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Office of River Protection
Project Managers' Meeting Minutes

2440 Stevens Center
Richland, Washington

April 20, 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.

Wahed Abdul, DOE-ORP — Date: 6/1/17

Jan Bovier, DOE-ORP — Date: 6/1/17

Jeff Bruggeman, DOE-ORP — Date: 6/1/17

Kaylin Burnett, DOE-ORP — Date: 6/5/17

for Joni Grindstaff, DOE-ORP — Date: 6/5/17

Paul Hernandez, DOE-ORP — Date: 6/1/17

Jeremy Johnson, DOE-ORP — Date: 6/1/17

Jeff Rambo, DOE-ORP — Date: 6/1/2017

Dustin Stewart, DOE-ORP — Date: 6/1/17

Richard Valle, DOE-ORP — Date: 6/1/2017

Jason Young, DOE-ORP — Date: 6/1/17

Date: 6-7-17

Jeff Lyon, Project Manager,
Washington State Department of Ecology

Date: 6-7-17

Dan McDonald, Project Manager,
Washington State Department of Ecology

Date: 6/7/17

Stephanie Schleif, Project Manager,
Washington State Department of Ecology

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TRI-PARTY AGREEMENT MILESTONE REVIEW AND MONTHLY SUMMARY REPORT

1.0 ADMINISTRATIVE ITEMS/MILESTONE STATUS

Upcoming Meetings

The next project managers meeting (PMM) is scheduled for Wednesday, June 14, 2017, from 1:00 p.m. to 3:30 p.m. at the Office of River Protection (ORP) office in Richland, Washington. The ORP quarterly milestone review is scheduled for May 18, 2017, from 8:30 a.m. to 11:30 a.m. at the Ecology office in Richland, Washington.

Recent Items Entered/To Be Entered into the Administrative Record

U.S. Department of Energy (DOE), ORP provided the monthly Tri-Party Agreement (TPA) and Consent Decree (CD) reports.

Tri-Party Agreement Milestone Status

ORP noted that milestone M-045-84 has been completed, and that M-045-82 will be discussed under the SST closure program section.

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

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

Action No. 1 (TF-16-01-02)

ORP stated that the last DFLAW/LAWPS program review held with Ecology provided all of the mass energy balance information associated with the DFLAW program, and that discussions will continue with Ecology regarding this topic. ORP requested closing this action. Ecology responded that this action could be closed, as long as communications in other forums continue. ***ORP noted that the 3/15/2017 date in the update column of the action table reflects the updates from the last PMM.*** This action was closed.

Action No. 2 (TF-16-07-05)

ORP stated that a follow-up meeting was scheduled with Ecology regarding the configuration of the exhausters, but the meeting was postponed. This action remains open.

Action No. 3 (TF-16-09-01)

ORP reported that the list of Independent Qualified Registered Professional Engineer (IQRPE) reports is being finalized by WRPS. This action remains open.

Action No. 4 (TF-16-09-02)

ORP stated that a meeting was held with Ecology to discuss DST permitting associated with DFLAW. ORP added that there have been some changes in the scope of upgrades to support DFLAW, and a follow-up meeting will be scheduled with Ecology to discuss those changes. Ecology stated that it received a letter from ORP earlier this week that indicated there was an agreement between ORP and Ecology on the permitting path forward for the DSTs. The letter stated that ORP will provide Ecology a draft DST permit application by July 3, 2017, and a list of the DST upgrades and any design information that would be affected by the upgrades will be provided to Ecology prior to the draft permit application. ORP added that there was agreement that meetings will be held with Ecology on a regular basis. Ecology stated that it will discuss the status of this action internally and follow up with an email to ORP. This action remains open.

Action No. 5 (TF-16-11-01)

ORP noted that there are three elements to this action: providing the waste designation work sheets for the AZ-301 sample; setting up a tour of the tanker loadout facility at AZ-301; and providing the resolution on the spill that occurred in November 2016. ORP stated that the tour for Ecology was conducted Tuesday (4/18/17), and the documents associated with the remaining two elements are in the process of being cleared for release. Ecology expressed appreciation to ORP for setting up the tour. This action remains open.

Action No. 6 (TF-16-11-02)

This action was closed 3/15/2017 and will be removed from the action table.

Action No. 7 (TF-16-11-04)

ORP stated that the T-112 work plan is still in legal review. This action remains open.

Action No. 8 (TF-16-11-05)

ORP stated that the reports associated with the four tanks that were visually inspected at ETF have been finalized, and WRPS is in the process of consolidating them into one RPP report before being cleared for release. This action remains open.

Action No. 9 (TF-17-02-01)

This action was closed on 3/15/2017 and will be removed from the action table.

Action No. 10 (TF-17-02-02)

This action was closed on 3/15/2017 and will be removed from the action table.

Action No. 11 (TF-17-02-03)

ORP stated that this action was discussed with Ecology during a meeting held Tuesday (4/18/17), and asked if enough information was provided to close this action. Ecology responded that the information provided was satisfactory. Ecology noted that what was described as a small

sinkhole was identified in a compliance inspection report, and it was determined that the sinkhole was caused by a buried light pole and not from anything that was leaking. Ecology stated that its question regarding the sinkhole was answered and this action could be closed. ORP noted that if the sinkhole was identified in a compliance inspection report, ORP will respond to the report. This action was closed.

Action No. 12 (TF-17-03-01)

Ecology stated that an internal meeting was held to discuss the SST Tier 1 Closure Plan, and Ecology is ready to schedule a meeting with ORP. ORP asked if this action could be closed. Ecology responded that the outcome of this action is the need to complete the review of the Tier 1 Closure Plan. Ecology noted that a meeting was held with ORP to discuss the Conceptual Agreement Plan (CAP) for the SST system, and the next step would be to schedule a meeting to move forward with the Tier 1 review and CAP process. Ecology stated that this action could be closed, but requested opening ***a new action for a meeting with ORP regarding the Tier 1 and closure plan process for Rev. 9 of the permit***. This action was closed and a new action will be opened, per Ecology's request.

2.0 SYSTEM PLAN

ORP reported that the modeling has been completed for all but the last two scenarios, and the information will be shared with the system plan team in the next two weeks. ORP stated that the preliminary write-ups for the first three scenarios that were modeled have been drafted, and ORP is on target for delivery prior to the October 31, 2017 milestone due date. Ecology inquired about the status of the negotiation strategy. ORP responded that the negotiation strategy is still in legal review, and it will be following up with legal later today.

3.0 ACQUISITION OF NEW FACILITIES

ORP stated that there were no updates to provide, and the milestones are tied to the system plan negotiation.

