action	Updates / Needs for Closure	Actionee(s)	Status/ Date Closed
1	WTP-14-06-02	06/19/14	Ecology requests that DOE provide a presentation on how DOE incorporates, vets, and considers all technical issues (including the Safety Design Strategy).		Joni Grindstaff	Closed 4/20/17
2	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	Impacts will be better understood once the design studies are issued. Expected in July timeframe (3/15/2017)	Wahed Abdul	Open
3	WTP-17-02-01	02/16/17	ORP to respond to ECY on why WTP Certification Plan is not being done on an annual basis.	Plan has been updated.	Joni Grindstaff	Open

Final

Office of River Protection  
Consent Decree  
Monthly Report  
May<sup>1</sup> 2017

**Consent Decree, *State of Washington v. Dept. of Energy*, Case No. 2:08-cv-05085-FVS (October 25, 2010)**

**Amended Consent Decree, *State of Washington v. Dept. of Energy*, Case No. 2:08-CV-5085-RMP (March 11, 2016)**

**Second Amended Consent Decree, *State of Washington v. Dept. of Energy*, Case No. 2:08-5085-RMP (April 12, 2016)<sup>2</sup>**

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<sup>1</sup> The narrative descriptions of progress in this report cover the period from April 1–30, 2017. Earned Value Management System data and descriptions cover the period of March 1–31, 2017; this includes the facility completion percentage estimates included at various locations in the Waste Treatment and Immobilization Plant section.

<sup>2</sup> The cited consent decrees are between the State of Washington and U.S. Department of Energy. For each of these decrees, there are companion, separate consent decrees with the State of Oregon, as Intervenor, under the same case numbers.

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**Acronyms and Abbreviations**

ABW	ABW Technologies
BNI	Bechtel National, Inc.
BOF	Balance of Facilities
C#V	ventilation system for potential contamination zones C#
CD	Consent Decree ( <i>State of Washington v. Dept. of Energy</i> , Case No. 2:08-cv-05085-FVS [October 25, 2010]; as amended, Amended Consent Decree, Case No. 2:08-cv-05085-RMP [March 11, 2016]; as amended, Second Amended Consent Decree, Case No. 2:08-cv-05085-RMP [April 12, 2016])
CV	cost variance
D&O	design and operability
DFLAW	direct-feed low-activity waste
DNFSB	Defense Nuclear Facilities Safety Board
DOE	U.S. Department of Energy
EMF	Effluent Management Facility
ERSS	extended reach sluicer system
EVMS	Earned Value Management System
FY	fiscal year
HAMTC	Hanford Atomic Metals Trades Council
HEPA	high-efficiency particulate air
HLW	High-Level Waste (Facility)
HPAV	hydrogen in piping and ancillary vessels
HVAC	heating, ventilation, and air-conditioning
LAB	Analytical Laboratory
LAW	Low-Activity Waste (Facility)
Laboratory	
LBL	Low-Activity Waste Facility, Balance of Facilities, and Analytical Laboratory
ORP	U.S. Department of Energy, Office of River Protection
PDSA	preliminary documented safety analysis
PJM	pulse-jet mixer
PT	Pretreatment (Facility)
SHSV	standard high-solids vessel
SV	schedule variance
WRPS	Washington River Protection Solutions LLC
WTP	Waste Treatment and Immobilization Plant

**Consent Decree Milestone Statistics/Status**

<b>Milestone</b>	<b>Title</b>	<b>Due Date</b>	<b>Completion Date</b>	<b>Status</b>
<b>Fiscal Year 2020</b>				
D-00A-07 Interim	LAW Facility Construction Substantially Complete	12/31/2020		On Schedule
D-16B-03	Of the 12 SSTs referred to in B-1 and B-2, complete retrieval of tank waste in at least 5	12/31/2020		Notice given that a serious risk has arisen. See letter 16-ORP- 0097.
<b>Fiscal Year 2022</b>				
D-00A-08 Interim	Start LAW Facility Cold Commissioning	12/31/2022		On Schedule
<b>Fiscal Year 2023</b>				
D-00A-09 Interim	LAW Facility Hot Commissioning Complete	12/31/2023		On Schedule
<b>Fiscal Year 2024</b>				
D-16B-01	Complete Retrieval of Tank Waste from the following remaining SSTs in WMA-C: C-102, C-105, and C-111	03/31/2024		On Schedule
D-16B-02	Complete retrieval of tank wastes from the following SSTs in Tank Farms A and AX: A-101, A-102, A-104, A-105, A-106. AX-101, AX-102, AX-103, and AX-104. Subject to the requirements of Section IV-B-3 DOE may substitute any of the identified 9 SSTs and advice Ecology accordingly	03/31/2024		Notice given that a serious risk has arisen. See letter 16-ORP- 0097.
<b>Fiscal Year 2030</b>				
D-00A-02 Interim	HLW Facility Construction Substantially Complete	12/31/2030		On Schedule

Milestone	Title	Due Date	Completion Date	Status
<b>Fiscal Year 2031</b>				
D-00A-13 Interim	Complete Installation of Pretreatment Feed Separation Vessels	12/31/2031		On Schedule
D-00A-14 Interim	PT Facility Construction Substantially Complete	12/31/2031		On Schedule
D-00A-19 Interim	Complete Elevation 98 feet Concrete Floor Slab Placements in PT Facility	12/31/2031		On Schedule
<b>Fiscal Year 2032</b>				
D-00A-03 Interim	Start HLW Facility Cold Commissioning	06/30/2032		On Schedule
D-00A-06 Interim	Complete Methods Validations	06/30/2032		On Schedule
D-00A-15 Interim	Start PT Facility Cold Commissioning	12/31/2032		On Schedule
<b>Fiscal Year 2033</b>				
D-00A-04 Interim	HLW Facility Hot Commissioning Complete	12/31/2033		On Schedule
D-00A-16 Interim	PT Facility Hot Commissioning Complete	12/31/2033		On Schedule
D-00A-17	Hot Start of Waste Treatment Plant	12/31/2033		On Schedule
<b>Fiscal Year 2036</b>				
D-00A-01	Achieve Initial Plant Operations for the Waste Treatment Plant	12/31/2036		On Schedule

DOE = U.S. Department of Energy.  
 Ecology = Washington State Department of Ecology.  
 HLW = high-level waste.  
 LAW = low-activity waste.  
 PT = pretreatment.  
 SST = single-shell tank.  
 WMA-C = C Farm waste management area.

**Consent Decree Reports/Reviews**

**D-16C-03 series, Submit to State of Washington and State of Oregon Quarterly Report,**  
Due: 45 days following after each calendar year quarter, Status: On Schedule.

**D-00C-02 series, Submit to State of Washington and State of Oregon Monthly Summary Reports,** Due: End of each month, Status: On Schedule.

**D-006-00-B1, Provide State of Oregon notice of meetings in D-006-00-B, etc. no less than 30 days before they are scheduled,** Status: Complete.

**D-006-00-B, Meet Approximately Every Three Years after Entry of Decree to review requirements of the Consent Decree,** Status: Complete (March 16, 2017).

## Spare Reboiler Requirement Status

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Paul Hernandez

Milestone	Title	Due Date	Status
D-16E-01	DOE must purchase by December 31, 2016, a spare E-A-1 reboiler for the 242-A Evaporator	12/31/2016	Complete
D-16E-02	Have available spare E-A-1 reboiler for the 242-A Evaporator	12/31/2018	On Schedule

DOE = U.S. Department of Energy.

### Description of activity and progress made for the spare E-A-1 reboiler for the 242-A Evaporator, including a description of cost and schedule performance:

- Design of the new spare 242-A Evaporator reboiler is ongoing with ABW Technologies (ABW). A bounding-conditions finite element analysis (FEA) associated with the reboiler has been completed. Part of the analysis will be re-performed to assess re-boiler nozzle loads when in an installed configuration, at the request of the Washington River Protection Solutions LLC (WRPS) engineering design lead.
- The commercial grade dedication plan submitted by ABW has been reviewed and approved by WRPS engineering. ABW has completed the fabrication, inspection and testing traveler.

## Single-Shell Tank Retrieval Program

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Jeff Rambo

Milestone	Title	Due Date	Status
D-16B-03	Of the 12 SSTs referred to in B-1 and B-2, complete retrieval of tank waste in at least 5	12/31/2020	Notice given that a serious risk has arisen. See letter 16-ORP-0097.
D-16B-01	Complete retrieval of tank waste from the following remaining SSTs in WMA-C: C-102, C-105, and C-111	03/31/2024	On Schedule
D-16B-02	Complete retrieval of tank wastes from the following SSTs in Tank Farms A and AX: A-101, A-102, A-104, A-105, A-106, AX-101, AX-102, AX-103, and AX-104. Subject to the requirements of Section IV-B-3 DOE may substitute any of the identified 9 SSTs and advice Ecology accordingly.	03/31/2024	Notice given that a serious risk has arisen. See letter 16-ORP-0097.

DOE = U.S. Department of Energy.

Ecology = Washington State Department of Ecology.

SST = single-shell tank.

WMA-C = C Farm waste management area.

### Significant Accomplishments for the Prior Three Months:

- Completed all pit clean outs associated with Tank AX-102 and Tank AX-104 (eight of eight pit clean outs completed)
- Completed initial Tank AX portable exhaustor POR126 and POR127 testing; both exhaustors are operating under “testing” conditions
- Completed foam and lead removal at Tank AX-103
- Initiated field work activities for first long length equipment pulls from Tank AX-102 and Tank AX-104
- Installed Tank C-105 Third Technology slurry pump
- Initiated a second Tank C-105 construction shift to mitigate schedule impacts
- Installed one of two Tank C-105 ERSS
- Completed Tank C-105 POR209 hose-in-hose transfer line bypass

- Completed Tank C-105 excavations for electrical installations
- Initiated C Tank Farm hose-in-hose transfer line removals planned for fiscal year (FY) 2017
- Initiated removal of Tank AX-104 in-tank equipment (two thermocouple assemblies).

**Significant Planned Activities in the Next Three Months:**

- Negotiate contract proposal for installing and performing the third retrieval technology at Tank C-105
- Complete Tank C-105 slurry pump containment box installation
- Complete AX Tank Farm ventilation readiness/turnover at portable exhausters POR126 and POR127
  
- Complete in-service leak testing of Tank C-105 slurry pump installation
- Complete installation of second Tank C-105 extended reach sluicer
- Complete in-service leak testing for two (2) Tank C-105 extended reach sluicers
- Complete construction acceptance testing (CAT) for Tank C-105 3<sup>rd</sup> Technology Retrieval System
- Complete operational acceptance testing (OAT) for Tank C-105 3<sup>rd</sup> Technology Retrieval System
- Declare readiness for and initiate Tank C-105 3<sup>rd</sup> Technology Retrieval
- Complete Tank AX-101 foam and lead removal (lead removal is ongoing)
- Complete 801A Building demolition
- Complete installation of the new Tank C-105 Control System.
- Initiate Tank C-105 Third Retrieval Technology waste retrieval operations.

**Issues:**

- Reduced worker efficiencies associated with mandatory use of supplied air continues to impact work in the tank farms. With respect to ongoing litigation regarding chemical vapors, the parties held a two-day mediation session on April 20-21, 2017.

**Tank Waste Retrieval Work Plan Status**

Tank	TWRWP	Expected Revisions	Retrieval Technology		
			First	Second	Third
AX-101	RPP-RPT-58932, Rev. 0	In Progress	Sluicing with ERSS	High-Pressure Water deployed with ERSS	–
AX-102	RPP-RPT-58933, Rev. 0	In Progress	Sluicing with ERSS	High-Pressure Water deployed with ERSS	–
AX-103	RPP-RPT-58934, Rev. 0	In Progress	Sluicing with ERSS	High-Pressure Water deployed with ERSS	–
AX-104	RPP-RPT-58935, Rev. 0	In Progress	Sluicing with ERSS	High-Pressure Water deployed with ERSS	–
C-101	RPP-22520, Rev. 8	Complete	Modified Sluicing with ERSS	High-Pressure Water deployed with the ERSS	–
C-102	RPP-22393, Rev. 7	Complete	Modified Sluicing with ERSS	High-Pressure Water deployed with the ERSS	–
C-104	RPP-22393, Rev. 7	Complete	Modified Sluicing	Chemical Retrieval Process complete per 13-TF-0018	–
C-105	RPP-22520, Rev. 8	In Progress	MARS-V	MARS-V High-Pressure Water Spray	Chemical Dissolution Process with ERSS
C-107	RPP-22393, Rev. 7	Complete	MARS-S	MARS-S High-Pressure Water Spray	Water Dissolution
C-108	RPP-22393, Rev. 7	Complete	Modified Sluicing	Chemical Retrieval Process complete per 13-TF-0025	–
C-109	RPP-21895, Rev. 5	Complete	Modified Sluicing	Chemical Retrieval Process complete per 13-TF-0037	–

Tank	TWRWP	Expected Revisions	Retrieval Technology		
			First	Second	Third
C-110	RPP-33116, Rev. 3	Complete	Modified Sluicing	Mechanical Waste Conditioning with an In-Tank Vehicle	High Pressure Water
C-111	RPP-37739, Rev. 2	Complete	Modified Sluicing	High pressure water using the ERSS	Chemical Dissolution Process with ERSS
C-112	RPP-22393, Rev. 7	Complete	Modified Sluicing	Chemical Retrieval Process	–

ERSS = extended reach sluicer system.

MARS-S = Mobile Arm Retrieval System-Sluicing.

MARS-V = Mobile Arm Retrieval System-Vacuum.

TWRWP = tank waste retrieval work plan.

#### Significant Accomplishments:

- None.

#### Significant Planned Activities in the Next Three Months:

- Finalize AX Tank Farm retrieval work plans
- Incorporate third retrieval technology in the revised C-105 Tank Waste Retrieval Work Plan.

#### Issues:

- None.