4.0 SUPPLEMENTAL TREATMENT AND PART B PERMIT APPLICATIONS

ORP stated that there were no updates to provide, and the milestones are tied to the system plan negotiation. Ecology asked for an explanation regarding the status of M-062-21 and M-062-00, which are listed at risk. ORP responded that those two milestones have been reported as at risk since September 2016, and it will follow up on the explanation that was provided.

5.0 242-A EVAPORATOR STATUS

ORP reported that the next campaign (EC-06) has been slightly delayed, and according to yesterday's schedule, EC-06 will occur during the last week of June 2017. Campaign EC-07 is to follow shortly after EC-06 has been completed.

ORP noted that there have been ongoing meetings with Ecology regarding the Class 2 permit modification for removal of the diesel generator. ORP indicated that a conclusion had been reached with Ecology earlier this week, which will be finalized before moving forward with the

next actions. Ecology requested an action item for ORP to provide a schedule on the removal of the diesel generator.

> ***ORP Action: ORP to provide Ecology with a schedule for removal of the 242-A Evaporator diesel generator.***

ORP reported that the P-B-2 pressure relief valves were successfully replaced, and replacement of the radiation monitoring systems is nearly complete. ORP stated that work continues on the integrity assessment for the reboiler and the C-A-1 vessel. Ecology inquired about the C-A-1 vessel. ORP responded that the C-A-1 vessel is the main vessel for the evaporator.

ORP stated that work on the vessel vent stack height extension is under way. ORP noted that the intent of the extension is to get the vapors at a higher elevation because it is one of the major sources of odor complaints in the tank farms, and the stack will be extended by 50 feet. Ecology noted that there are internal discussions as to whether a permit modification is needed for extending the stack height, and an email was sent to ORP this morning regarding the subject. ORP acknowledged receipt of the email, and stated that WRPS will be following up with Ecology's email.

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

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

ORP reported that progress continues with processing the backlog in LERF basin 43. ORP stated that currently about 3.1 million gallons have been processed, and the level in basin 43 is down to about half a million gallons. ORP noted that the basin 43 transfer pump was successfully replaced, which allowed the contractor to achieve a performance goal by the end of the second quarter of FY17. ORP stated that a temporary pump will be installed to remove the heel in basin 43, which will complete the processing of the contents in basin 43. When basin 43 is emptied, operations will turn over to projects to begin the field work for the LERF basin cover replacement, which is scheduled to start in May 2017.

Ecology noted the large volume of leachate in basin 44. ORP responded that the high leachate volume was due to the wet conditions during the winter, and when basin 44 was approaching its limit, the streams were rerouted to basin 42. Ecology pointed out that basin 42 is also getting full. ORP agreed, but pointed out that the cover replacement project for basin 43 is scheduled to start in May 2017, and it is planned for about 90 to 120 days' field work. ORP noted that the old basin 43 cover will be cut into sections, and a crane will be used to put the sections into a box for shipment to ERDF. Ecology asked about cover replacement for basins 42 and 44. ORP responded that the one basin cover replacement is planned for FY17 (basin 43), and one or two will be done next fiscal year, depending on available funding.

Ecology inquired about the capacity of the LERF basins. ORP responded that the capacity for each of the basins is about 7.8 million gallons.

Ecology asked if there are plans to inspect the liner in basin 43 when it is empty. ORP responded that there are plans to inspect the liner, and a certain amount of minor repairs have been priced into the cover replacement project. Ecology noted that the LERF basins were

identified in a Regulatory Analysis Memorandum analysis a number of years ago as a single point of failure, and the liners were designed to last for 15 to 20 years. ORP stated that a meeting is planned with Ecology to provide a current status on the LERF basin cover replacement project, and the liners would be discussed. Ecology noted that the availability of the LERF basins is essential to the Waste Treatment Project (WTP), and it would be helpful to learn about the condition of the liners.

7.0 TANK SYSTEM UPDATE

Double-Shell Tank (DST) Integrity - ORP stated that the enhanced annulus video inspections planned for this year are on schedule to be completed by September 2017. ORP reported that planning is under way to conduct ultrasonic testing (UT) of the annulus floors in the SY Farm this fiscal year. Ecology noted that that the UT of the SY annulus floors is not listed in today's TPA summary report. ORP responded that some of the issues with the annulus floors have been shared with Ecology, and it is emerging scope that will be added to the list in the TPA report.

Oregon Department of Energy (ODOE) asked if there were any issues associated with AP-101 or AP-107. ORP responded that there were no issues with those two tanks, and they were on the schedule of tanks to be inspected. ORP added that reports will be issued on the inspections, which will be provided to Ecology. Ecology suggested including the report number in the TPA monthly summary so it could be accessed. ORP agreed to include the report numbers in the TPA monthly summary.

Ecology stated that during the Tank Waste Committee meeting held yesterday, there were questions about the upcoming activities for AY-102. Ecology noted that since in-tank inspections are planned with the high definition camera starting in June 2017, an update should be provided to the committee sometime this summer. ORP took note of Ecology's suggestion.

Single-Shell Tanks (SST) Integrity – ORP noted activities associated with the three Independent Qualified Registered Professional Engineer (IQRPE) reports that are under way. ORP stated that a meeting will be scheduled with Ecology to review the initial scope for the SST IQRPE in an effort to avoid the possible issues that were associated with the Double-Shell Tank System Integrity Assessment Report (DSTAR). ORP stated that the current priority is with the DST annulus videos, and it is being done ahead of the SST in-tank videos since the same resources are used.

ORP stated that the final report for the operation of the T-111 intrusion mitigation was submitted to the TPA Administrative Record, and a copy was provided to Ecology.

8.0 SINGLE-SHELL TANK INTEGRITY ASSURANCE

ORP noted that the SST IQRPE was discussed in the SST Integrity section.

9.0 IN-TANK CHARACTERIZATION SUMMARY

ORP stated that a complete list of all the reports that were issued in the past month was included in today's TPA monthly summary report. Ecology noted that the report for the AZ-301 sample was listed. ORP stated that the AZ-301 sample is tied to action item No. 5. ORP added that the waste designation is being reviewed from the sample taken in December 2016, which is why a

response to the action item has been pushed into the April/May 2017 time frame. Ecology noted that during the tour at AZ-301, there was discussion about preparations to send the condensate down to LERF/ETF again, rather than returning it to the DST where it's taking up tank space.

10.0 SINGLE-SHELL TANK CLOSURE PROGRAM

ORP reported that two public comments were received regarding the Tier 2 and Tier 3 Closure Plans associated with M-045-82 tentative agreement, and a responsiveness summary is being prepared. ORP stated that when the draft Tier 2 and Tier 3 Closure Plans that have associated interim milestones were sent to Ecology, a date of March 31, 2017 was set for submittal of the final Tier 2 and Tier 3 Closure Plans. ORP has since requested an extension for submittal to May 15, 2017, which was granted by Ecology. ORP stated that there has been discussion regarding options about how to proceed since the dates were changed in the tentative agreement. Ecology stated that as long as the public comment was held on the interim milestones, it would be acceptable to change the dates. Ecology added that the changed dates should be noted when the closure plans are issued.

Ecology stated its understanding was that ORP would be submitting four Tier 3 Closure Plans, but not all of the Tier 3's would be submitted at this time. ORP responded that a single Tier 3 covering the four 200 series tanks will be submitted, and there are several other Tier 3's that will be prepared.

ORP noted that Ecology requested an extension for commenting on the M-045-62 RCRA Facility Investigation/Corrective Measures Study (RFI/CMS) until after the WMA-C Appendix I Performance Assessment (PA) comments are completed. ORP inquired about a time frame for comments on the PA. Ecology responded that the goal is to complete the Performance Assessment comments by the end of May 2017. Ecology added that some of the comments could be transmitted earlier. ORP stated that early submittal of comments would be appreciated.

Ecology noted that M-045-84 was completed to initiate negotiations, and suggested that the parties restart the negotiations at the end of October 2017, following completion of the System Plan milestone. Ecology proposed creating an M-045-84A milestone to restart the negotiations to avoid establishing a new milestone. Ecology offered to work with the TPA staff to draft a change request.

Under significant planned activities, ORP reported that the draft of the T and TY Tank Farm Interim Surface Barriers Monitoring Reports was submitted by the contractor. ORP stated that it has reviewed and commented on the draft, and the comments are being addressed by the contractor. ORP noted that there was an earlier discussion regarding resolution of Ecology's comments on the RCRA Tier 1 Closure Plan, and that a meeting will be scheduled. ORP will provide names and dates to Ecology, and Ecology will schedule the meeting. Ecology indicated that inclusion of bullets under planned activities and issues was sufficient for tracking the Tier 1 Closure plan. Ecology reiterated its intent for the Tier 1 process and the Rev. 9 process to occur simultaneously, and it would be important for ORP to provide support for both issues in at least one meeting.

Ecology asked if a meeting will be scheduled regarding the planned activity for discussion on locations for barriers 3 and 4. ORP responded that a meeting will be set up via email with Ecology.

11.0 SINGLE-SHELL TANK RETRIEVAL PROGRAM

ORP stated that the C-111 retrieval data report (RDR) is in progress, and it should be finalized in September 2017. The C-105 will be the next RDR to be prepared. Ecology suggested adding a bullet to the TPA monthly report for planned activities to include the C-111 RDR. ORP agreed to add a bullet for C-111.

12.0 TANK WASTE RETRIEVAL WORK PLANS STATUS

ORP stated that it has reviewed the last version of the AX Farm tank waste retrieval work plans (TWRWP), and the contractor is incorporating ORP's comments.

13.0 TANK OPERATIONS CONTRACT OVERVIEW

ORP stated the unfavorable schedule variances in base operations for the month of February 2017 were due to adverse weather conditions, which resulted in ten lost work days. ORP noted that overtime was added to recover the schedule, and the March data will reflect an improvement in the schedule variance.

ORP reported that with the better weather, work is getting done under retrieve and close SSTs. ORP noted that a concern was raised with possible beryllium contamination in the pits and associated facilities in the tank farms, which impacted field activities. The work plans were revised, and beryllium concerns are being addressed and incorporated into future work plans. Ecology noted a correction should be made to the second bullet under schedule variance, and the text in parentheses should read "waste disturbing activities," not "waste distributing activities."

There were no updates to report for waste feed delivery or treat waste, other than the status provided in the TPA monthly report.

CONSENT DECREE MONTHLY SUMMARY REPORT REVIEW

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

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

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

ORP stated that a meeting was held with Ecology after the March 2017 PMM, and Ecology provided more clarification regarding its request for technical issue resolution information. The next steps will be to schedule additional meetings with Ecology, and there will be follow-on discussions regarding HLW and PT technical issue resolution. Ecology stated that the parties are still in discussion, and that all of the steps have not been identified for reaching an understanding about what it means to incorporate, vet and consider all technical issues into the design strategy. Ecology added that it has been kept apprised by ORP on the status of technical issue resolution. Ecology stated that the safety basis and design basis must align, and the technical issue resolution has to be part of the alignment. Ecology stated that its perception from discussions suggest that T1, T2 and T3 are in the resolving area, but the remaining five technical issues are not, and it is not clear how the technical issue resolution will be infused into the design strategy.

ORP stated that as discussions continue, the intent is to provide Ecology a schedule for technical issue resolution, and the target date for resolution of the remaining five technical issues is by the end of FY 2018. ORP added that as some testing is ongoing, there could be some resolutions before the target date of FY 2018. Ecology stated that if the prospect of technical issue resolution is reached by the end of FY 2017, the next piece of information would be when the design changes, reconfiguration and re-contracting would be available.

ORP responded that part of that information is dependent on funding. ORP stated that the acting DOE Assistant Secretary for Environmental Management (EM-1) is on site this week for tours, and there will be continued communication to inform EM-1 about the next steps for WTP. ORP noted that EM-1 is asking for specific numbers on funding. ORP stated that a briefing will be provided soon to the new Energy Secretary. ORP stated that the goal is to continue construction at HLW and authorize full production in September 2017, and in parallel complete the design changes from the technical issue resolution. ORP added that as the testing is completed for PT, the design changes will need to be initiated next year.

Ecology acknowledged that funding and cost are uncertain at this point, and stated that since funding is in question, the schedule is also in question. Ecology added that the appropriate scope could be identified, although it couldn't be timed or funded right away, and suggested that the parties move forward with the steps necessary to get the scope in place. Oregon Department of Energy (ODOE) stated that as a representative of the Hanford Advisory Board (HAB) and the other site-specific advisory board (SSAB), EM-Headquarters has requested performance metrics for WTP. ORP stated that there are unknown challenges with the new administration and a new

Energy Secretary, although the current proposed budget is favorable to WTP. ORP stated that as communications with EM-1 continues, the narrative for HLW and PT will be provided to EM-1. ORP noted that a rebaseline and new contract modification is needed for HLW and PT, and those activities will kick off for HLW after full production approval is received this September. ORP indicated that if funding is not established, it will be difficult to build the scope. Ecology suggested that the scope needs to be identified first, followed by seeking the funding. ORP agreed with Ecology. Ecology asked if the continuing resolution (CR) for funding has been extended. ORP responded that it is waiting on the extension, which is due by April 28, 2017.

ORP noted that there was a discussion regarding the PT permit, which is based on a previous design, and it will need future design changes.

Ecology stated that this action could be closed since the discussion will continue in other venues. This action was closed.

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

ORP stated that a presentation on the SHSVD is still on track for the July 2017 time frame. This action remains open.