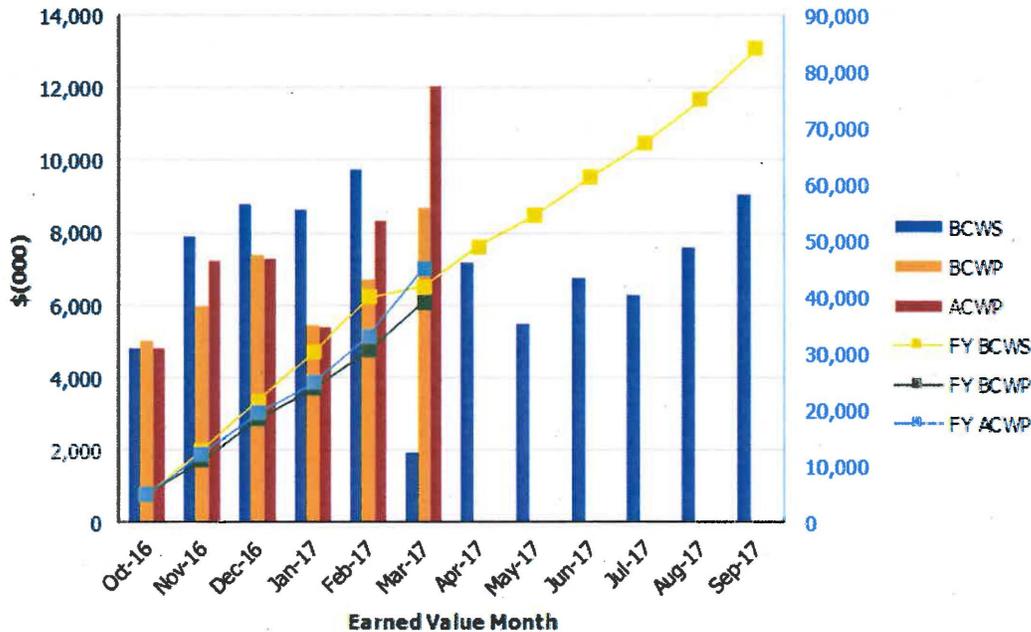
### EXC-01a: Fiscal Year Cost and Schedule Report

Earned Value Data: Fiscal Year 2017

March-17

**Tank Farms ORP-0014  
Retrieve and Close SST's 5.02**

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2016	\$4,816	\$4,996	\$4,822	1.04	1.04	\$4,816	\$4,996	\$4,822	1.04	1.04
Nov 2016	\$7,924	\$5,969	\$7,241	0.75	0.82	\$12,740	\$10,965	\$12,063	0.86	0.91
Dec 2016	\$8,772	\$7,401	\$7,262	0.84	1.02	\$21,512	\$18,365	\$19,325	0.85	0.95
Jan 2017	\$8,646	\$5,422	\$5,360	0.63	1.01	\$30,158	\$23,787	\$24,685	0.79	0.96
Feb 2017	\$9,716	\$6,707	\$8,341	0.69	0.80	\$39,874	\$30,495	\$33,026	0.76	0.92
Mar 2017	\$1,903	\$8,675	\$12,056	4.56	0.72	\$41,777	\$39,170	\$45,082	0.94	0.87
Apr 2017	\$7,156			0.00	0.00	\$48,933			0.00	0.00
May 2017	\$5,499			0.00	0.00	\$54,432			0.00	0.00
Jun 2017	\$6,758			0.00	0.00	\$61,191			0.00	0.00
Jul 2017	\$6,258			0.00	0.00	\$67,449			0.00	0.00
Aug 2017	\$7,579			0.00	0.00	\$75,028			0.00	0.00
Sep 2017	\$9,072			0.00	0.00	\$84,100			0.00	0.00
CTD	\$750,945	\$737,219	\$765,756	0.98	0.96					

ACWP = actual cost of work performed.  
 BCWP = budgeted cost of work performed.  
 BCWS = budgeted cost of work scheduled.  
 CPI = cost performance index.

CTD = contract to date.  
 EVMS = earned value management system.  
 FY = fiscal year.  
 SPI = schedule performance index.

**Retrieve and Close Single-Shell Tanks (5.02)**

The March 2017 **favorable** schedule variance (SV) of \$6,772K is due to:

- A baseline change request was processed in March that resulted in a point adjustment in the FY 2017 budget as a result of the Continuing Resolution. Adjustments included field work within AX Tank Farm that was originally planned to be performed this year but was constrained due to SCBA inefficiencies, beryllium precautions, limited personnel, and funding restrictions.

The March 2017 **unfavorable** cost variance (CV) of (\$3,381K) is due to:

- Increased costs are associated with the continued inefficiencies associated with SCBA usage. In addition, unanticipated costs have been incurred as a result of possible beryllium contamination, and sampling requirements in A/AX Tank Farms and C Tank Farm for personnel protection.

## Waste Treatment and Immobilization Plant Project

**Federal Project Director:** Bill Hamel

**Deputy Federal Project Director:** Joni Grindstaff

Milestone	Title	Due Date	Status
D-00A-06	Complete Methods Validations	06/30/2032	On Schedule
D-00A-17	Hot Start of Waste Treatment Plant	12/31/2033	On Schedule
D-00A-01	Achieve Initial Plant Operations for WTP	12/31/2036	On Schedule

WTP = Waste Treatment and Immobilization Plant.

The Waste Treatment and Immobilization Plant (WTP) Project currently employs approximately 3,114 full-time equivalent contractor, Bechtel National, Inc. (BNI), and subcontractor personnel. This includes 697 craft, 715 non-manual, and 122 subcontractor full-time equivalent personnel working at the WTP construction site (all facilities).

The WTP Project continues to focus on completion of the Low-Activity Waste (LAW) Facility, Balance of Facilities (BOF), and Analytical Laboratory (LAB) (collectively known as LBL, including direct-feed LAW [DFLAW] and LBL facility services). As of March 2017, total LBL facilities were 55 percent complete, design and engineering was 80 percent complete, procurement was 69 percent complete, construction was 72 percent complete, and startup and commissioning was 17 percent complete.

The WTP Project has complied with milestones already come due as of the date of this report. There are no missed milestones that may affect compliance with other milestones.

### Significant Accomplishments during the Prior Three Months:

- Significant accomplishments during the prior three months are noted in project reports for the Pretreatment (PT) Facility, High-Level Waste (HLW) Facility, LAW Facility, BOF, and LAB.

### Significant Planned Activities in the Next Three Months:

- Significant planned activities in the next three months are noted in project reports for the PT Facility, HLW Facility, LAW Facility, BOF, and LAB.

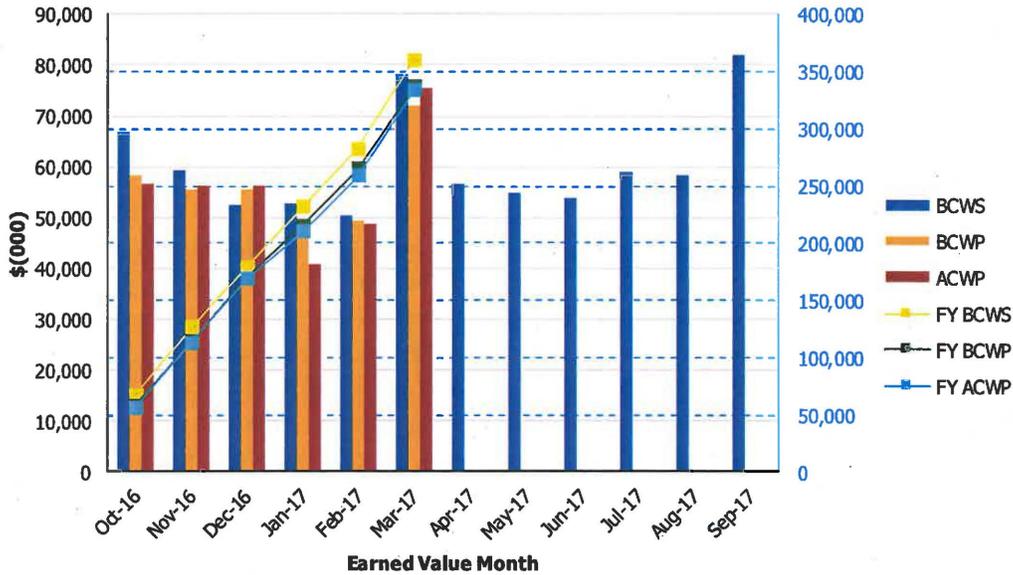
**EXC-01a: Fiscal Year Cost and Schedule Report**

Data Set: FY 2017 Earned Value Data

Data as of: March 2017

**River Protection Project  
Waste Treatment Plant (WTP) Project**

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2016	\$67,019	\$58,321	\$56,633	0.87	1.03	\$67,019	\$58,321	\$56,633	0.87	1.03
Nov 2016	\$59,361	\$55,681	\$56,299	0.94	0.99	\$126,379	\$114,002	\$112,932	0.90	1.01
Dec 2016	\$52,654	\$55,489	\$56,125	1.05	0.99	\$179,033	\$169,491	\$169,057	0.95	1.00
Jan 2017	\$52,807	\$46,077	\$40,881	0.87	1.13	\$231,840	\$215,568	\$209,938	0.93	1.03
Feb 2017	\$50,489	\$49,354	\$48,627	0.98	1.01	\$282,329	\$264,922	\$258,565	0.94	1.02
Mar 2017	\$78,183	\$72,145	\$75,415	0.92	0.96	\$360,512	\$337,067	\$333,981	0.93	1.01
Apr 2017	\$56,589									
May 2017	\$55,031									
Jun 2017	\$54,043									
Jul 2017	\$59,154									
Aug 2017	\$58,300									
Sep 2017	\$81,906									
<b>PTD</b>	<b>\$10,188,628</b>	<b>\$10,138,076</b>	<b>\$10,064,070</b>	<b>1.00</b>	<b>1.01</b>					

ACWP = actual cost of work performed.  
 BCWP = budgeted cost of work performed.  
 BCWS = budgeted cost of work scheduled.  
 CPI = cost performance index.

CTD = contract to date.  
 EVMS = earned value management system.  
 FY = fiscal year.  
 SPI = schedule performance index.

**Project Schedule and Cost Variance Performance**

<b>Performance Tracking</b>	<b>SV (\$x1,000)</b>	<b>CV (\$x1,000)</b>
Current Period (March 2017)	(\$6,038)	(\$3,270)
Fiscal Year 2017 to-date	(\$23,446)	\$3,086
Cumulative (through March 2017)	(\$50,551)	\$74,007

CV = cost variance.

SV = schedule variance.

**Earned Value Management System Analysis**

The Earned Value Management System (EVMS) is intended to provide a status of how the contractor is progressing against its planned work (i.e., schedule), and whether it is costing more or less to complete the work than planned. The project plan is measured by expressing the schedule in terms of dollars spread over the anticipated project duration, and then for each month, determining how much of the planned work was accomplished or “earned,” as measured in equivalent dollars. If more work is accomplished than planned, then the project is ahead of schedule and has a favorable SV. Similarly, if less work is accomplished, the project is behind schedule and has an unfavorable SV. Accomplished work is reported in the month it was completed, which may not be when it was planned. For example, work completed in a month earlier than planned would be reported as a favorable SV for the month in which it was completed, but would be reported as an unfavorable SV in the month it was planned. The end result would be the overall cumulative SV netting out to zero over these months. Likewise, work completed late will recover an earlier reported unfavorable SV.

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

The SV and CV are reported for each monthly period, fiscal year to-date, as well as for the project-to-date value. The monthly variances can fluctuate significantly (for reasons noted earlier), so the fiscal year or cumulative-to-date report provides a better indicator of the overall project completion status, and can give a reasonable projection of how the project will finish, based on the progress-to-date.

For the March EVMS reporting period, a net **unfavorable** SV of approximately (\$6.0 million) was reported (meaning a net of \$6 million worth of planned work scope was not completed), primarily due to the following:

- The LBL/DFLAW facilities reported a net unfavorable SV of (\$6.0 million). LBL Engineering contributed about \$2.5 million of the unfavorable SV, as the LAW Mechanical Systems, Controls and Instrumentation, and Plant Design continue to be

impacted by the change in preliminary documented safety analysis (PDSA) execution strategy. LBL Construction, Startup, and Commissioning reported an unfavorable SV of (\$3.0 million). However, this variance is mostly related to implementation of the Waste Treatment Completion Company subcontract into the BNI Performance Measurement Baseline. The existing BNI Construction, Startup, and Commissioning control accounts were closed and all remaining effort was transferred to the new Waste Treatment Completion Company control accounts. The change resulted in *current period* adjustments and administrative impacts to performance reporting, but did not significantly impact the to-date variances.

For the March EVMS reporting period, a net **unfavorable** CV of approximately (\$3.3 million) was reported (meaning it cost about \$3.3 million more to complete the work scope than estimated), primarily due to the following:

- The LBL/DFLAW facilities reported a net unfavorable CV of (\$2.0 million). LBL Engineering recorded about \$1.7 million of the unfavorable CV, related to LAW Engineering resources charging to special purpose charge codes in executing the revised PDSA execution strategy. LBL Construction, Startup, and Commissioning recorded an unfavorable CV of (\$0.5 million). This was related to implementation of the Waste Treatment Completion Company subcontract into the BNI Performance Measurement Baseline (as noted above). These unfavorable CVs were offset by an LBL support functions favorable CV of \$0.3 million, primarily related to less resources being utilized than planned.
- Project Services reported a net unfavorable CV of (\$1.5 million). General/Other services recorded a net unfavorable CV of (\$1.1 million) primarily due to site closure costs and Information Technology equipment and software lease costs that were deferred and will be corrected in future reports.
- The PT Facility reported a net unfavorable CV of (\$0.2 million), related to technical teams extra effort to complete the standard high-solids vessel (SHSV) design plant vessel structural analysis and additional support of the full-scale vessel test program from the national laboratories.
- The HLW Facility reported a favorable CV of \$0.3 million, due to favorable performance in level-of-effort accounts and less procurement support being required than planned.

Through the current monthly reporting period, there are no SVs or CVs impacting current Consent Decree milestones.

## Pretreatment Facility

**Federal Project Director:** Bill Hamel

**Facility Federal Project Director:** Wahed Abdul

Milestone	Title	Due Date	Status
D-00A-18	Complete Structural Steel Erection Below Elevation 56' in PT Facility	12/31/2009	Complete
D-00A-19	Complete Elevation 98' Concrete Floor Slab in PT Facility	12/31/2031	On Schedule
D-00A-13	Complete Installation of Pretreatment Feed Separation Vessels	12/31/2031	On Schedule
D-00A-14	PT Facility Construction Substantially Complete	12/31/2031	On Schedule
D-00A-15	Start PT Facility Cold Commissioning	12/31/2032	On Schedule
D-00A-16	PT Facility Hot Commissioning Complete	12/31/2033	On Schedule

PT = pretreatment.

The PT Facility will separate radioactive tank waste into high-level waste and low-activity waste fractions, and transfer each waste type to the respective vitrification facility for immobilization. As of September 2012, the PT Facility was 56 percent complete overall, with engineering design 85 percent complete, procurement 56 percent complete, construction 43 percent complete, and startup and commissioning 3 percent complete. The physical percent complete analysis for the PT Facility was frozen in September 2012, pending development of a revised baseline to address technical and design issues.

ORP and BNI continue to work on resolving the remaining technical issues as described in the Amended Consent Decree, which includes, “Ensuring Control of the Pulse Jet Mixers” (i.e., T4 in relation to pulse jet mixer [PJM] vessel mixing and control); “Protecting Against Possible Erosion and Corrosion” (i.e., T5 in relation to erosion/corrosion in piping and ancillary vessels); and “Ensuring Ventilation Balancing” (i.e., T8 in relation to facility ventilation/process offgas treatment).

Work is also being performed to evaluate the facility design using the SHSV test design prototype (i.e., T6 in relation to design redundancy and in-service inspection), and evaluating vessel and equipment structural integrity (i.e., T7 in relation to seismic ground motion criteria changes around 2005).

Full-scale testing is ongoing and significant progress has been made in addressing the PJM controls and mixing issue. Test plans have been designed to demonstrate adequacy of the PJM control system and the vessel mixing to support resolution of PJM issues applicable to PT Facility vessels with high solids concentrations and non-Newtonian slurries. Test results will be used to support the PT Facility redesign with the SHSV design. ORP continues to work with

BNI to develop closure packages for each technical issue, defining work scope, required deliverables, and technical issue resolution criteria.

**Significant Accomplishments during the Prior Three Months:**

- ORP and BNI initiated testing of a proposed PJM SHSV design to replace a number of vessel designs in the PT Facility (this is in relation to resolving concerns over PJM vessel mixing and control [i.e., T4]). A prototype of the 16-foot-diameter SHSV was commissioned in December 2016. Testing is expected to be completed in September 2017 and will provide the required design and operations information to support PT Facility design.
- BNI issued a Basis of Design Change Notice establishing the erosion/corrosion basis of design parameters (this is in relation to resolving concerns over erosion/corrosion in piping and vessels [i.e., T5]).
- BNI issued the draft SHSV Conceptual Design Plan to ORP for review.