Action No. 3 (WTP-16-05-01)

ORP stated that Ecology was provided the last engineering study, and this action was closed on March 15, 2017. This action will be removed from the table.

Action No. 4 (WTP-17-02-01)

ORP stated that there will be a discussion with Bechtel about the WTP certification plan and why it is not being updated on an annual basis. An update will be provided to Ecology at the next PMM. This action remains open.

1.0 SPARE REBOILER REQUIREMENT STATUS

ORP stated it is anticipated that the spare reboiler will be received on site ahead of the December 31, 2018 due date. Ecology stated that an IQRPE inspection is being done on the current reboiler, and inquired about the process regarding an independent inspection and the acceptance process for the spare reboiler. Ecology noted that there will be certain vendor qualifications and QA activities occurring up front, but there would be a final inspection before acceptance of the reboiler. ORP responded that the vendor is certified as an NQA-1 fabricator, and the reboiler will be NQA-1 stamped. Ecology stated that in the past, for purposes of an IQRPE inspection, an IQRPE cover sheet with a statement and a stamp is placed with the inspection report.

Ecology expanded on the inquiry and asked about all of the activities necessary to pre-position the reboiler in order to minimize or eliminate any delays when (or if) the spare reboiler needs to be installed. Ecology listed items such as advance work planning documents, work packages, associated ancillary systems, and equipment and components necessary to support installation of the reboiler. There was a brief discussing regarding the mechanism for providing the information Ecology requested about activities needed to minimize the down time for installation of the spare reboiler. ORP noted that the information Ecology is requesting is not required in the

Consent Decree report, and the lawyers have a concern regarding information that is included in the CD report. ORP will have an internal discussion to determine how the information will be provided and follow up with Ecology.

The parties agreed to establish an action for ORP to respond to Ecology's inquiry regarding the IQRPE and QA process for the new reboiler.

> ***ORP Action: ORP to provide Ecology information regarding the inspection and acceptance process for the spare reboiler.***

2.0 SINGLE-SHELL TANK RETRIEVAL

ORP provided updates on the planned activities. ORP stated that a construction second shift was added on April 4, 2017 to work on C-105, and the electrical installation is nearing completion. The Enhanced Reach Slucing System (ERSSs) are ready to be installed in C-105. The slurry pump was installed in C-105, and the connections are being made. One of the exhausters in AX Farm is operational, and there are some corrective actions to do on the other exhauster. Several attempts were made to remove the thermocouple tree in AX-102, but it remains stuck, and alternatives for removal are being considered. The thermocouple tree was removed from AX-104. The thermocouple trees are being removed to make room for installation of the ERSSs and the cameras and lights.

Ecology inquired about the installation of the C-105 control system trailer. ORP explained that a new trailer will be installed, and the power and control lines will be run from the trailer for the C-105 retrieval.

Ecology inquired about building 801A. ORP responded that 801A is a building that was part of the old airlift circulation system. During the 1960s, there was a contamination spill of about 25 gallons of high level liquid waste in the building, and at that time a couple inches of lead shot was put on the floor with a layer of concrete over the lead shot. The building was sealed off with shielding, and it was abandoned after the air lift circulators were no longer being used. The building is in the way of the transfer lines for emptying A/AX Farm, and the building will be taken down to slab-on-grade. The transfer lines will be routed over the floor, and they will be shielded with the standard lead hose barns. ORP noted that routing the transfer lines over the 801A facility was the most direct route because of several buried air circulator lines, which have been sealed by the crew digging down to cut and cap the lines.

3.0 TANK WASTE RETRIEVAL WORK PLAN STATUS

ORP noted that the C-105 TWRWP is being revised to add the third retrieval technology for chemical dissolution.

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

See CD monthly summary report.

4.0 WASTE TREATMENT AND IMMOBILIZATION PLANT PROJECT

ORP stated that overall LAW, BOF and LAB (LBL) is 54 percent complete, and the focus continues to be Direct Feed LAW (DFLAW). ORP noted that a briefing was provided and a letter was sent to the Defense Nuclear Facilities Safety Board (DNFSB) in January 2017 regarding technical issues T1, T2 and T3.

ORP asked if it should continue to include the earned value management system (EVMS) analysis in the CD report. Ecology responded that it should continue to be included, and it is beneficial information to understand the frame of reference for anyone outside of the projects.

ORP reported that the unfavorable schedule variance for February 2017 was mainly due to inclement weather. ORP noted that there were delays in startup testing for BOF Building 91 due to weather, but building 91 now has power and the earned value will start to improve. ORP stated that the cost variance was net favorable, and other than weather delays, progress was made with the LAW Preliminary Documented Safety Analysis (PDSA).

5.0 PRETREATMENT FACILITY

ORP provided an update on the technical issues. ORP reported that the pulse jet mixer (PJM) controls testing (T4) has been completed. Revisions are being made to the mixing aspect in terms of the instrumentation on the sampler. ORP stated that the mixing testing should start this June and be completed by September 2017, which is several months ahead of schedule. Ecology asked if there is sufficient funding to complete the T4 testing. ORP responded that there is full funding to complete T4 testing. ORP noted that the optimization process resulted in the decision that some of the testing was not needed.

ORP stated that corrosion testing is under way for the T5 erosion/corrosion testing, which was scheduled to be completed in the September/October 2017 time frame, but some of the erosion testing has been pushed out through FY18/19 due to funding issues. ORP added that an assessment is being done on how much testing is needed, and if it is determined that some of the testing is not needed, T5 testing could be completed in FY18. Ecology inquired about the decisions that would determine not as much testing would be needed. ORP explained that the decisions will be made on the basis of having enough data from past testing. ORP noted that the decision will be made by the integrated technical team (ITT), which is an independent expert team of consultants. The ITT has requested Bechtel to generate a document on testing that has been done, and to provide the basis on what Bechtel believes is needed. Ecology referred to the difficulties over the past six or seven years with erosion/corrosion margins, incorrect calculations, and chemical compositions being poorly characterized, and stated the expectation that those aspects will be based on robust calculations. ORP responded that the focus of the ITT is to assess the justification for testing and/or eliminating any testing. ORP added that the testing will be done, but the extent of testing is what will be determined. Ecology requested that ORP keep it apprised of the decisions made regarding T5 testing. ORP stated that it will keep Ecology informed of the decisions, but noted that it is not involved in the decision making.

ORP stated that Bechtel is in the process of the optimization study (T6) regarding the standard high solids vessel design (SHSVD). ORP noted that the SHSVD is associated with action item No. 2. ORP stated that the complete details have not been determined about what needs to be

included in the optimization study, but at a minimum the vessel layout, the number of vessels, and whether the throughput can be met with the SHSVD will be included in the study. Ecology stated the assumption is that the process throughput will be consistent with the contract requirements. ORP responded that it will be consistent with the contract requirements. ORP noted that an evaluation is being done on whether the oxidating leaching can be removed from the contract and still meet the mission. ORP stated that past analysis showed that with the new glass model, leaching may not be as important as previously considered. Ecology asked if there will be actual testing and not just calculation methods. ORP responded that T6 is calculation flow sheets, but the glass model is testing that will be done based on T4 results. ORP indicated that the optimization study could be completed by September 2017, and definitely by the end of calendar year 2017. ORP stated that Bechtel is to provide a cost estimate for the new SHSVD, which will be more focused with the black cell than the hot cell.

ORP stated that Bechtel is working on the strategy for the vessel structural integrity analysis (T7), based on a number of different analyses that were done on some of the existing vessels.

6.0 HIGH-LEVEL WASTE FACILITY

ORP stated that the key focus is getting the D2 production authorization, and that Bechtel submitted the facility completion plan, which identifies the strategy for full production. ORP stated that the facility completion plan was approved and has been provided to Ecology. Ecology acknowledged receipt of the facility completion plan, and requested a briefing on the plan after a review has been done. Ecology stated that it will send ORP items of concern and questions ahead of the briefing.

ORP stated that another area of key focus in HLW is the design and operability (D&O) review. ORP reported that its comments on the D&O review have been dispositioned by Bechtel, and ORP has accepted all of the dispositions. Bechtel is currently working on the report that summarizes all of the dispositions and the outcome of HLW based on the dispositions. ORP stated that it has reviewed the first draft of Bechtel's D&O report and provided comments last week. ORP added that the goal is to issue the final D&O report by June 2017, and the report should be released to Ecology by July 2017.

ORP noted that the review on the PDSA has been delayed, due to resources being focused on the LAW PDSA review, but additional resources have been hired to supplement the nuclear safety organization. ORP stated that there are now four additional consultants on board who have started reviewing the HLW PDSA. ORP noted that it will take some time for the review, and it will be meeting with the review team in two weeks to discuss their high level comments and a tentative schedule to complete the review. ORP will also be meeting with Bechtel to determine their level of support for the PDSA review and when it could be approved. ORP noted that the goal is to meet the September 2017 date for the DSA approval, which equates to approval of the PDSA by August or early September 2017.

Ecology inquired about the additional contractors for the PDSA review, particularly regarding their level of knowledge of the D&O review. ORP responded that two of the additional contractors have been involved with the HLW safety design strategy for several years, and there is confidence with the additional contractors. ODOE asked if there is a time limit for the

additional contractors. ORP responded that they will remain on board until the PDSA is approved, and they will probably move on to assist with other nuclear safety needs for the WTP.

7.0 LOW-ACTIVITY WASTE FACILITY

ORP stated that the LAW facility is 60 percent complete overall. ORP noted that Ecology visited the LAW facility on Tuesday (4/18/17) and viewed the caustic scrubber. ORP referred to the design reviews listed in today's CD report, and stated that the reviews have been discussed with Ecology.

ORP reported that the final shipment of the redesigned jack bolts was received, and preparations are being made to install them into melter one. ORP noted that the new contract language for Bechtel puts the focus on melter one, with melter two following several months later. Ecology inquired about the status of the jack bolts. ORP responded that all of the jack bolts have been received for both melter one and melter two. ORP added that the correct combination was determined for the jack bolts with the washers that meet the testing range. Ecology asked if ORP was satisfied with the verification of the jack bolt and washer combination. ORP responded that it was satisfied, and noted that it was a very tight testing range. Ecology inquired about the redesign of the jack bolts. ORP responded that the main issue was associated with the washers, which had to be redesigned to meet the criteria for load range.

ORP reported that an area in LAW that is being worked is the melter offgas piping from the film cooler and into the process cell. ORP noted that an issue has been identified with that section of the piping. ORP stated that when the screw fittings were placed on the piping, it elongated the pipe and it's not matching up. ORP stated that there is an Nuclear Quality Assurance (NQA)-1 shop in town that should be able to get the fittings to match up.

ORP stated that system walk-downs have started on the chilled water system and the potable water system.

ORP reported that the calculation for the preliminary hazard categorization was received for review, which represents a step toward going from a PDSA to the DSA. ORP stated that a change package was issued, allowing Bechtel to proceed with procurements.

9.0 BALANCE OF FACILITIES

ORP reported that concrete pours for the Effluent Management Facility (EMF) are under way. The concrete for the base mat of the utility building has been poured, and the concrete for the base mat of the processing facility is being poured today. ORP noted that those two pours represent about 4,000 yards of concrete and about 40 percent of the total concrete that will be needed for the EMF. The next phase for the EMF will be the stem walls around the facility. ORP stated that a follow-on activity will be placement of the base mat at the low point drain and the stem walls.

ORP stated that from a design perspective, the EMF is at about 80 percent complete. ORP noted that the design completion milestone that was set for Bechtel does not equate to the final drawings signed off and finalized as an as-built design. ORP stated that the design will reach a point where the percentages will not increase because the design will be done for all intents and purposes, and there will be minor changes as work is done with the vendors on vessels.

ORP stated that for BOF, the focus is electricity and water by moving through the electrical distribution system turnovers, startup testing, distributing out for beneficial use and then bringing up the water systems. A key accomplishment was energizing Building 91 with permanent power at the low voltage power supply, which was distributed out to the water treatment facility and the NLD facility. There is water in the NLD tank, and it is lining up for the first transfer under the pump systems over to the Treated Effluent Disposal Facility (TEDF).

ORP stated that the next focus area will be the water treatment building, which has been turned over to the startup organization for testing protocols on the three water systems in the water treatment building.

ORP stated that the next steps for the cooling tower will be receipt of low voltage power from building 91 and any testing that can be done with low voltage.

ORP reported that the crew is doing jumper repair at Building 91 to allow power from building 87 to the large transformers outside of building 91. The large transformers will distribute medium voltage power into Building 91, which is the next main step for power distribution. ORP noted that an overhaul was done this past January on the four large transformers, and the transformers will be ready once the jumpers and all of the equipment are lined up inside Building 91. When the medium voltage power is distributed into Building 91, it will be distributed out to the cooling tower, which is a critical step to allow for testing of the pumps at the cooling tower.

ORP stated that during operations, about half of the cooling tower will be operating to support DFLAW, and if there is an issue with one of the pumps, there is some backup capability since the pumps all pull off a common header. ORP noted that the whole system needs to be online, with the capability to go back and forth between partial and full operation, and the backup capability provides some reassurance if there is an issue with one of the pumps. Ecology inquired about the capability once the full system is operating. ORP responded that full operating capacity will be two pumps with one standby pump. ODOE asked if there was additional capacity if all three pumps were running. ORP responded that there would be additional capacity, and since the pumps all pull off one header, it would be a matter of giving out the proper discharge pressure. ORP noted that there are head pressure concerns, with head pressure loss when going up to PT and HLW and LAW. ORP added that a review has been done on the capacity of the system and the capacity needs can be met.