**Significant Planned Activities in the Next Three Months:**

- BNI to complete the erosion/corrosion synergistic test simulant qualification and final recipe.
- BNI will continue full-scale testing of the SHSV design prototype, focusing on the PJM mixing systems testing.
- BNI to complete non-Newtonian blend testing at the National Engineering Technology Laboratory that supports the full-scale vessel testing.
- ORP and BNI will continue efforts to resolve the spray leak methodology and sliding bed wear issues identified by the Defense Nuclear Facilities Safety Board in its *26<sup>th</sup> Annual Report to Congress*, dated March 2016.
- BNI to issue an update to the localized corrosion test basis document.

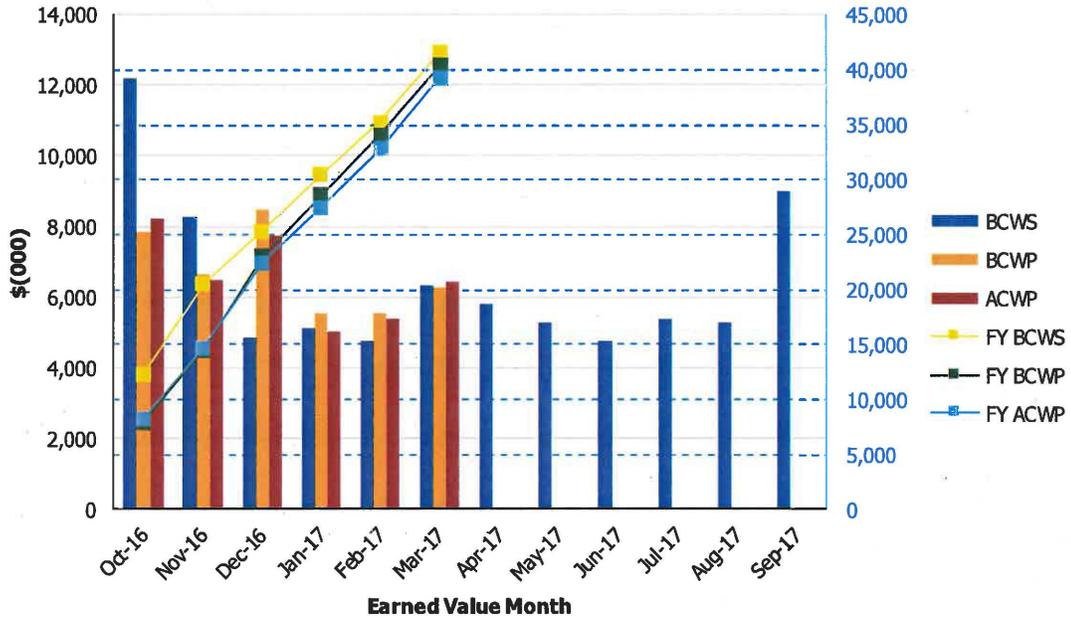
**EXC-01a: Fiscal Year Cost and Schedule Report**

Data Set: FY 2017 Earned Value Data

Data as of: March 2017

**River Protection Project  
Pretreatment Facility (WBS 1.01)**

EVMS Monthly and Fiscal Year Values



Earned Value * Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2016	\$12,193	\$7,845	\$8,196	0.64	0.96	\$12,193	\$7,845	\$8,196	0.64	0.96
Nov 2016	\$8,254	\$6,654	\$6,487	0.81	1.03	\$20,447	\$14,500	\$14,684	0.71	0.99
Dec 2016	\$4,851	\$8,480	\$7,738	1.75	1.10	\$25,298	\$22,980	\$22,421	0.91	1.02
Jan 2017	\$5,139	\$5,539	\$5,024	1.08	1.10	\$30,437	\$28,519	\$27,445	0.94	1.04
Feb 2017	\$4,765	\$5,517	\$5,361	1.16	1.03	\$35,202	\$34,036	\$32,806	0.97	1.04
Mar 2017	\$6,333	\$6,286	\$6,455	0.99	0.97	\$41,535	\$40,322	\$39,261	0.97	1.03
Apr 2017	\$5,816									
May 2017	\$5,300									
Jun 2017	\$4,769									
Jul 2017	\$5,385									
Aug 2017	\$5,307									
Sep 2017	\$9,009									

PTD	\$1,889,812	\$1,890,562	\$1,866,834	1.00	1.01
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- |      |   |                                  |      |   |                                 |
|------|---|----------------------------------|------|---|---------------------------------|
| ACWP | = | actual cost of work performed.   | CTD  | = | contract to date.               |
| BCWP | = | budgeted cost of work performed. | EVMS | = | earned value management system. |
| BCWS | = | budgeted cost of work scheduled. | FY   | = | fiscal year.                    |
| CPI  | = | cost performance index.          | SPI  | = | schedule performance index.     |

## High-Level Waste Facility

**Federal Project Director:** Bill Hamel

**Facility Federal Project Director:** Wahed Abdul

Milestone	Title	Due Date	Status
D-00A-20	Complete Construction of Structural Steel to 14' in HLW Facility	12/31/2010	Complete
D-00A-21	Complete Construction of Structural Steel to 37' in HLW Facility	12/31/2012	Complete
D-00A-02	HLW Facility Construction Substantially Complete	12/31/2030	On Schedule
D-00A-03	Start HLW Facility Cold Commissioning	06/30/2032	On Schedule
D-00A-04	HLW Facility Hot Commissioning Complete	12/31/2033	On Schedule

HLW = high-level waste.

The HLW Facility will receive the separated high-level waste concentrate from the PT Facility. This concentrate will be blended with glass formers, converted into molten glass in one of the two HLW Facility melters, and then poured into cylindrical stainless steel canisters. After cooling, the canisters will be sealed and decontaminated before shipping to interim storage.

As of September 2012, the HLW Facility was 62 percent complete overall, with engineering design 89 percent complete, procurement 81 percent complete, construction 43 percent complete, and startup and commissioning 4 percent complete. The physical percent complete analysis for the HLW Facility was frozen in September 2012, pending development of a revised baseline to address technical and design issues.

Work on the HLW Facility is now being performed in accordance with the FY 2017–FY 2021 Interim Work Plan. BNI is still working under a limited construction and procurement authorization, and efforts are focused on completing activities required to obtain full-production authorization from ORP. BNI submitted a Facility Completion Plan identifying the strategy for obtaining full authorization to complete engineering, procurement, and construction of the HLW Facility. The final draft of the HLW Facility Completion Plan has been approved by ORP.

BNI Engineering is focused on activities to support implementation of technical core team recommendations and development of engineering studies and analysis to disposition design and operability (D&O) review comments. All of the planned engineering studies and individual comment dispositions in support of the resolution of the D&O comments have been issued. ORP has reviewed all disposition comments for adequacy. BNI is now developing a final D&O report to summarize recommendations to support ORP authorization for full construction.

The HLW Facility PDSA update to align design and the safety basis was previously submitted to ORP. The ORP-chartered Safety Basis Review Team provided initial comments, and BNI submitted responses to those comments along with a revised PDSA in early March 2017. This

review and comment resolution process is being impacted by resource constraint and has been delayed due to the ongoing LBL PDSA review and approval, which is a higher WTP priority at this time. Once the HLW PDSA is approved, system design requirements will be confirmed to ensure facility design is aligned with the nuclear safety basis.

All testing at Mississippi State University of the high-efficiency particulate air (HEPA) filter “Design 4” for the safe-change and remote-change housings have been completed successfully. Underwriters Laboratories testing for flame and flammability resistance is underway. The final report from the results of the testing is planned to be issued in mid-2017.

**Significant Accomplishments during the Prior Three Months:**

- ORP approved the HLW Facility Completion Plan.
- BNI incorporated ORP comments into the final HLW Facility Completion Plan submittal.
- BNI transmitted the revised PDSA change package, incorporating responses to the Safety Basis Review Team comments.
- BNI released material procurement and fabrication of RLD-7 and RLD-8 vessels. These vessels are located in the wet process cell and must be installed prior to concrete slab placement, which supports roof installation. Fabrication of these vessels is underway.
- BNI completed disposition of D&O comments.
- BNI completed NQA-1 HEPA filter qualification testing of the “Design 4” safe-change and remote-change filters.

**Significant Planned Activities in the Next Three Months:**

- BNI to issue the final D&O report to ORP summarizing disposition of D&O comments.
- ORP to perform comment resolution of the draft PDSA update.
- BNI to issue reports associated with the full-scale testing and final selection of HEPA filters supporting the ventilation and offgas systems of HLW and LBL facilities.
- BNI to continue with facility preservation and maintenance activities.

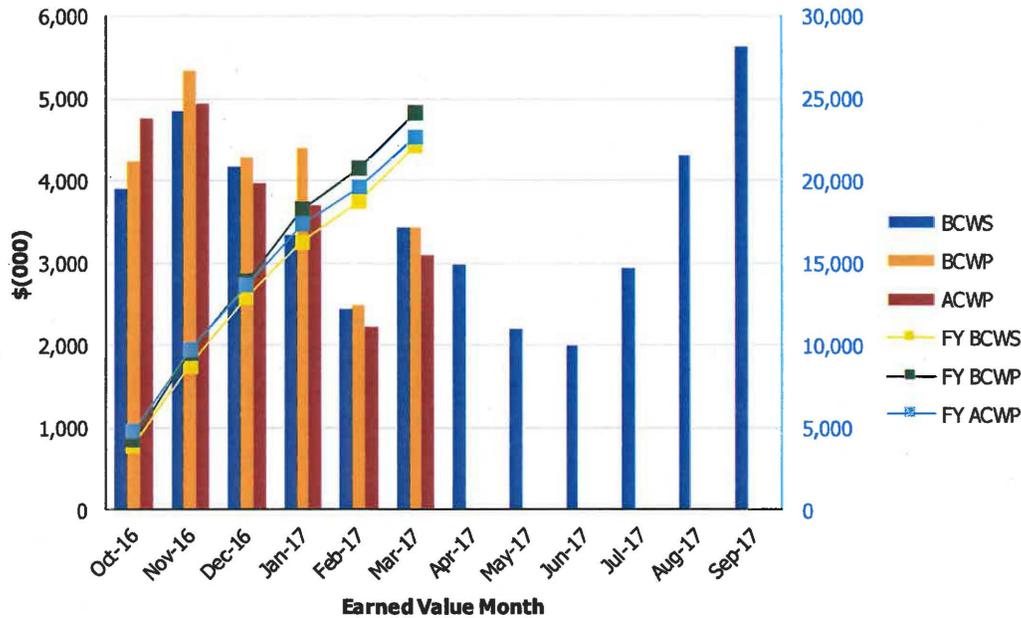
**EXC-01a: Fiscal Year Cost and Schedule Report**

Data Set: FY 2017 Earned Value Data

Data as of: March 2017

**River Protection Project  
High-Level Waste Facility (WBS 1.03)**

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2016	\$3,910	\$4,231	\$4,761	1.08	0.89	\$3,910	\$4,231	\$4,761	1.08	0.89
Nov 2016	\$4,855	\$5,337	\$4,930	1.10	1.08	\$8,766	\$9,568	\$9,692	1.09	0.99
Dec 2016	\$4,163	\$4,292	\$3,960	1.03	1.08	\$12,929	\$13,860	\$13,652	1.07	1.02
Jan 2017	\$3,343	\$4,387	\$3,702	1.31	1.19	\$16,271	\$18,247	\$17,354	1.12	1.05
Feb 2017	\$2,439	\$2,491	\$2,225	1.02	1.12	\$18,710	\$20,738	\$19,579	1.11	1.06
Mar 2017	\$3,425	\$3,427	\$3,098	1.00	1.11	\$22,135	\$24,165	\$22,676	1.09	1.07
Apr 2017	\$2,992									
May 2017	\$2,202									
Jun 2017	\$2,001									
Jul 2017	\$2,946									
Aug 2017	\$4,297									
Sep 2017	\$5,632									
<b>PTD</b>	<b>\$1,305,166</b>	<b>\$1,305,746</b>	<b>\$1,283,672</b>	<b>1.00</b>	<b>1.02</b>					

- |   |  |
|---|--|
| ACWP = actual cost of work performed.   | CTD = contract to date.                |
| BCWP = budgeted cost of work performed. | EVMS = earned value management system. |
| BCWS = budgeted cost of work scheduled. | FY = fiscal year.                      |
| CPI = cost performance index.           | SPI = schedule performance index.      |

## Low-Activity Waste Facility

**Federal Project Director:** Bill Hamel

**Facility Federal Project Director:** Jeff Bruggeman

Milestone	Title	Due Date	Status
D-00A-07	LAW Facility Construction Substantially Complete	12/31/2020	On Schedule
D-00A-08	Start LAW Facility Cold Commissioning	12/31/2022	On Schedule
D-00A-09	LAW Facility Hot Commissioning Complete	12/31/2023	On Schedule

LAW = low-activity waste.

The LAW Facility will process concentrated low-activity waste, which will be mixed with silica and other glass-forming materials. The mixture will be fed into the LAW Facility's two melters at a design capacity of 30 metric tons per day, heated to 2,100°F, and vitrified into glass. The 300-ton melters are approximately 20 feet by 30 feet and 16 feet high. The glass mixture will then be poured into stainless steel containers, which are 4 feet in diameter, 7 feet tall, and weigh more than 7 tons. These containers are anticipated to be disposed of on the Hanford Site in the Integrated Disposal Facility. As of March 2017, the LAW Facility was 61 percent complete overall, with engineering design 82 percent complete, procurement 76 percent complete, construction 85 percent complete, and startup and commissioning 10 percent complete.

### Significant Accomplishments during the Prior Three Months:

- BNI completed placement of concrete for the caustic scrubber platform.
- BNI reassembled wet electrostatic precipitator 1 electrodes.
- BNI completed installation of the melter jack-bolts on melter 1 as progress continues on completing the melters.
- BNI provided ORP with the draft LAW PDSA.
- BNI received delivery of the final shipment of caustic scrubber internals and completed installation.
- ORP completed caustic scrubber vessel vertical slice review.
- BNI installed the steel caustic scrubber platform on the greater than the 48-foot elevation (i.e., EL+48).
- BNI completed repairs for the LAW Facility primary offgas system wet electrostatic precipitator vessel nozzle welds.
- BNI completed LAW Facility secondary offgas/vessel vent process system pipe tie-ins at caustic scrubber and thermal catalytic oxidizer.
- BNI installed and tested melter bubblers and completed welding on melter shield lids.

- BNI completed base frame modifications on both melters.
- BNI issued the 90 percent design review reports for the following:
  - C1 ventilation system (C1V)–C5V
  - Radioactive solid waste handling system
  - LAW melter handling system
  - LAW melter equipment support handling system
  - Carbon dioxide gas system
  - Plant cooling water system.

**Significant Planned Activities in the Next Three Months:**

- BNI to start assembly of cooling jackets for LAW Facility melter feed process vessels.
- BNI to complete final assembly of melter 1.
- BNI to receive and install redesigned melter jack-bolts for melter 2.
- BNI to reinstall wet electrostatic precipitator internals now that radiographic testing to verify adequacy of welds is complete.
- BNI to perform initial system walkdowns for the following:
  - Chilled water system
  - Domestic (potable) water system
  - C1V.
- ORP to evaluate preliminary hazard category calculation for LAW Facility.
- BNI to develop hazard identification checklist, what-if tables, and process hazard analysis events for accident scenarios to support PDSA update development.
- BNI to install C3V air conditioning unit for offgas exhausters on the greater than the 48-foot elevation (i.e., EL+48).

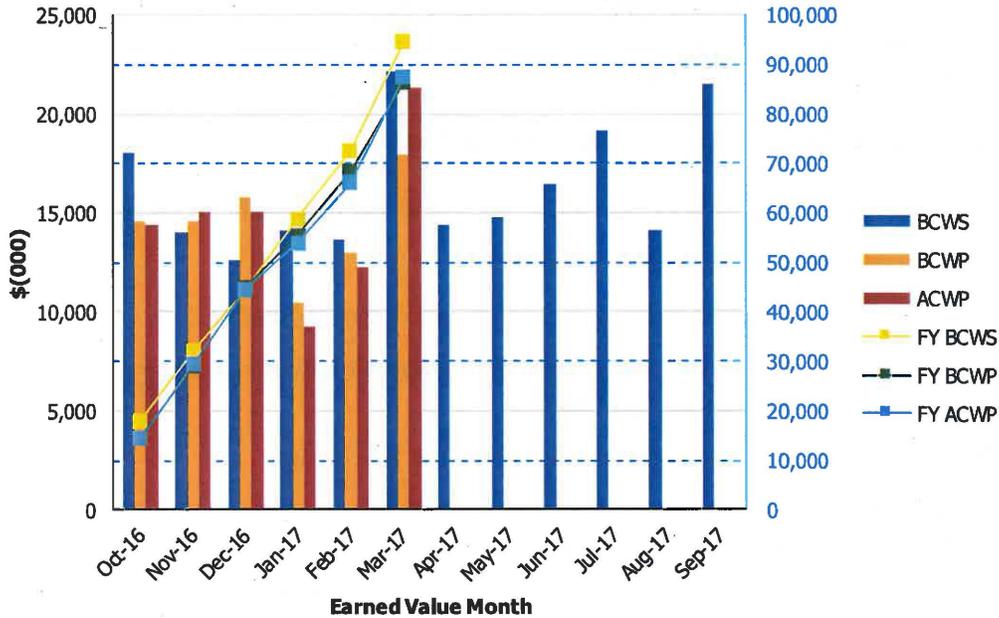
**EXC-01a: Fiscal Year Cost and Schedule Report**

Data Set: FY 2017 Earned Value Data

Data as of: March 2017

**River Protection Project  
Low-Activity Waste Facility (WBS 1.02)**

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2016	\$18,055	\$14,539	\$14,396	0.81	1.01	\$18,055	\$14,539	\$14,396	0.81	1.01
Nov 2016	\$14,013	\$14,564	\$15,062	1.04	0.97	\$32,068	\$29,102	\$29,458	0.91	0.99
Dec 2016	\$12,629	\$15,785	\$15,081	1.25	1.05	\$44,697	\$44,887	\$44,539	1.00	1.01
Jan 2017	\$14,122	\$10,498	\$9,286	0.74	1.13	\$58,818	\$55,386	\$53,825	0.94	1.03
Feb 2017	\$13,603	\$12,947	\$12,282	0.95	1.05	\$72,421	\$68,333	\$66,107	0.94	1.03
Mar 2017	\$22,131	\$17,933	\$21,287	0.81	0.84	\$94,552	\$86,266	\$87,395	0.91	0.99
Apr 2017	\$14,370									
May 2017	\$14,730									
Jun 2017	\$16,424									
Jul 2017	\$19,190									
Aug 2017	\$14,105									
Sep 2017	\$21,509									
<b>PTD</b>	<b>\$1,543,582</b>	<b>\$1,524,459</b>	<b>\$1,523,588</b>	<b>0.99</b>	<b>1.00</b>					

ACWP = actual cost of work performed.  
 BCWP = budgeted cost of work performed.  
 BCWS = budgeted cost of work scheduled.  
 CPI = cost performance index.

CTD = contract to date.  
 EVMS = earned value management system.  
 FY = fiscal year.  
 SPI = schedule performance index.

## Balance of Facilities

**Federal Project Director:** Bill Hamel

**Facility Federal Project Director:** Jason Young

Milestone	Title	Due Date	Status
D-00A-12	Steam Plant Construction Complete	12/31/2012	Complete

BOF will provide services and utilities to support operation of the main production facilities: PT, HLW, LAW, and LAB. As of March 2017, BOF was 65 percent complete overall, with engineering design 84 percent complete, procurement 80 percent complete, construction 92 percent complete, and startup and commissioning 25 percent complete.

Engineering activities continue to support the DFLAW initiative. Current efforts are focused on progressing the design of the Effluent Management Facility (EMF), supporting the EMF dangerous waste permit, supporting EMF procurement activities, and providing field support for BOF startup activities. Construction efforts are focused on rebar and embed placement for the EMF walls, concrete placement for EMF slabs, and completion of the remaining items required for energization of the BOF switchgear building from the WTP switchgear building. Additional construction punch list activities are underway to support turnover of the water treatment building and cooling tower facility to the startup organization for component-level testing.

### Significant Accomplishments during the Prior Three Months:

- BNI energized the water treatment building (Building 86) from BOF switchgear (Building 91) low voltage permanent power.
- EMF Secondary Containment Dangerous Waste Permit temporary authorization for EMF concrete placement received. Concrete placement of utility building (Building 26) completed, and main process building slab completed with the exception of the low point drain tank and truck bay slabs.
- BNI completed the low point drain tank excavation, placed mudmat, and began rebar placement.
- BNI awarded process tank and vessel procurements for EMF.
- BNI completed turnover of the following systems to its startup organization:
  - Water treatment building process service water system
  - Water treatment building demineralized water system
  - Water treatment building domestic (potable) water system
  - BOF switchgear building low voltage electrical system
  - BOF switchgear building medium voltage electrical system
  - Water treatment building fire detection and alarm system
  - Water treatment building nonradioactive, nondangerous liquid drain system
  - Water treatment building low voltage electrical system
  - Cathodic protection systems

- Cooling tower process control system.
- BNI initiated testing for the cathodic protection system rectifiers.
- BNI completed the functional review of installation of the fire detection and alarm system fire detection equipment in the water treatment building (Building 86) and cooling tower facility (Building 83).
- ORP and the Washington State Department of Ecology provided informal comments to BNI on the EMF Underground Transfer Line Permit package. BNI formally submitted EMF Underground Transfer Line Permit package to ORP.

**Significant Planned Activities in the Next Three Months:**

- BNI to issue DFLAW modification drawings for construction for the steam plant.
- BNI to complete nonradioactive liquid waste disposal system functional test.
- BNI expects to turn over the following systems to its startup organization:
  - Steam plant facility low voltage electrical system
  - Cooling tower facility low voltage electrical system
  - Cooling tower facility plant cooling water system
  - Diesel fuel oil facility process control system
  - Diesel fuel oil facility diesel fuel oil system
  - Chiller compressor plant low voltage electrical system
  - Chiller compressor plant fire detection and alarm system
  - Chiller compressor plant chilled water system
  - Chiller compressor plant process control system.
- BNI to award EMF evaporator fabrication.
- BNI to confirm final sizing of new rectifiers for the cathodic protection system through completion of current injection test.
- BNI to complete testing in support of Phase 2 energization to BOF switchgear Building 91.

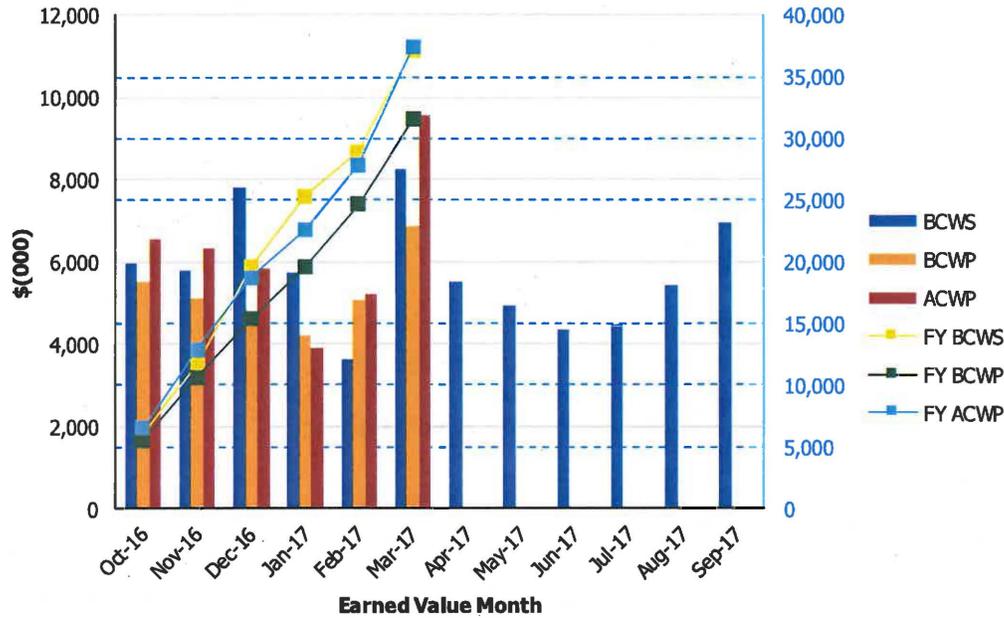
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2017 Earned Value Data

Data as of: March 2017

**River Protection Project  
Balance of Facilities (WBS 1.05)**

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2016	\$5,977	\$5,519	\$6,535	0.92	0.84	\$5,977	\$5,519	\$6,535	0.92	0.84
Nov 2016	\$5,773	\$5,120	\$6,338	0.89	0.81	\$11,751	\$10,640	\$12,874	0.91	0.83
Dec 2016	\$7,799	\$4,729	\$5,843	0.61	0.81	\$19,549	\$15,369	\$18,717	0.79	0.82
Jan 2017	\$5,754	\$4,219	\$3,918	0.73	1.08	\$25,304	\$19,588	\$22,634	0.77	0.87
Feb 2017	\$3,635	\$5,048	\$5,197	1.39	0.97	\$28,938	\$24,636	\$27,831	0.85	0.89
Mar 2017	\$8,237	\$6,862	\$9,546	0.83	0.72	\$37,175	\$31,498	\$37,378	0.85	0.84
Apr 2017	\$5,529									
May 2017	\$4,909									
Jun 2017	\$4,361									
Jul 2017	\$4,484									
Aug 2017	\$5,437									
Sep 2017	\$6,942									
<b>PTD</b>	<b>\$564,782</b>	<b>\$553,292</b>	<b>\$560,641</b>	<b>0.98</b>	<b>0.99</b>					

- ACWP = actual cost of work performed.
- BCWP = budgeted cost of work performed.
- BCWS = budgeted cost of work scheduled.
- CPI = cost performance index.
- CTD = contract to date.
- EVMS = earned value management system.
- FY = fiscal year.
- SPI = schedule performance index.

## Analytical Laboratory

**Federal Project Director:** Bill Hamel

**Facility Federal Project Director:** Jason Young

Milestone	Title	Due Date	Status
D-00A-05	LAB Construction Substantially Complete	12/31/2012	Complete

LAB = analytical laboratory.

The LAB will support WTP operations by analyzing feed, vitrified waste, and effluent streams. As of March 2017, the LAB was 65 percent complete overall, with engineering design 81 percent complete, procurement 88 percent complete, construction 96 percent complete, and startup and commissioning 18 percent complete.

During this reporting period, efforts were focused on startup testing of the test engineer's workstation and procurement activities for the offsite laboratory.

### Significant Accomplishments during the Prior Three Months:

- BNI completed turnover of the sanitary disposal system.
- BNI completed turnover of the C1V system.
- BNI completed the fire detection and alarm system facility battery-drawdown fire protection acceptance test.
- BNI continued final wall and floor coatings.
- BNI continued development of procedures for the WTP analytical methods.
- BNI received the replacement heating, ventilation, and air-conditioning (HVAC) condenser.

### Significant Planned Activities in the Next Three Months:

- BNI to award the temporary laboratory space request for proposal, which allows for earlier laboratory methods development and training to ensure laboratory staff are ready at the start of commissioning.
- ORP and BNI to reach an agreement on proposed C5V modifications, if needed.
- BNI to continue testing control and monitoring systems in the test engineer's workstation to support the nonradioactive liquid waste disposal system functional tests.
- BNI to award procurement for toxicity refrigerant monitor needed for beneficial occupancy.
- BNI to install the replacement HVAC condenser.

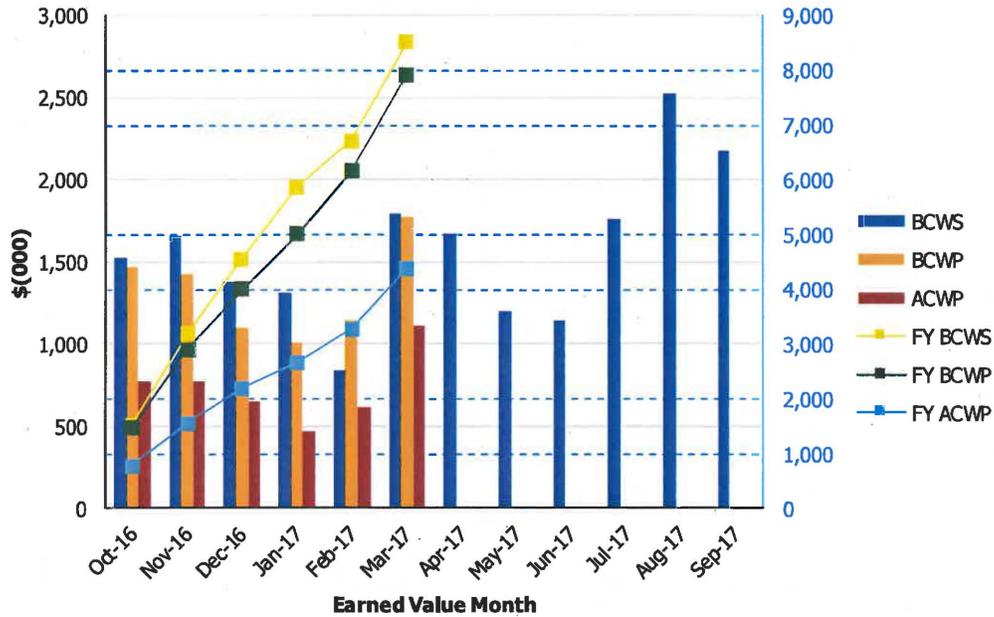
**EXC-01a: Fiscal Year Cost and Schedule Report**

Data Set: FY 2017 Earned Value Data

Data as of: March 2017

**River Protection Project  
Analytical Laboratory (WBS 1.06)**

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2016	\$1,521	\$1,470	\$776	0.97	1.89	\$1,521	\$1,470	\$776	0.97	1.89
Nov 2016	\$1,661	\$1,426	\$777	0.86	1.83	\$3,182	\$2,896	\$1,553	0.91	1.86
Dec 2016	\$1,375	\$1,098	\$645	0.80	1.70	\$4,557	\$3,994	\$2,198	0.88	1.82
Jan 2017	\$1,309	\$1,008	\$466	0.77	2.16	\$5,866	\$5,001	\$2,664	0.85	1.88
Feb 2017	\$845	\$1,141	\$612	1.35	1.86	\$6,711	\$6,143	\$3,277	0.92	1.87
Mar 2017	\$1,791	\$1,774	\$1,109	0.99	1.60	\$8,502	\$7,916	\$4,385	0.93	1.81
Apr 2017	\$1,673									
May 2017	\$1,197									
Jun 2017	\$1,144									
Jul 2017	\$1,766									
Aug 2017	\$2,520									
Sep 2017	\$2,178									

PTD	\$347,108	\$344,490	\$333,410	0.99	1.03
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- ACWP = actual cost of work performed.
- BCWP = budgeted cost of work performed.
- BCWS = budgeted cost of work scheduled.
- CPI = cost performance index.
- CTD = contract to date.
- EVMS = earned value management system.
- FY = fiscal year.
- SPI = schedule performance index.