ORP stated that looking forward, the next steps will be turning over the chiller compressor plant and the steam plant to the startup organization. ORP noted that there have been discussions with Ecology regarding the retrofitting that has been done in the chiller compressor plant. There was some repair done to the levels of the fire heads on the ceiling that were out of code tolerance. The four air compressors are sitting in place and being prepared to get wired up and piped in. ORP stated that preparations are under way to do the modifications to the steam plant to support DFLAW. The modifications are mainly headers and valve sizing changes.

Ecology asked about the source of potable water for BOF. ORP responded that all the potable water comes from the Hanford Site. There is a 400,000 gallon clear well and a water treatment building in the 200 West Area, which feeds a 400,000 gallon clear well in the 200 East Area. ORP stated that the water from 200 East is what will supply BOF with its water, and it has not been transferred over to BOF through the main header yet. ORP stated that there is a four-inch

header and a 12-inch header, and the 12-inch header supplies the water treatment facility. ORP stated that within the water treatment building, the process service water and all the pertinent cooling processes have to come in as potable water. ORP noted that there is no capability to go from raw water to DI water within the treatment facility, and there are several stages of filtration to clarify any incoming potable water. There is the potential to adjust the chlorine levels if they are not in spec. ORP added that there is a potable water line and a raw water line, and the raw water will supply the fire systems. The raw water can be used, if needed, as a backup for the cooling tower.

10.0 ANALYTICAL LABORATORY

ORP stated that after a review, a decision has been made to operate the C5V system in its entirety. ORP noted that the decision provides the opportunity to bring up some of the equipment to assess its condition. ORP stated that when the full systems start operation to support HLW and PT, there will be a more reliable system going forward knowing the current condition of the equipment that has had regular maintenance. ORP stated that there will be some sort of closure within the hot cell, and as part of the full balance, the dampers within each of the hot cells will be throttled. Ecology inquired about verifying sustainable margin of the flow back and forth with the throttling. ORP responded that less than 1,000 SCFM to do the job that is needed, and a system that will pull much more than that, so the system will be throttled back to where there isn't too much of a load.

ORP noted that if Ecology wants to visit the LAB, there have been changes in access to minimize traffic, and Ecology should notify Bechtel so that a visit can be coordinated ahead of time.

ORP/Ecology TPA and CD Agreements, Issues, and Action Items –April 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 –April 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.	Need an established baseline. Meeting pending. (3/15/2017)	Kaylin Burnett	Open
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. (3/15/2017).	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. (3/15/2017)	Dusty Stewart	Open
4	TF-16-09-02	9-20-16	Ecology request that ORP schedule a meeting on DST permitting (DFLAW related)	Scope is still being defined. (3/15/2017)	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 ECY would like to know how spill (from Nov) was resolved. ORP is reviewing information prior to release to Ecology.(3/15/2017)	Richard Valle/Dusty Stewart	Open
6	TF-16-11-02	11-17-16	ORP to schedule a meeting with Ecology to discuss A/AX Farm closure and the WMA A/AX PA. The discussion will include the schedule for A/AX Farm.	Meeting occurred on March 14. (ref M-045-84) (3/15/2017)	Jan Bovier	Closed 3/15/17
7	TF-16-11-04	11-17-16	ORP to provide Ecology the T-112 work plan	In legal review. (3/15/2017)	Dusty Stewart	Open

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

#	Action ID	Start Date	Action	Updates / Needs for Closure	Actionee(s)	Status/ Date Closed
8	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 (3/15/2017)	Richard Valle	Open
9	TF-17-02-01	2-16-17	ORP to provide Ecology a copy of the revision to the DST integrity assessment report.		Jeremy Johnson	Closed 3/15/17
10	TF-17-02-02	2-16-17	ORP to follow up on Ecology's inquiry regarding daily readings on the SY annulus inspections.		Jeremy Johnson	Closed 3/15/17
11	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	Open
12	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	Open

#	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).	ORP will follow-up with Ecology to further define and clarify this action so that it can be addressed and closed. Meeting pending. This issue will be closed after the meeting occurs. (3/15/2017)	Joni Grindstaff	Open

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

#	Action ID	Start Date	Action	Updates / Needs for Closure	Actionee(s)	Status/ Date Closed
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-16-05-01	5/19/16	Ecology requests ORP provide engineering studies that support closure of the HLW Design and Operability review.	ORP will provided studies as they are completed.	Wahed Abdul	Closed 3/15/17
4	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.		Joni Grindstaff	Open
5						
6						
7						

FINAL

Office of River Protection
Consent Decree
Monthly Report
April[1] 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)[2]

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[1] The narrative descriptions of progress in this report cover the period from March 1–31, 2017. Earned Value Management System data and descriptions cover the period of February 1–28, 2017; this includes the facility completion percentage estimates included at various locations in the Waste Treatment and Immobilization Plant section.

[2] 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.

Acronyms and Abbreviations

ABW	ABW Technologies
BNI	Bechtel National, Inc.
BOF	Balance of Facilities
C5V	ventilation system for potential contamination zones C5
CD	Consent Decree (*State of Washington v. Dept. of Energy*, 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)
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

Milestone	Title	Due Date	Completion Date	Status
Fiscal Year 2020				
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.
Fiscal Year 2022				
D-00A-08 Interim	Start LAW Facility Cold Commissioning	12/31/2022		On Schedule
Fiscal Year 2023				
D-00A-09 Interim	LAW Facility Hot Commissioning Complete	12/31/2023		On Schedule
Fiscal Year 2024				
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.
Fiscal Year 2030				
D-00A-02 Interim	HLW Facility Construction Substantially Complete	12/31/2030		On Schedule

Milestone	Title	Due Date	Completion Date	Status
Fiscal Year 2031				
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
Fiscal Year 2032				
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
Fiscal Year 2033				
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
Fiscal Year 2036				
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 finite element analysis associated with the reboiler is in the process of being performed. The bounding conditions associated with the finite element analysis model were provided to ABW by Washington River Protection Solutions LLC (WRPS) engineering. The commercial grade dedication plan submitted by ABW has been reviewed by WRPS engineering. Comments associated with the commercial dedication plan have been generated by WRPS and have been submitted back to ABW for disposition.

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 AX Farm emergency shower installation
- Completed an additional AX Farm pit clean out (AX-02B); seven of eight pit clean outs completed
- Completed initial AX POR-126 exhauster and POR-127 exhauster testing; both exhausters are operating under "testing" conditions
- Completed foam and lead removal at AX-103
- Completed Tank C-105 riser go-no-go testing for extended reach sluicer system (ERSS) installation

- Completed Tank C-105 excavations for electrical installations
- Initiated C Farm hose-in-hose transfer line removals planned for fiscal year (FY) 2017.