### Waste Treatment Plant Project Percent Complete Status (Table)

Waste Treatment Plant Project - (LBL/Project Services) Percent Complete Status  
Through March 2017

(Dollars - Millions)	Overall Facility Percent Complete Unallocated Dollars			Design/Engineering Unallocated Dollars			Procurement Unallocated Dollars			Construction Unallocated Dollars			Startup & Plant Operations Unallocated Dollars			Project Management & Shared Services Unallocated Dollars		
	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete
<b>Facilities</b>																		
Low-Activity Waste	2,285.8	1,395.8	61%	556.0	456.3	82%	373.4	283.0	76%	689.8	588.4	85%	662.5	63.9	10%	4.0	4.0	100%
Balance of Facilities	753.5	491.2	65%	153.9	128.5	84%	72.4	57.8	80%	257.3	236.6	92%	269.5	67.7	25%	0.5	0.5	100%
Analytical Lab	510.0	331.9	65%	108.3	88.1	81%	65.6	57.4	88%	161.3	155.0	96%	174.3	30.9	18%	0.5	0.5	100%
Direct Feed LAW	396.9	105.3	27%	96.4	62.0	64%	56.2	6.3	11%	235.3	32.3	14%	0.0	0.0	0%	9.1	4.7	52%
LBL Facility Services	648.8	195.7	30%	0.0	0.0	0%	59.9	26.3	44%	137.5	49.6	36%	208.9	63.6	30%	242.4	56.1	23%
<b>Total LBL</b>	<b>4,595.1</b>	<b>2,519.8</b>	<b>55%</b>	<b>914.6</b>	<b>735.1</b>	<b>80%</b>	<b>627.5</b>	<b>430.9</b>	<b>69%</b>	<b>1,481.3</b>	<b>1,061.9</b>	<b>72%</b>	<b>1,315.2</b>	<b>226.1</b>	<b>17%</b>	<b>256.5</b>	<b>65.8</b>	<b>26%</b>
Project Services	1,031.1	433.2	42%	131.8	61.7	47%	73.9	38.7	52%	105.5	74.2	70%	1.7	1.7	100%	718.2	257.0	36%
<b>Total Project Services</b>	<b>1,031.1</b>	<b>433.2</b>	<b>42%</b>	<b>131.8</b>	<b>61.7</b>	<b>47%</b>	<b>73.9</b>	<b>38.7</b>	<b>52%</b>	<b>105.5</b>	<b>74.2</b>	<b>70%</b>	<b>1.7</b>	<b>1.7</b>	<b>100%</b>	<b>718.2</b>	<b>257.0</b>	<b>36%</b>
<b>Total LBL, DFLAW &amp; Project Services</b>	<b>5,626.2</b>	<b>2,953.0</b>	<b>52%</b>	<b>1,046.4</b>	<b>796.8</b>	<b>76%</b>	<b>701.4</b>	<b>469.5</b>	<b>67%</b>	<b>1,586.8</b>	<b>1,136.1</b>	<b>72%</b>	<b>1,317.0</b>	<b>227.8</b>	<b>17%</b>	<b>974.6</b>	<b>322.8</b>	<b>33%</b>
<b>PT/HLW/SS Percent Complete Status Frozen as of September 2012 (due to project rebaselining efforts)</b>																		
High-Level Waste	1,478.6	922.1	62%	364.4	325.2	89%	433.9	349.4	81%	561.1	243.2	43%	119.2	4.4	4%	n/a	n/a	n/a
Pretreatment	2,517.3	1,410.5	56%	761.7	645.8	85%	679.9	380.4	56%	890.0	378.6	43%	185.8	5.6	3%	n/a	n/a	n/a
Shared Services	4,726.9	3,632.6	77%	1,047.0	977.9	93%	451.7	395.0	87%	1,436.5	1,143.0	80%	453.5	133.2	29%	1,338.1	983.5	73%
<b>Total HLW/PT/SS</b>	<b>8,722.8</b>	<b>5,965.2</b>	<b>68%</b>	<b>2,173.1</b>	<b>1,948.9</b>	<b>90%</b>	<b>1,565.5</b>	<b>1,124.8</b>	<b>72%</b>	<b>2,887.6</b>	<b>1,764.8</b>	<b>61%</b>	<b>758.5</b>	<b>143.2</b>	<b>19%</b>	<b>1,338.1</b>	<b>983.5</b>	<b>73%</b>
Undistributed Budget	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>Total WTP</b>	<b>14,349.0</b>	<b>8,918.2</b>	<b>62%</b>	<b>3,219.5</b>	<b>2,745.7</b>	<b>85%</b>	<b>2,266.9</b>	<b>1,594.3</b>	<b>70%</b>	<b>4,474.4</b>	<b>2,900.9</b>	<b>65%</b>	<b>2,075.5</b>	<b>371.0</b>	<b>18%</b>	<b>2,312.7</b>	<b>1,306.3</b>	<b>56%</b>

Source: Preliminary WTP Contract Performance Report - Format 1, Data for March 2017

Note: In September 2012, the LBL Replan was incorporated into the project OTB baseline resulting in increases/decreases to the LBL facility budgets, which correspondingly increased/decreased the facility/function to-date percent complete values. In October 2012, the PT/HLW/SS Interim Work Plan was incorporated into the project OTB baseline resulting in decreases to the PT/HLW/SS facility budgets, this was due to a work scope shift from the Distributed budget to UB. Percent Complete Values shown for PT, HLW and SS have been frozen with the September 2012 values due to the Interim Work Plan and budgets being moved into UB. UB value for the project for PT/HLW/SS is \$2,014M. The percent complete values for the Total WTP are the current total LBL BCWP added to the frozen HLW/PT/SS BCWP values. In March 2014, Project Controls and Project Management work scope was moved out of Shared Services control accounts into the facilities with new control accounts being set up in the facilities. These will now be seen under Project Management/Shared Services by facility. The Shared Services PMB value has not been changed to reflect this change due to the freeze on HLW/PT and SS and the budgets remaining in UB. October 2014 data reflects the incorporation of Direct Feed LAW and the split of Shared Services into LBL Facility Services and Project Services. March 2016 LBL percent complete data is a total of LAW-BOF-LAB-DFLAW and LBL Facility Services. The Project Services Allocation account (zPSA), as shown on the CPR Format 1, is not added to LBL for percent complete purposes.

## **ORP/Ecology TPA and CD Agreements, Issues, and Action Items –May 2017**

### **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:**

1. Ecology disagrees with ORP's letter 15-WSC-0027 and the System Plan.

## ORP/Ecology TPA and CD Agreements, Issues, and Action Items –May 2017

#	Action ID	Start Date	Action	Updates / Needs for Closure	Actionee(s)	Status/ Date Closed
1	TF-16-01-02	1-21-16	Ecology would like DFLAW program interface information to include mass & energy balance and process flow information.		Kaylin Burnett	Closed 4/20/17
2	TF-16-07-05	7-21-16	Ecology requests ORP to provide the configuration parameters for the SST and DST exhausters.	ECY would like to see design and controls on exhauster. Jeremy has action to check with WRPS. Meeting pending. (4/20/2017).	Dusty Stewart	Open
3	TF-16-09-01	9-20-16	Ecology request a list of all the IQRPE reports that have been generated and/or are in the operating record since 2010	The list is still in development. Hope to have finalized by next meeting. (4/20/2017)	Dusty Stewart	Open
4	TF-16-09-02	9-20-16	Ecology request that ORP schedule a meeting on DST permitting (DFLAW related)	ECY to discuss internally. (4/20/2017)	Dusty Stewart	Open
5	TF-16-11-01	11-17-16	ORP to provide Ecology the waste designation work sheets for the AZ-301 sample collected in the July/August 2016 time frame.	ECY requests a tour of tanker loadout facility at AZ-301 (Conducted 4-18-17) ECY would like to know how spill (from Nov) was resolved. ORP is reviewing information prior to release to Ecology.(4/20/2017)	Richard Valle/Dusty Stewart	Open
6	TF-16-11-04	11-17-16	ORP to provide Ecology the T-112 work plan	In legal review. (4/20/2017)	Dusty Stewart	Open
7	TF-16-11-05	11-17-16	ORP to provide Ecology results of the four tanks that were visually inspected at ETF	Currently there are three draft versions in review, fourth report is being drafted. Waiting to have all four final version before providing to Ecology (4/20/2017)	Richard Valle	Open
8	TF-17-02-03	2-16-17	ORP to follow up on Ecology's inquiry regarding the current path forward for the sinkhole by AZ-102.		Jeremy Johnson	Closed 4/20/17

**ORP/Ecology TPA and CD Agreements, Issues, and Action Items –May 2017**

#	Action ID	Start Date	Action	Updates / Needs for Closure	Actionee(s)	Status/ Date Closed
9	TF-17-03-01	3-15-17	SST Tier 1 closure plan: Ecology to schedule internal meeting with Ecology management and then schedule meeting with ORP.		Jeff Lyon	Closed 4/20/17
10	TF-17-04-01	4-20-17	ORP to provide Ecology with schedule updates on the removal of the 242-A Evaporator diesel generator.	Pending permit mod.	Paul Hernandez	

#	Action ID	Start Date	Action	Updates / Needs for Closure	Actionee(s)	Status/ Date Closed
1	WTP-14-06-02	06/19/14	Ecology requests that DOE provide a presentation on how DOE incorporates, vets, and considers all technical issues (including the Safety Design Strategy).		Joni Grindstaff	Closed 4/20/17
2	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	Impacts will be better understood once the design studies are issued. Expected in July timeframe (3/15/2017)	Wahed Abdul	Open
3	WTP-17-02-01	02/16/17	ORP to respond to ECY on why WTP Certification Plan is not being done on an annual basis.	Plan has been updated.	Joni Grindstaff	Open

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**FINAL**  
**Office of River Protection**  
**Tri-Party Agreement**  
**Report**  
**May<sup>1</sup> 2017**



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<sup>1</sup> The narrative descriptions of progress in this report cover the period from April 01–30, 2017. Earned Value Management System data and descriptions cover the period of March 01–31, 2017.

**Tri-Party Agreement (TPA) Milestone Review**

<b>Page</b>	<b>Topic</b>	<b>Leads</b>
2	Administrative Items/Milestone Status	B. Trimmerger D. McDonald, J. Lyon
5	System Plan	K. Burnett J. Lyon, D. McDonald
6	Acquisition of New Facilities	J. Diediker J. Lyon, D. McDonald
7	Supplemental Treatment and Part B Permit Applications	S. Pfaff J. Lyon, D. McDonald
9	242-A Evaporator Status	P. Hernandez J. Lyon
11	Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility	R. Valle S. Schleif
12	Tank System Update	D. Stewart J. Lyon
15	Single-Shell Tank Integrity Assurance	D. Stewart J. Alzheimer
16	In-Tank Characterization and Summary	D. Stewart M. Barnes
18	Single-Shell Tank Closure Program	J. Bovier J. Lyon
22	Single-Shell Tank Retrieval Program	J. Rambo J. Lyon
22	Tank Waste Retrieval Work Plan Status	J. Rambo J. Lyon
23	Tank Operations Contract Overview	ORP TPA PMs ECY TPA PMs
CD	Waste Treatment and Immobilization Plant (WTP) Overall TPA Summary and Milestone Status; see the Office of River Protection Consent Decree Monthly Report	J. Grindstaff D. McDonald

### Administrative Items/Milestone Status

Milestone	Title	Due Date	Completion Date	Status
<b>Fiscal Year 2015</b>				
M-062-45-T01	Complete Negotiations 6-Mo After Last Issuance of System Plan	04/30/2015		In Abeyance
M-062-45-ZZ	Negotiate a One Time Supplemental Treatment Selection	04/30/2015		In Abeyance
M-062-45-ZZ-A	Convert the M-062-31-T01 Through M-062-34-T01 to Interim Milestones	04/30/2015		In Abeyance
M-045-82	<a href="#">Modified See Fiscal Year 2017</a>			Responsiveness summary to public comments is being prepared
<b>Fiscal Year 2016</b>				
M-047-07	CD-1 for Secondary Liquid Waste Treatment and CR for CD-2 to Ecology	03/31/2016		In Abeyance
M-090-13	CD-1 for Interim Hanford Storage Project and CR for CD-2 to Ecology	03/31/2016		In Abeyance
M-062-31-T01	Complete Final Design & Submit RCRA Part B Permit Mod Request for Enhanced WTP & Supplemental Treatment	04/30/2016		In Abeyance
<b>Fiscal Year 2017</b>				
M-062-40E	Select a Minimum of Three Scenarios	10/31/2016	10/06/2016	Complete
M-045-61A	Submit to Ecology a primary doc. Phase 2 CMS, and Rev. 0 update to the RFI Report for WMA-C	12/31/2016	12/29/2016	Complete
M-062-01AH	Submit Semi-Annual Project Compliance Report	01/31/2017	01/31/2017	Complete
M-045-84	Initiate Negotiations to Establish HFFACO Interim Milestones for Closure of 2nd SST WMA	04/03/2017	03/14/2017	Complete

Milestone	Title	Due Date	Completion Date	Status
M-045-82	Submit to Ecology the draft Tier 2 closure plan for WMA-C	05/15/2017		On Schedule
M-045-82A	Submit to Ecology the draft Tier 3 closure plans for the C-200 tanks.	05/15/2017		On Schedule
M-045-62	Submit to Ecology the draft Tier 3 closure plans to implement corrective measures.	To be established in accordance with the date identified in the M-045-82 Tier 2 closure plan		On Schedule
M-045-83	Complete the Closure of WMA-C	To be established in accordance with the date identified in the M-045-82 Tier 2 closure plan		On Schedule
M-045-56M	Ecology and DOE Agree, at a Minimum, to Meet Yearly (by July)	07/31/2017		On Schedule
M-062-01AI	Submit Semi-Annual Project Compliance Report	07/31/2017		On Schedule
M-045-91E2	Provide SST Farms Dome Deflection Surveys Every Two Years	09/30/2017		On Schedule
M-045-92S	DOE and Ecology Will Agree On Locations For Barriers 3 And 4	09/30/2017		On Schedule
<b>Fiscal Year 2018</b>				
M-062-40F	Submit System Plan	10/31/2017		On Schedule
M-062-32-T01	Start Construction of Supplemental Vitrification Treatment Facility and/or WTP Enhancements	04/20/2018		In Abeyance
M-045-92O	Barrier 3 Design/Monitoring Plan Submitted to Ecology	06/30/2018		On Schedule
M-045-56N	Ecology And DOE Agree, At A Minimum, To Meet Yearly (By July)	07/31/2018		On Schedule

Milestone	Title	Due Date	Completion Date	Status
M-045-91I	Provide IQRPE Certification of SSTs Structural Integrity	09/30/2018		On Schedule
M-045-92T	Barrier 3 Design/Monitoring Plan Approved by Ecology	09/30/2018		On Schedule

CD-1/-2	critical decision-1/-2	RCRA	<i>Resource Conservation and Recovery Act</i>
CMS	corrective measures study		
CR	change request	RFI	RCRA Facility Investigation.
DOE	U.S. Department of Energy	SST	single-shell tank.
Ecology	WA State Department of Ecology	WTP	Waste Treatment and Immobilization Plant.
HFFACO	Hanford Federal Facility Agreement and Consent Order	WMA	waste management area.
IQRPE	independent qualified registered professional engineer	WMA-C	C Farm waste management area.

## **System Plan**

***One System Division Director:*** Jon Peschong

***Federal Program Manager:*** Kaylin Burnett

### **Significant Past Accomplishments:**

- Modeling for the remainder of the 11 cases was completed and the results reviewed by the U.S. Department of Energy, Office of River Protection (ORP) and the Washington State Department of Ecology (Ecology), in April.
- Drafts of five case write-ups provided to System Plan 8 team for informal review.

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

- Continue negotiations of the M-062-45 milestones with intent to utilize information from System Plan 8 negotiations.
- WRPS will provide the draft final System Plan 8 to ORP by May 23, 2017. ORP will share the document with Ecology at the Thursday, May 25<sup>th</sup> meeting.

### **Issues:**

- None.

### Acquisition of New Facilities

**Tank Farms Assistant Manager:** Glyn Trenchard

**Deputy Federal Project Director:** Janet Diediker

- M-047-07**      **Submit CD-1 for Secondary Liquid Waste Treatment and Change Request (CR) for CD-2 to Ecology**  
Due: March 31, 2016  
Status: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.
- M-090-13**      **Submit Critical Decision-1 for Interim Hanford Storage Project and TPA Change Request for CD-2 to Ecology**  
Due: March 31, 2016  
Status: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.
- M-090-00**      **Acquire/Modify Facilities for Storage of Immobilized High-Level Waste (IHLW)**  
Due: December 31, 2019  
Status: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.
- M-047-00**      **Complete Work Necessary to Provide Facilities for Management of Secondary Waste from the Waste Treatment and Immobilization Plant (WTP)**  
Due: December 31, 2022  
Status: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.

**Significant Past Accomplishments:**

- None.

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

- None.

**Issues:**

- None.

## Supplemental Treatment and Part B Permit Applications

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Project Director:** Steve Pfaff

- M-062-45-T01** Every six years, within six months after last revision of the System Plan, negotiate tank waste retrieval sequencing  
Due: April 30, 2015  
Status: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.
- M-062-45-ZZ** (designation for M-062-45 item 3), Negotiate a one-time supplemental treatment selection  
Due: April 30, 2015  
Status: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.
- M-062-45-ZZ-A** Convert M-062-31-T01 through M-062-34-T01 to Interim Milestones  
Due: April 30, 2015  
Status: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.
- M-062-31-T01** Complete final design and submit Resource Conservation and Recovery Act Part B permit modification request  
Due: April 30, 2016  
Status: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.
- M-062-32-T01** Start construction of supplemental vitrification treatment facility and/or WTP enhancements  
Due: April 30, 2018  
Status: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.
- M-062-33-T01** Complete construction of supplemental vitrification treatment facility and/or WTP enhancements  
Due: April 30, 2021  
Status: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.

- M-062-45-XX**     **No later than December 31, 2021, the DOE and Ecology shall complete negotiations to establish a mechanism that will apply to resolve future disputes regarding the determinations in M-062-45, paragraphs 4 and 5**  
Due: December 31, 2021  
Status: On schedule.
- M-062-34-T01**     **Complete hot commissioning of supplemental vitrification treatment facility and/or WTP enhancements**  
Due: December 30, 2022  
Status: In Abeyance. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations began on September 8, 2016.
- M-062-21**         **Annually submit data that demonstrates operation of the WTP**  
Due: February 28, 2023  
Status: At risk.
- M-062-00**         **Complete Pretreatment Processing and Vitrification of High-Level Waste and LAW Tank Wastes**  
Due: December 31, 2047  
Status: At risk.

**Significant Past Accomplishments:**

- None.

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

- None.

**Issues:**

- Negotiations on the items identified in the M-062-45 milestone began on September 8, 2016, per decision by the Interagency Management Integration Team.

## 242-A Evaporator Status

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Paul Hernandez

The 242-A Evaporator campaign strategy for fiscal year (FY) 2016 through fourth quarter of FY 2017 is depicted in the following table:

Fiscal Year	Campaign No.	Feed Source	Slurry Tank	Comments
FY 2016	EC-04	AP-104	AP-103	Completed April 15, 2016 WVR = 258 kgal
FY 2016	EC-05	AP-104	AP-104	Completed April 21, 2016 WVR = 46 kgal
FY 2017	EC-06	AY-101	AP-104	242-A Evaporator campaign EC-06 has been postponed until replacement of failed radiation monitoring systems RC-1, RC-2, and RC-3 are completed. This is expected mid-year of calendar year 2017.
FY 2017	EC-07	AW-106	AP-104	242-A Evaporator campaign EC-07 will follow EC-06.
FY 2018	EC-08	AP 106/107 Blend	AP-103	Will require blending of waste in 102-AW, sampling, and sample analysis prior to campaign start. This cannot occur until campaign EC-07 is completed.

FY fiscal year.

kgal thousand gallons.

WVR waste volume reduction.

### Significant Past Accomplishments:

- The class 2 permit modification covering the removal of the diesel generator requiring changes to Chapter 6.0, "Procedures to Prevent Hazards" and Chapter 7.0, "Contingency Plan," and updates to storage volumes in Chapter 1.0, "Part A Form" at the 242-A Evaporator were submitted to Ecology for informal review on November, 14, 2016.

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

- Future campaign and outage scheduling
- Continue integrity assessment on 242-A Evaporator components

- Replace P-B-2 associated pressure relief valves
- Replace radiation monitoring systems RC-1, RC-2, and RC-3
- Replace and extend the vessel vent stack. Equivalent or better material will be used. The new vent stack will be approximately 50 ft taller.

**Issues:**

- None.

## Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Richard Valle

The Liquid Effluent Retention Facility (LERF) liquid levels, inventory, and received waste is shown in the table below. Volumes in this table are estimated. Tanker shipment volumes are estimated by multiplying the number of shipments by the capacity of the tanker being used.

	242AL-42 (Basin 42)	242AL-43 (Basin 43)	242AL-44 (Basin 44)
<b>Total Volume (as of April 30, 2017)</b>	~ 5.78 Mgal	~ 0.49 Mgal	~ 7.57 Mgal

<b>Waste Received</b>			
AZ-301 Tanker Shipments	-	-	-
MWT-31 and 34 Leachate	~ 84,000 gal	-	-
Other (e.g., Modutank Purgewater)	-	~ 122,000 gal	-
242-A Evaporator Campaigns	-	-	-

gal           gallon.  
Mgal         million gallons.  
MWT         mixed waste trench.

### Significant Past Accomplishments:

- Total FY 2017 volume processed (as of April 30, 2017): ~ 3,485,000 gallons.

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

- Continue to empty LERF Basin 43 by processing waste through the Effluent Treatment Facility (ETF)
- Enter maintenance outage at the ETF to clean out plant
- Begin LERF Basin 43 cover replacement fieldwork.
- Initiate LERF Basin 42 waste processing through the ETF

### Issues:

- None.

## Tank System Update

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Dusty Stewart

### Significant Past Accomplishments

Double-Shell Tank (DST) Integrity:

- RPP-ASMT-61313, “Tank Integrity Expert Panel Corrosion Subgroup August 2016 Meeting Outcomes” was issued documenting expert panel review of the FY 2016 corrosion testing and providing guidance for FY 2017 activities.

Single-Shell Tank (SST) Integrity:

- None.

### Independent Qualified Registered Professional Engineer Activities

Planned Actions:

- Preparation of the independent qualified registered professional engineer (IQRPE) report for the 242-A Evaporator is ongoing. A video probe inspection of the steam side of the E-A-1 reboiler was successfully completed and video was provided to the IQRPE. Meier Architecture Engineering (Meier) completed a tour/walkdown of readily accessible areas of the facility. Remaining fieldwork includes the E-A-1 reboiler fluorescein dye 24-hour leak test and C-A-1 vapor-liquid separator 24-hour static leak test. These tests are scheduled for completion prior to introducing Evaporator Campaign EC-06 hot feed to the facility.
- Work continues on RPP-RPT-61349, the ETF integrity program plan. The plan is expected to be released in May to support the FY 2019 IQRPE integrity assessment. Ultrasonic thickness scanning of ETF tanks is scheduled to begin in June.
- Initial planning continues for the IQRPE report for the 219-S facility at the 222-S Laboratory
- The Integrity Assessment plan is being drafted for the 2018 SST IQRPE report and will be the basis for a statement of work later this fiscal year.

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

DST Integrity:

- Continuing bi-weekly inspections of AY-102 waste accumulation site.
- Continuing bi-monthly comprehensive inspection of AY-102 annulus.
- Continuing annual comprehensive inspection of AY-101 annulus.

- FY 2017 enhanced annulus visual inspections are in progress. The following tanks will be inspected in FY 2017:
  - 241-AN-102 (complete)
  - 241-AN-107 (complete)
  - 241-AP-101
  - 241-AP-107
  - 241-AW-105 (RPP-RPT-42147, Rev. 5 issued)
  - 241-AY-101 (complete, report in external clearance process)
  - 241-AZ-101 (complete, report in external clearance process)
  - 241-AZ-102 (complete, report in external clearance process)
- Work planning and execution for FY 2017 ultrasonic testing inspections has begun. The following tanks will be inspected in FY 2017:
  - 241-AN-106 (field work complete; report in review)
  - 241-AY-101 (field preparations underway)
  - 241-AZ-101

#### SST Integrity:

- The FY 2016 SST Visual Inspection Report (RPP-RPT-59272) has been issued and is going through the clearance process for external release. This report documents the results of 14 SST video inspections.
- Work planning for FY 2017 in-tank video inspections has already begun. The following tanks will be inspected in FY 2017 (note SX-113 was deleted and S-104 was added):
 

- 241-BX-102	- 241-T-106
- 241-BX-107	- 241-T-109
- 241-BY-109	- 241-TX-105
- 241-S-104 (complete)	- 241-TX-106
- 241-SX-110	- 241-TX-109
- 241-T-104	- 241-U-107.
- Intrusion mitigation (M-045-56):
  - The POR-006 exhauster remains out of service at T-111. Parts were ordered to repair the malfunctioning instrument cabinet heater. Data collection and reporting software are still not working. The total volume of water evaporated from T-111 since mid-July 2015 was very roughly estimated at 7,100 gal.
  - The exhauster will continue operation as resource availability permits, but the evaporation is no longer being tracked. Periodic video inspections may be

conducted to visually observe changes to the liquid pool in the tank if the  
exhauster is able to operate for a sufficiently long period.

- RPP-RPT-59273 Rev. 0, *Evaporation of Water from Single-Shell Tank 241-T-111  
with 500 CFM Portable Exhauster POR06*, was cleared for public release on  
April 13, 2017.

**Issues:**

DST Integrity:

- None.

SST Integrity:

- None.

## Single-Shell Tank Integrity Assurance

***Tank Farms Assistant Manager:*** Glyn Trenchard

***Federal Program Manager:*** Dusty Stewart

**M-045-91I** Provide to Ecology an Independent, Qualified, Registered Professional Engineer (IQRPE) certification of single-shell tanks (SST) structural integrity for the remainder of the mission, or for such time as the IQRPE believes he/she can reasonably certify.

Due: September 30, 2018

Status: On schedule.

### **Significant Past Accomplishments:**

- None.

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

- The Integrity Assessment Plan is being drafted for 2018 SST IQRPE report and will be the basis for a Statement of Work (SOW) later this fiscal year.

### **Issues:**

- None.

## In-Tank Characterization and Summary

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Dusty Stewart

### Accomplishments:

For the period from April 01 through April 30, the following reports were completed or issued:

- Completed RPP-RPT-59887, *Derivation of Best-Basis Inventory for Tank 241-BX-107 as of April 1, 2017*, Rev 0.
- Completed RPP-RPT-59981, *Derivation of Best-Basis Inventory for Tank 241-AP-108 as of April 1, 2017*, Rev 0.
- Completed RPP-PLAN-60361, *Tank 241-AP-107 Grab Sampling and Analysis Plan in FY2017*, Rev. 1.
- Completed HNF-EP-0182, *Waste Tank Summary Report for Month Ending February 28, 2017*, Rev 350.
- Completed HNF-EP-0182, *Waste Tank Summary Report for Month Ending March 31, 2017*, Rev 351.
- WRPS-1500668, [241-C-111] *Solid Phase Characterization of Solids Recovered from Failed Shuicer Arm*, Rev 1, has been released.
- Completed 241-AP-105 liquid grab sampling on April 28, 2017. Thirty-six samples were received at PNNL for analysis.
- Completed 241-AZ-101 Leak Detection Pit sampling on April 20, 2017. Four samples were received at the lab.

### Planned Action within the Next Six Months:

Tank sampling:

- Tank 241-AW-104 grab sampling is planned for May 2017.
- Tank 241-AY-102 solids grab sampling is planned for June 2017.
- Tank 241-AP-107 grab sampling is planned for June 2017.
- Tank 241-AN-107 grab sampling is planned for August 2017.
- Tank 241-C-105 grab sampling is planned for September 2017.

### Best-Basis Inventory updates:

Best-basis inventory updates for the following tanks were completed in April 2017:

- 241-AP-108

- 241-BX-107

Best-basis inventory updates for the following tanks currently are planned to be completed in May 2017:

- 241-AN-102
- 241-AP-102
- 241-AP-103
- 241-AY-101
- 241-AY-102
- 241-B-106
- 241-C-105
- 241-C-111
- 241-S-105
- 241-TX-113
- 241-TX-116.

**Data Quality Objectives updates:**

- None.

**Issues:**

- None.

## Single-Shell Tank Closure Program

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Jan Bovier

- M-045-59**      **Control surface water infiltration pathways as needed to control or significantly reduce the likelihood of migration of subsurface contamination to groundwater at the SST Waste Management Areas (WMA) (pending the Corrective Measures Study report, Milestone M-45-58, and implementation of other interim corrective measures)**  
Due: To be determined  
Status: To be determined.
- M-045-82**      **Submit to Ecology for review, in accordance with HFFACO Action Section 9.2.2, the draft Tier 2 closure plan for WMA C. The Tier 2 plan shall include a proposed TPA milestone change control form identifying all Tier 3 submittal dates for WMA C and proposed target dates to initiate Tier 3 closure activities. Target dates will be converted to enforceable schedules through permit modification to incorporate Tier 3 closure plans**  
Due: May 15, 2017  
Status: On schedule.
- M-045-82A**      **Submit to Ecology for review, in accordance with HFFACO Action Section 9.2.2, the draft Tier 3 closure plans for the C-200 tanks (C-201, C-202, C-203, and C-204) including schedules.**  
Due: May 15, 2017  
Status: On schedule.
- M-045-62**      **Submit to Ecology for review, in accordance with HFFACO Action Section 9.2.2, the draft Tier 3 closure plan to implement corrective measures identified in the approved Phase 2 Corrective Measures Implementation Work Plan (CMIP) for WMA C.**  
Due: To be established in accordance with the date identified in the M-45-82 Tier 2 closure plan  
Status: On schedule.

Status: On schedule. This milestone will be modified through resolution of the dispute on M-045-82. Phase 2 Corrective Measures Study, and Rev. 0 update to the *Resource Conservation and Recovery Act (RCRA) Facility Investigation Report (RFI)* for WMA-C were submitted to Ecology on December 29, 2016, via letter 16-TF-0142, "The U.S. Department of Energy, Office of River Protection Submittal of Reports for the Resource Conservation and Recovery Act Facility Investigation and Corrective Measures Study for Waste Management Area C in Completion of HFFACO Milestone M-045-61A." Per Ecology letter 17-NWP-033, "Department of Ecology's (Ecology) Request for an Extension in Providing Comments on *Phase 2 RCRA Facility Investigation Report for Waste Management Area C, RPP-RPT-58339, Rev.0 (RFI) and Waste Management Area C Phase 2 Corrective Measures Study Report, RP-RPT-59379, Rev. 0 (CMS)*," dated March 29, 2017, Ecology requested an extension in providing comments for the RFI/Corrective Measures Study until after the WMA-C Appendix I performance assessment is discussed and evaluated by Ecology.