Significant Planned Activities in the Next Three Months:

- Negotiate contract proposal for installing and performing the third retrieval technology at Tank C-105
- Add second Tank C-105 construction shift to mitigate schedule impacts
- Complete Tank C-105 electrical installation
- Initiate Tank C-105 ERSS installation
- Initiate Tank C-105 slurry pump installation
- Complete AX Farm ventilation readiness/turnover at portable exhauster POR126 and POR127
- Initiate AX-102 and AX-104 in-tank equipment removal
- Complete the one remaining AX-104 pit clean out
- Complete AX-101 foam and lead removal
- Complete 801A Building demolition
- Complete installation of the C-105 Control System Trailer.

Issues:

- See previous reports for a description of the history of the July 11, 2016, Hanford Atomic Metal Trades Council (HAMTC) "stop work" order requiring mandatory use of supplied air within the perimeter fence lines of both single- and double-shell tank farms, and the August 31, 2016, Memorandum of Agreement between HAMTC and WRPS, which lifted the stop work based upon WRPS's agreement to remain on supplied air until chemical cartridge testing is complete and reviewed by a third party selected by HAMTC. The litigation between Hanford Challenge, United Association of Plumbers and Steamfitters Local Union 598, and the State of Washington vs. the U.S. Department of Energy (DOE) and WRPS remains pending with a trial date set for March 5, 2018; however, the parties have agreed to pursue mediation, which is currently scheduled to occur April 20 and 21, 2017.
- On December 6, 2016, by letter number 16-ORP-0097, DOE formally notified the Washington State Department of Ecology (Ecology) that a serious risk had risen that DOE may be unable to meet Consent Decree milestones B-2 and B-3. Ecology responded to 16-ORP-0097 on January 4, 2017, and requested a meeting in accordance with Section IV.C.3.a of the Consent Decree. The meeting occurred on March 16, 2017, contemporaneously with the Joint Three Year Review under Section VI of the Consent Decree.

Tank Waste Retrieval Work Plan Status

			Retrieval Technology		
Tank	**TWRWP**	**Expected Revisions**	**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	–

			Retrieval Technology		
Tank	**TWRWP**	**Expected Revisions**	**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 Farm tank retrieval work plans
- Incorporate third retrieval technology in the revised C-105 Tank Waste Retrieval Work Plan.

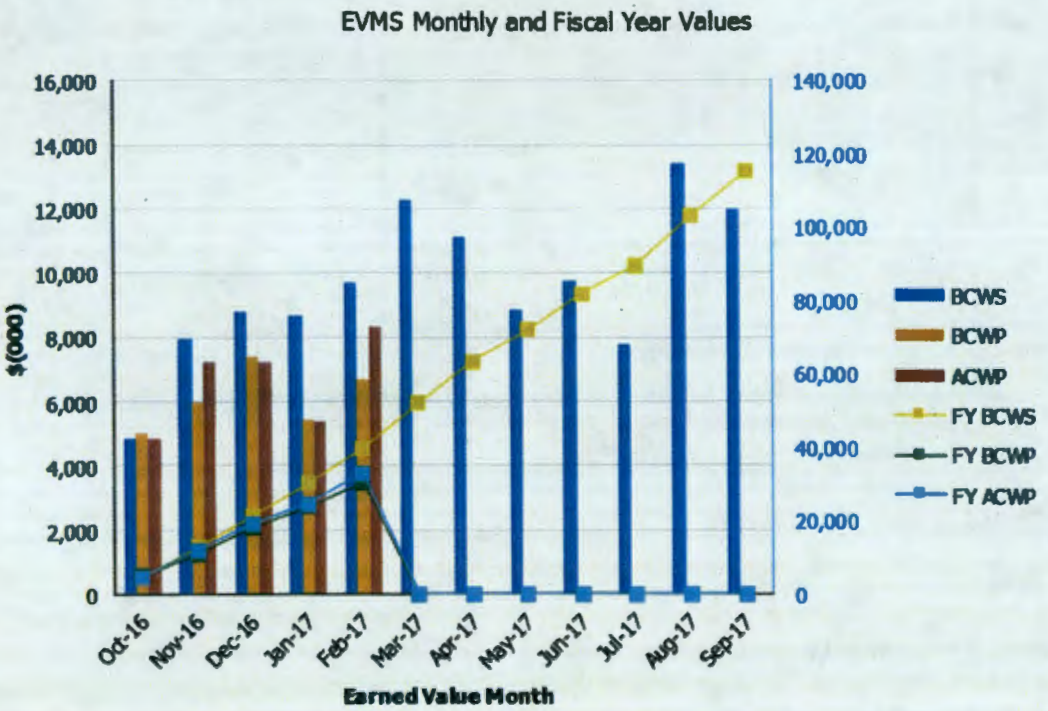
Issues:

- None.

EXC-01a: Fiscal Year Cost and Schedule Report

Earned Value Data: Fiscal Year 2017 February-17

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



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	$12,286	$0	$0	0.00	0.00	$52,160	$0	$0	0.00	0.00
Apr 2017	$11,137	$0	$0	0.00	0.00	$63,298	$0	$0	0.00	0.00
May 2017	$8,865	$0	$0	0.00	0.00	$72,163	$0	$0	0.00	0.00
Jun 2017	$9,738	$0	$0	0.00	0.00	$81,901	$0	$0	0.00	0.00
Jul 2017	$7,769	$0	$0	0.00	0.00	$89,670	$0	$0	0.00	0.00
Aug 2017	$13,387	$0	$0	0.00	0.00	$103,057	$0	$0	0.00	0.00
Sep 2017	$11,973	$0	$0	0.00	0.00	$115,030	$0	$0	0.00	0.00
CTD	$749,042	$728,544	$753,700	0.97	0.97					

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 Febuary 2017 **unfavorable** schedule variance (SV) of ($3,009K) is due to:

- Winter weather and beryllium concerns continue to limit and at times suspend field activities within AX Farm and C Farm.
- In-tank equipment removals within AX Farm continue to be delayed as a result of the stop work prohibiting the operation of the ventilation system (as a waste distributing activity).

The February 2017 **unfavorable** cost variance (CV) of ($1,634K) is due to:

- Labor inefficiencies as a result of ice and snow removal. Crews spent a good portion of the month removing snow and ice to maintain surveillance and monitoring capabilities.
- Previously completed field work packages for AX Farm and C Farm required revisions as a result of beryllium concerns; these revisions required additional labor hours not originally budgeted.