- M-045-83**      **Complete the Closure of WMA C - by completing all closure activities specified in the Tier 2 closure plan, not including activities specifically described in the Tier 2 closure plan as requiring integration with closure of other WMAs**  
 Due: To be established in accordance with the date identified in the M-45-82 Tier 2 closure plan  
 Status: On Schedule
- M-045-84**      **Initiate negotiations to establish HFFACO interim milestones for closure of second SST WMA**  
 Due: April 3, 2017  
 Status: Completed on March 14, 2017.
- M-045-56M**      **Complete Implementation of Agreed to Interim Measures**  
 Due: July 28, 2017  
 Status: On schedule. An annual meeting is held between ORP and Ecology to discuss the prior FY accomplishments and the next FY proposed interim measures to be scheduled in July 2017.
- M-045-92S**      **DOE and Ecology agree on locations for Barriers 3 and 4**  
 Due: September 30, 2017  
 Status: On schedule.
- M-045-92O**      **Barrier 3 Design and Monitoring Plan submitted to Ecology**  
 Due: June 30, 2018  
 Status: On schedule.
- M-045-92T**      **Barrier 3 Design and Monitoring Plan approved by Ecology**  
 Due: September 30, 2018  
 Status: On schedule.

- M-045-92N**      **Complete construction of Barriers 1 and 2 in SX Farm**  
Due: October 31, 2018  
Status: On schedule.
- M-045-83**      **Complete the closure of WMA-C**  
Due: June 30, 2019  
Status: To be missed. Please see status explanation under M-045-82.
- M-045-92Q**      **Barrier 4 Design and Monitoring Plan submitted to Ecology**  
Due: June 30, 2019  
Status: On schedule.
- M-045-92U**      **Barrier 4 Design and Monitoring Plan approved by Ecology**  
Due: September 30, 2019  
Status: On schedule.
- M-045-92P**      **Complete construction of Barrier 3**  
Due: October 31, 2019  
Status: On schedule.
- M-045-92R**      **Complete construction of Barrier 4**  
Due: October 31, 2020  
Status: On schedule.
- M-045-85**      **Initiate negotiations to establish HFFACO interim milestones for closure of remaining SST WMAs**  
Due: January 31, 2022  
Status: On schedule.
- M-045-00**      **Complete Closure of all SST Farms**  
Due: January 31, 2043  
Status: At risk. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45.

**Significant Past Accomplishments:**

- Working with Ecology on review of the WMA-C Performance Assessment.
- Submitted RPP-RPT-58339, *Phase 2 RCRA Facility Investigation Report for Waste Management Area C*, and RPP-RPT-59379, *Waste Management Area C Phase 2 Corrective Measures Study Report*, to complete HFFACO Milestone M-045-61 A.

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

- Continue data collection for T Farm and TY Farm interim surface barrier monitoring and develop the annual interim barrier monitoring report for FY 2016.
- Begin resolution of Ecology's comments on the RCRA Tier 1 Closure Plan.

- Submit the draft Tier 2 Closure Plan for WMA-C, and a draft Tier 3 Closure Plan for the C-200 Series Tanks to Ecology for review.
- Begin discussions on locations for barriers 3 and 4.

**Issues:**

- Developing path forward for resolving Ecology's comments on the RCRA Tier 1 Closure Plan was elevated to ORP and Nuclear Waste Program managers in March 2017.

### **Single-Shell Tank Retrieval Program**

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Jeff Rambo

**M-045-86**      **Submit retrieval data report (RDR) to Ecology for 19 tanks retrieved**  
Due: To be determined (12 months after retrieval certification).  
Status: Ongoing, retrieval data report submitted when completed.

**M-045-70**      **Complete waste retrieval from all remaining SSTs**  
Due: December 31, 2040  
Status: At risk. Decision document 2016-005 signed August 22, 2016, requires this milestone be addressed with the negotiations supporting M-062-45. Negotiations have begun.

#### **Significant Past Accomplishments:**

- Refer to Consent Decree monthly report for ongoing retrieval activities.

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

- The C-111 RDR is expected to be ready in September 2017.
- Refer to Consent Decree monthly report for ongoing retrieval activities.

#### **Issues:**

- Refer to Consent Decree monthly report for ongoing retrieval issues.

### **Tank Waste Retrieval Work Plan Status**

**Tank Farms Assistant Manager:** Glyn Trenchard

**Federal Program Manager:** Jeff Rambo

#### **Significant Accomplishments:**

- None.

#### **Significant Planned Activities in the Next Three Months:**

- Finalize AX Farm tank retrieval work plans.

#### **Issues:**

- None.

## Tank Operations Contract Overview

### Project Performance:

The earned value performance reporting reflects the format, work breakdown structure reporting levels, and variance thresholds as agreed to with the Tank Operations Contractor for monthly performance reporting. The earned value analysis is not intended to be a measurement of performance against existing TPA milestones.

March-17										
	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
CM	49,127	55,701	60,510	6,574	(4,810)	1.13	0.92			
FYTD	282,490	268,676	262,209	(13,814)	6,467	0.95	1.02	593,538		
CTD	3,738,439	3,703,811	3,671,072	(34,629)	32,739	0.99	1.01	4,744,966	4,779,644	(34,678)

ACWP	actual cost of work performed	CV	cost variance
BAC	budget at completion	EAC	estimate at completion
BCWP	budgeted cost of work performed	FYTD	fiscal year to date
BCWS	budgeted cost of work scheduled	SPI	schedule performance index
CM	current month	SV	schedule variance
CPI	cost performance index	VAC	variance at completion
CTD	contract to date		

The Earned Value Management System is intended to provide a status of how the contractor is progressing against its planned work (i.e., schedule), and whether it is costing more or less to complete the work than planned. The project plan is measured by expressing the schedule in terms of dollars spread over the anticipated project duration, and then for each month, determining how much of the planned work was accomplished or “earned,” as measured in equivalent dollars. If more work is accomplished than planned, then the project is ahead of schedule and has a favorable SV. Similarly, if less work is accomplished, the project is behind schedule and has an unfavorable SV. Accomplished work is reported in the month it was completed, which may not be when it was planned. For example, work completed in a month earlier than planned would be reported as a favorable SV for the month in which it was completed, but would be reported as an unfavorable SV in the month it was planned. The end result would be a net zero overall cumulative SV over these months. Likewise, work completed late will recover an earlier reported unfavorable SV.

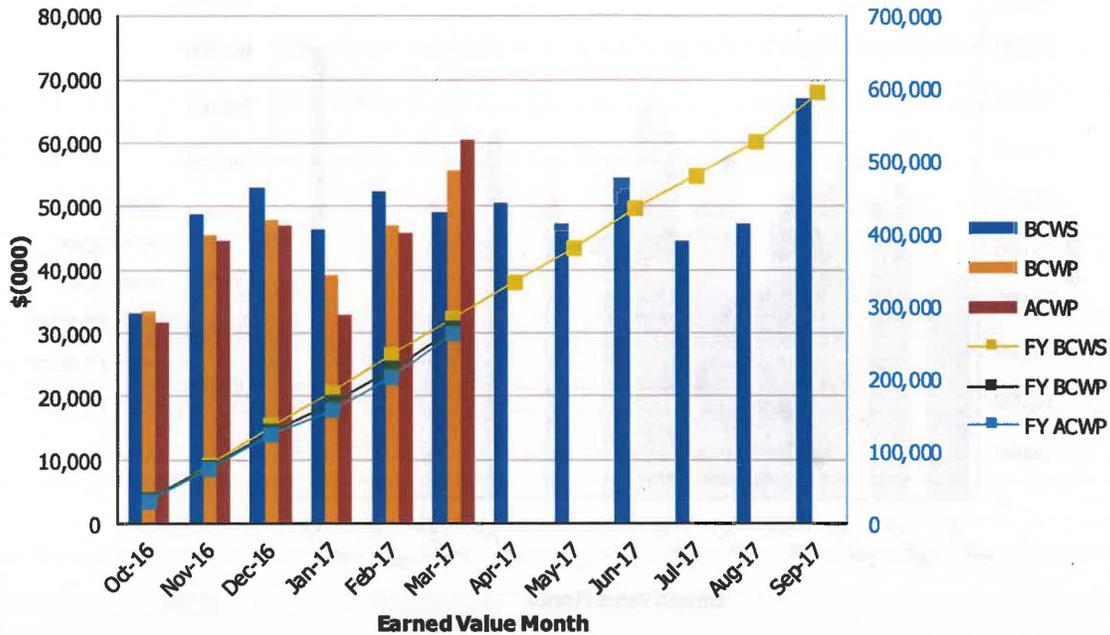
The CV measures the actual cost of work performed against the earned dollar value of that performed work. As an example, assume \$10K of work was planned to-date, \$8K was reported as being performed (earned), at an actual cost of \$9K. This work would be reported as being \$2K behind schedule [a negative or unfavorable SV:  $\$8K - \$10K = (\$2K)$ ], and has cost \$1K more [a negative or unfavorable CV:  $\$8K - \$9K = (\$1K)$ ] than was planned for completing that work scope. Likewise, a favorable or positive CV would be reported if it cost less to complete the work than the performed dollar value of the work. The SV and CV are reported for each monthly period, fiscal year to-date, as well as for the contract-to-date value. The monthly variances can fluctuate significantly (for reasons noted earlier), so the fiscal year or contract-to-date report provides a better indicator of the overall project completion status, and can give a reasonable projection of how the project will finish, based on the progress-to-date.

Earned Value Data: Fiscal Year 2017

March-17

**Tank Farms ORP-0014**

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2016	\$33,051	\$33,501	\$31,798	1.01	1.05	\$33,051	\$33,501	\$31,798	1.01	1.05
Nov 2016	\$48,628	\$45,386	\$44,614	0.93	1.02	\$81,679	\$78,887	\$76,412	0.97	1.03
Dec 2016	\$52,841	\$47,972	\$46,833	0.91	1.02	\$134,520	\$126,859	\$123,246	0.94	1.03
Jan 2017	\$46,477	\$39,027	\$32,764	0.84	1.19	\$180,997	\$165,886	\$156,009	0.92	1.06
Feb 2017	\$52,366	\$47,088	\$45,690	0.90	1.03	\$233,363	\$212,974	\$201,699	0.91	1.06
Mar 2017	\$49,127	\$55,701	\$60,510	1.13	0.92	\$282,490	\$268,674	\$262,209	0.95	1.02
Apr 2017	\$50,433			0.00	0.00	\$332,923			0.00	0.00
May 2017	\$47,279			0.00	0.00	\$380,202			0.00	0.00
Jun 2017	\$54,378			0.00	0.00	\$434,580			0.00	0.00
Jul 2017	\$44,684			0.00	0.00	\$479,264			0.00	0.00
Aug 2017	\$47,326			0.00	0.00	\$526,590			0.00	0.00
Sep 2017	\$66,948			0.00	0.00	\$593,538			0.00	0.00

CTD	\$3,738,439	\$3,703,811	\$3,671,072	0.99	1.01
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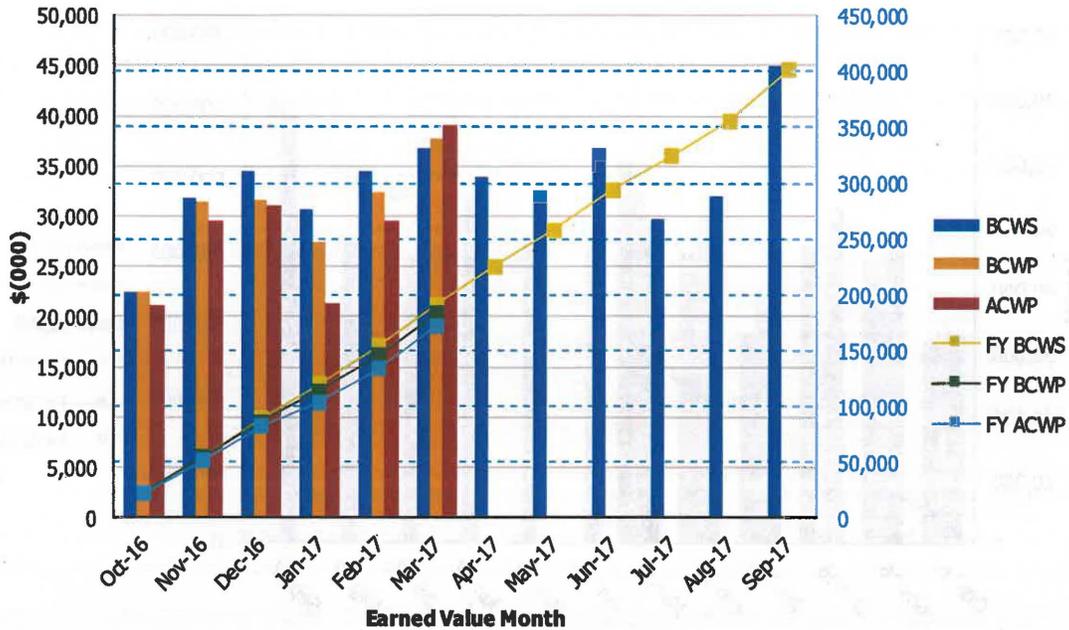
- |      |                                 |      |                                |
|------|---------------------------------|------|--------------------------------|
| ACWP | actual cost of work performed   | CTD  | contract to date               |
| BCWP | budgeted cost of work performed | EVMS | Earned Value Management System |
| BCWS | budgeted cost of work scheduled | FY   | fiscal year                    |
| CPI  | cost performance index          | SPI  | schedule performance index     |

Earned Value Data: Fiscal Year 2017

March-17

**Tank Farms ORP-0014  
Base Operations 5.01**

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2016	\$22,507	\$22,546	\$21,216	1.00	1.06	\$22,507	\$22,546	\$21,216	1.00	1.06
Nov 2016	\$31,885	\$31,496	\$29,527	0.99	1.07	\$54,392	\$54,042	\$50,743	0.99	1.07
Dec 2016	\$34,394	\$31,547	\$31,032	0.92	1.02	\$88,786	\$85,589	\$81,775	0.96	1.05
Jan 2017	\$30,657	\$27,462	\$21,370	0.90	1.29	\$119,443	\$113,051	\$103,146	0.95	1.10
Feb 2017	\$34,475	\$32,418	\$29,588	0.94	1.10	\$153,918	\$145,468	\$132,734	0.95	1.10
Mar 2017	\$36,780	\$37,769	\$39,127	1.03	0.97	\$190,698	\$183,237	\$171,861	0.96	1.07
Apr 2017	\$33,988			0.00	0.00	\$224,685			0.00	0.00
May 2017	\$32,532			0.00	0.00	\$257,217			0.00	0.00
Jun 2017	\$36,732			0.00	0.00	\$293,949			0.00	0.00
Jul 2017	\$29,626			0.00	0.00	\$323,575			0.00	0.00
Aug 2017	\$31,967			0.00	0.00	\$355,542			0.00	0.00
Sep 2017	\$45,007			0.00	0.00	\$400,549			0.00	0.00
<b>CTD</b>	<b>\$2,489,376</b>	<b>\$2,475,560</b>	<b>\$2,439,286</b>	<b>0.99</b>	<b>1.01</b>					

ACWP	actual cost of work performed	CTD	contract to date
BCWP	budgeted cost of work performed	EVMS	Earned Value Management System
BCWS	budgeted cost of work scheduled	FY	fiscal year
CPI	cost performance index	SPI	schedule performance index

**Federal Project Director:** Ellen Mattlin

**Base Operations and Tank Farm Projects (5.01)**

The March 2017 variances below do not impact or delay TPA milestones.

The **favorable** schedule variance (SV) of \$988K is primarily due to the following:

- Schedule recovery in April for the AP-102A Long Length Pump Disposal and the AP Farm mechanical installation of SS Air Flow instrumentation. Also acceleration of the AN Farm installation work package planning and mechanical installation of the SS flow instrumentation.

The **unfavorable** cost variance (CV) of (\$1,358K) is primarily due to the following:

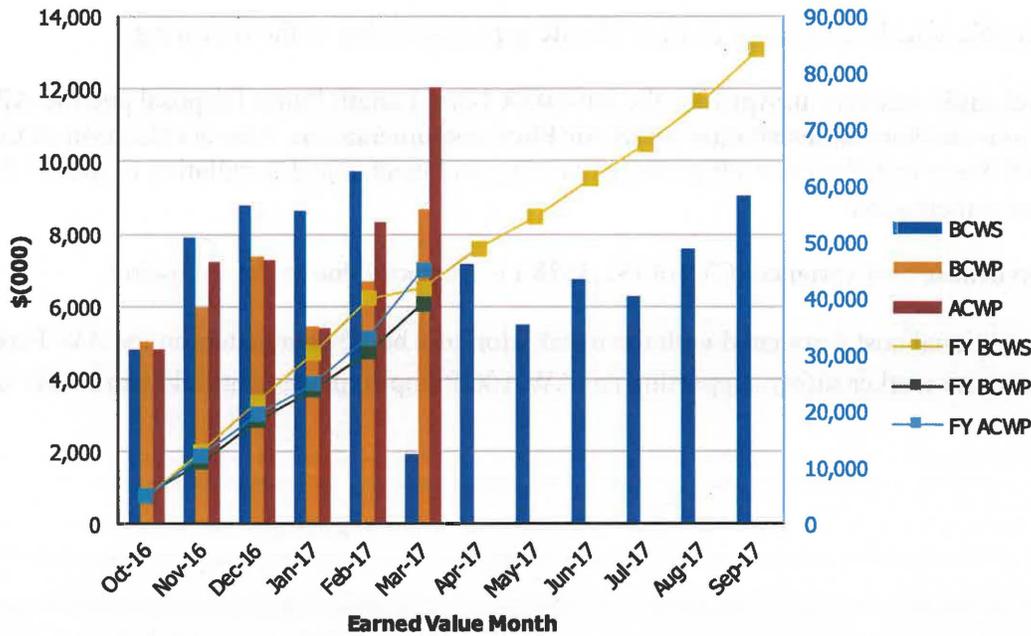
- Additional cost associated with the installation of a bottle change tent in the AW Farm to increase worker safety supporting the AW-106 Pump Replacement field work activities.

Earned Value Data: Fiscal Year 2017

March-17

**Tank Farms ORP-0014**  
**Retrieve and Close SST's 5.02**

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2016	\$4,816	\$4,996	\$4,822	1.04	1.04	\$4,816	\$4,996	\$4,822	1.04	1.04
Nov 2016	\$7,924	\$5,969	\$7,241	0.75	0.82	\$12,740	\$10,965	\$12,063	0.86	0.91
Dec 2016	\$8,772	\$7,401	\$7,262	0.84	1.02	\$21,512	\$18,365	\$19,325	0.85	0.95
Jan 2017	\$8,646	\$5,422	\$5,360	0.63	1.01	\$30,158	\$23,787	\$24,685	0.79	0.96
Feb 2017	\$9,716	\$6,707	\$8,341	0.69	0.80	\$39,874	\$30,495	\$33,026	0.76	0.92
Mar 2017	\$1,903	\$8,675	\$12,056	4.56	0.72	\$41,777	\$39,170	\$45,082	0.94	0.87
Apr 2017	\$7,156			0.00	0.00	\$48,933			0.00	0.00
May 2017	\$5,499			0.00	0.00	\$54,432			0.00	0.00
Jun 2017	\$6,758			0.00	0.00	\$61,191			0.00	0.00
Jul 2017	\$6,258			0.00	0.00	\$67,449			0.00	0.00
Aug 2017	\$7,579			0.00	0.00	\$75,028			0.00	0.00
Sep 2017	\$9,072			0.00	0.00	\$84,100			0.00	0.00
<b>CTD</b>	<b>\$750,945</b>	<b>\$737,219</b>	<b>\$765,756</b>	<b>0.98</b>	<b>0.96</b>					

ACWP	actual cost of work performed	CTD	contract to date
BCWP	budgeted cost of work performed	EVMS	Earned Value Management System
BCWS	budgeted cost of work scheduled	FY	fiscal year
CPI	cost performance index	SPI	schedule performance index

***Federal Program Manager:*** Jeff Rambo

**Retrieve and Close Single-Shell Tanks (5.02)**

The March 2017 variances below have a no impact on TPA milestones for tank retrieval.

The **favorable** schedule variance (SV) of \$6,772K is due to:

- A baseline change request was processed in March that resulted in a point adjustment in the FY 2017 budget as a result of the Continuing Resolution. Adjustments included field work within AX Tank Farm that was originally planned to be performed this year but was constrained due to SCBA inefficiencies, beryllium precautions, limited personnel, and funding restrictions.

The **unfavorable** cost variance (CV) of (\$3,381K) is due to:

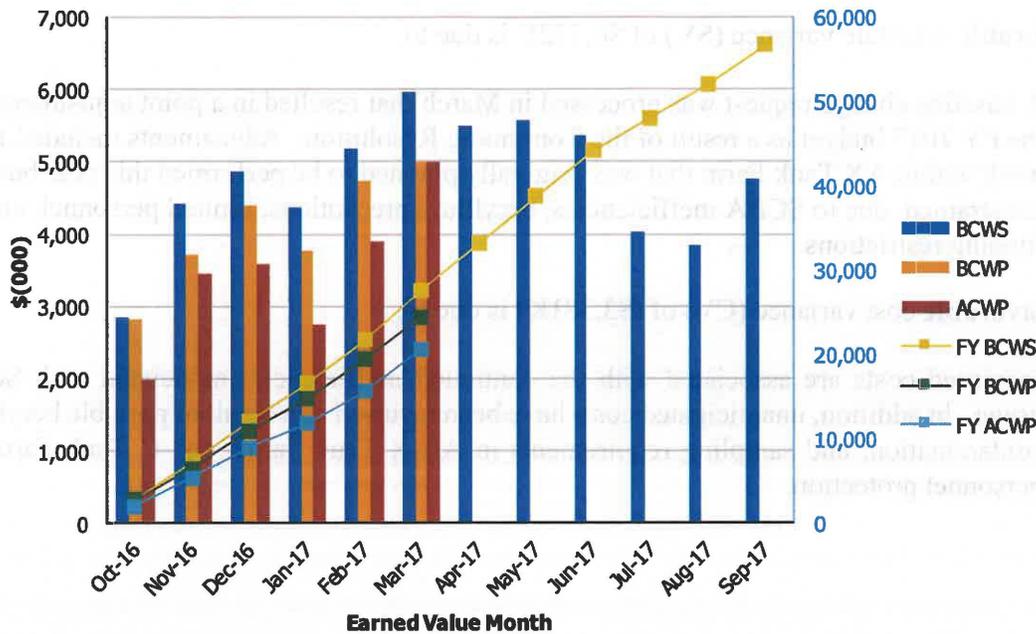
- Increased costs are associated with the continued inefficiencies associated with SCBA usage. In addition, unanticipated costs have been incurred as a result of possible beryllium contamination, and sampling requirements in A/AX Tank Farms and C Tank Farm for personnel protection.

Earned Value Data: Fiscal Year 2017

March-17

**Tank Farms ORP-0014**  
**Waste Feed Delivery/Treatment/Double-Shell Tank Retrieval Closure 5.03**

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2016	\$2,840	\$2,829	\$1,990	1.00	1.42	\$2,840	\$2,829	\$1,990	1.00	1.42
Nov 2016	\$4,428	\$3,728	\$3,446	0.84	1.08	\$7,267	\$6,557	\$5,436	0.90	1.21
Dec 2016	\$4,878	\$4,404	\$3,589	0.90	1.23	\$12,146	\$10,961	\$9,026	0.90	1.21
Jan 2017	\$4,371	\$3,773	\$2,737	0.86	1.38	\$16,516	\$14,734	\$11,762	0.89	1.25
Feb 2017	\$5,176	\$4,743	\$3,893	0.92	1.22	\$21,692	\$19,477	\$15,656	0.90	1.24
Mar 2017	\$5,981	\$4,992	\$4,999	0.83	1.00	\$27,673	\$24,469	\$20,654	0.88	1.18
Apr 2017	\$5,496			0.00	0.00	\$33,169			0.00	0.00
May 2017	\$5,564			0.00	0.00	\$38,733			0.00	0.00
Jun 2017	\$5,357			0.00	0.00	\$44,090			0.00	0.00
Jul 2017	\$4,034			0.00	0.00	\$48,124			0.00	0.00
Aug 2017	\$3,836			0.00	0.00	\$51,960			0.00	0.00
Sep 2017	\$4,770			0.00	0.00	\$56,730			0.00	0.00
<b>CTD</b>	<b>\$400,058</b>	<b>\$395,488</b>	<b>\$365,509</b>	<b>0.99</b>	<b>1.08</b>					

ACWP	actual cost of work performed	CTD	contract to date
BCWP	budgeted cost of work performed	EVMS	Earned Value Management System
BCWS	budgeted cost of work scheduled	FY	fiscal year
CPI	cost performance index	SPI	schedule performance index

**Federal Program Manager:** Kaylin Burnett

**Waste Feed Delivery/Treatment (5.03)**

The March 2017 variances below have no impacts on the TPA milestones.

The **unfavorable** schedule variance (SV) of (\$989K) is primarily due to:

- Prolonged procurement strategy discussions and late agreement with procurement on path forward for subcontract resulted in a delay to the initiation of AP-105 Tank Farm upgrades design.
- The Single Pass Flow-Through (SPFT) testing being performed by the Vitreous State Lab (VSL) is making less progress than planned. The original plan assumed that the testing for Glass #1 and Glass #2 would run concurrently; however, due to VSL resource limitations the tests will now be run in series with the testing of Glass #2 completing at the end of the fiscal year.
- The Single Pass Flow-Through (SPFT) and Flow through Coupon Analysis (FTCA) testing being performed by the Pacific Northwest National Lab (PNNL) started approximately two months later than planned due to delayed glass selection at the beginning of the fiscal year as well as prolonged test set-up and glass preparation.
- A delayed start to the fabrication of the Hanford Waste End Effector (HWEE).

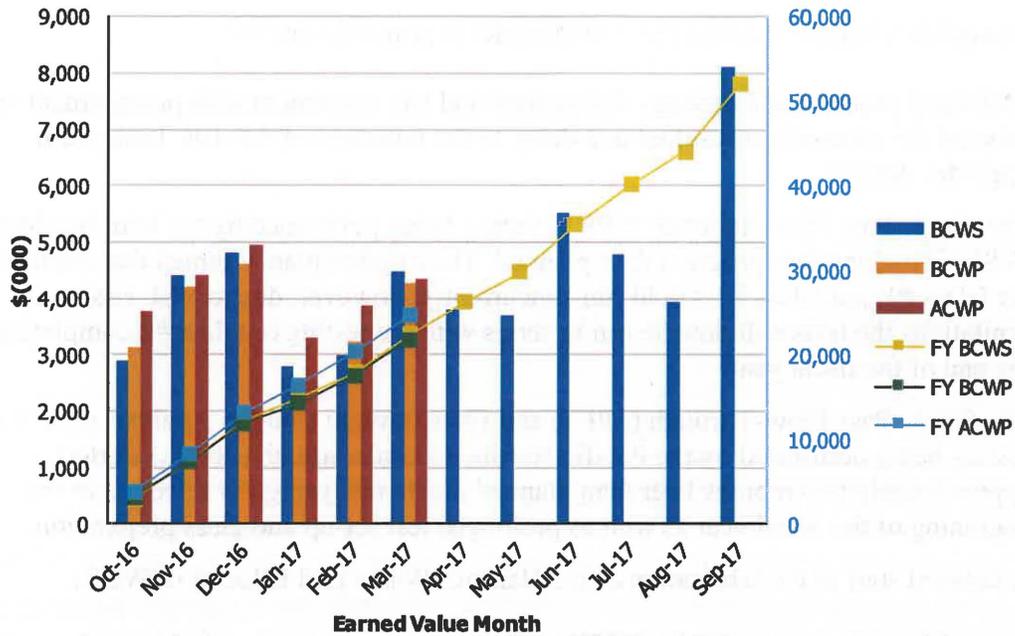
The **unfavorable** cost variance (CV) of (\$7K) is below the reporting threshold and does not require a variance narrative.

Earned Value Data: Fiscal Year 2017

March-17

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

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2016	\$2,889	\$3,131	\$3,770	1.08	0.83	\$2,889	\$3,131	\$3,770	1.08	0.83
Nov 2016	\$4,391	\$4,193	\$4,400	0.95	0.95	\$7,280	\$7,324	\$8,170	1.01	0.90
Dec 2016	\$4,796	\$4,620	\$4,950	0.96	0.93	\$12,076	\$11,944	\$13,119	0.99	0.91
Jan 2017	\$2,804	\$2,370	\$3,297	0.85	0.72	\$14,880	\$14,314	\$16,417	0.96	0.87
Feb 2017	\$2,999	\$3,220	\$3,867	1.07	0.83	\$17,879	\$17,534	\$20,284	0.98	0.86
Mar 2017	\$4,462	\$4,265	\$4,328	0.96	0.99	\$22,342	\$21,799	\$24,612	0.98	0.89
Apr 2017	\$3,794			0.00	0.00	\$26,136			0.00	0.00
May 2017	\$3,684			0.00	0.00	\$29,820			0.00	0.00
Jun 2017	\$5,531			0.00	0.00	\$35,350			0.00	0.00
Jul 2017	\$4,765			0.00	0.00	\$40,115			0.00	0.00
Aug 2017	\$3,945			0.00	0.00	\$44,060			0.00	0.00
Sep 2017	\$8,099			0.00	0.00	\$52,159			0.00	0.00
<b>CTD</b>	<b>\$77,951</b>	<b>\$75,433</b>	<b>\$81,360</b>	<b>0.97</b>	<b>0.93</b>					

ACWP	actual cost of work performed	CTD	contract to date
BCWP	budgeted cost of work performed	EVMS	Earned Value Management System
BCWS	budgeted cost of work scheduled	FY	fiscal year
CPI	cost performance index	SPI	schedule performance index

***Deputy Federal Project Director:*** Janet Diediker

**Treat Waste (5.5)**

The March 2017 variances below have no impacts on TPA milestones.

The **unfavorable** schedule variance (SV) of (\$197K) is due to:

- The schedule for the waste transfer hydraulic transient analysis (HTA) was based on early review of the draft calculations with accelerated comment disposition and the selection of mitigation strategies. Due to the extent of the initial draft comments, the mitigation selection has taken longer than initially anticipated. This resulted in a delay to the scheduled completion of these calculations.

The **unfavorable** cost variance (CV) of (\$63K) is due to:

- The Preliminary Design and Design Project support work scope required additional resources to develop the extensive documentation required for the 60 percent Part B Design Review. The record comment dispositions required additional effort as well. The hourly rates for the review team were higher than estimated for these efforts which also included Project Technical Changes Notices, detailed schedules and evaluations relative to Build to Print (BTP) scope changes from the original strategy.