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 2,831 full-time equivalent contractor, Bechtel National, Inc. (BNI), and subcontractor personnel. This includes 617 craft, 603 non-manual, and 187 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 February 2017, total LBL facilities were 54 percent complete, design and engineering was 79 percent complete, procurement was 68 percent complete, construction was 70 percent complete, and startup and commissioning was 15 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:

- As noted in the previous report, the Acting Assistant Secretary for Environmental Management sent a letter and supporting documentation to the Defense Nuclear Facilities Safety Board (DNFSB) Chairman in late January on the status of the nuclear safety technical issues, "Preventing Potential Hydrogen Build-Up" and "Preventing Criticality." The letter indicated that since design-related activities on the Pretreatment (PT) Facility and the High-Level Waste (HLW) Facility were suspended in 2012, the U.S. Department of Energy (DOE) and the WTP contractor have performed a comprehensive set of work activities, which now provides the DOE Office of River Protection (ORP) with sufficient confidence to direct the resumption of design activities affected by these nuclear safety technical issues.
- Also noted in the previous report, ORP briefed the DNFSB in late January on the status of the nuclear safety technical issues described in the above bullet (i.e., technical issue T1 in relation to hydrogen gas events in vessels, T2 in relation to criticality in pulse jet mixer (PJM) vessels, and T3 in relation to hydrogen in piping and ancillary vessels). These technical issues have been sufficiently resolved to allow engineering to proceed in support of design and safety basis development.

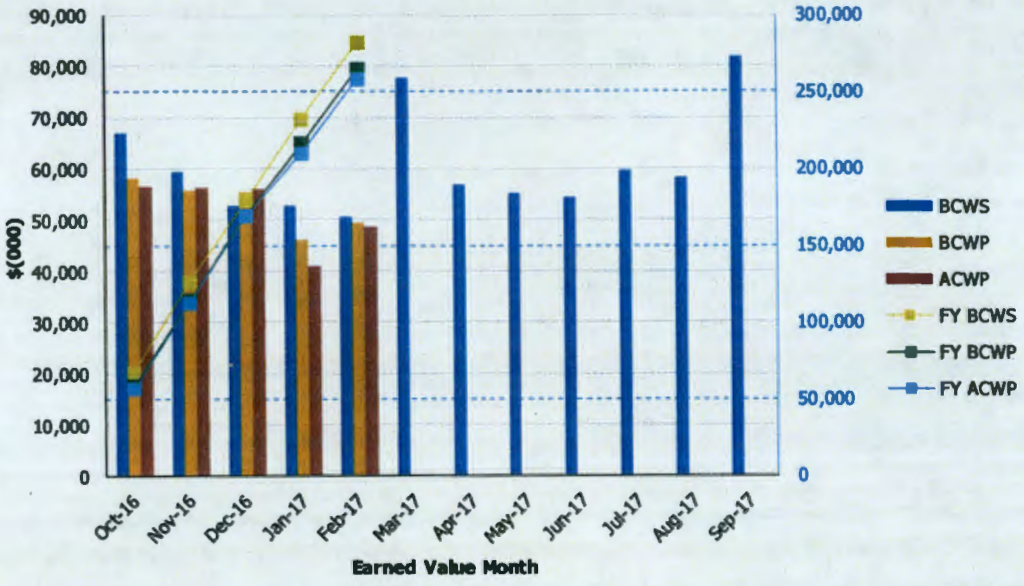
Significant Planned Activities in the Next Three Months:

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

Data Set: FY 2017 Earned Value Data Data as of: February 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	$77,702									
Apr 2017	$56,734									
May 2017	$55,298									
Jun 2017	$54,462									
Jul 2017	$59,542									
Aug 2017	$58,331									
Sep 2017	$81,888									
PTD	$10,110,444	$10,065,931	$9,988,654	1.00	1.01					

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

Performance Tracking	SV ($x1,000)	CV ($x1,000)
Current Period (February 2017)	($1,136)	$726
Fiscal Year 2017 to-date	($17,407)	$6,356
Cumulative (through February 2017)	($44,513)	$77,277

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 February EVMS reporting period, a net **unfavorable** SV of approximately ($1.1 million) was reported (meaning that a net of $1.1 million of planned work did not get completed), primarily due to the following:

- LBL reported a net unfavorable SV of ($2.1 million), related to LAW engineering delays in mechanical systems and controls and instrumentation (C&I) and other LAW planned work scope, as the engineering labor staff is focused on completing the LAW PDSA-II, which is behind schedule. DFLAW is experiencing delays in completing civil, structural, and design reviews, and cannot provide planned procurement support for C&I, because of reduced FY 2017 funding levels. Startup reported delays in BOF because of Building 91 testing delays related in part to inclement weather, and a delay in turnover of the cooling tower and water treatment buildings. Plant Material reported delays in DFLAW related to late delivery of steel, pipe, and hangers.
- PT reported a net favorable SV of $0.8 million, resulting from a rescheduling of a planned procurement delivery, early completion of controls testing and platform modifications, and resumption of simulant procurement and analysis for mixing testing.

For the February EVMS reporting period, a net **favorable CV** of approximately $0.7 million was reported (meaning it cost $0.7 million less to complete the work than estimated), primarily due to the following:

- There were several weather-related site closure days. This resulted in a net favorable CV for level-of-effort (LOE) type work, as the LOE work is considered performed. Because employees did not actually work those days, the account was not charged for actual costs. The actual cost for the employees staying home was charged to other general distribution or overhead-type accounts in Project Services. With the primary crafts and trades not working, the support craft and personnel – which are also considered LOE – did not work as well. This resulted in the facility-specific accounts reporting a net favorable CV, while the support accounts (i.e., Project Services) reported a net unfavorable CV.
- LBL reported a net favorable CV of $2.0 million, resulting primarily from February weather-related closures. This was offset by additional engineering charges for revised PDSA work.
- HLW reported a net favorable CV of $0.3 million, resulting primarily from February weather-related closures.
- PT reported a net favorable CV of $0.2 million, resulting primarily from February weather-related closures. This was offset by technical teams' additional labor cost to complete the standard high-solids vessel (SHSV) design plant vessel structural analysis and scrubber trade study.
- Project Services reported a net unfavorable CV of ($1.7 million), related to absorbing the general/other services weather-related site closures labor costs described in the above bullets.

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 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 standard high-solids vessel (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 has made significant progress regarding the WTP nuclear safety technical issues, "Preventing Potential Hydrogen Build-Up" and "Preventing Criticality," as described in the Amended Consent Decree. In late January, the Acting Assistant Secretary for Environmental Management sent a letter and supporting documentation to the DNFSB Chairman regarding the status of these technical issues. The letter noted ORP and BNI have performed a comprehensive set of work activities since 2012 which provides ORP with sufficient confidence to direct resumption of design activities affected by these technical issues at the PT and HLW facilities.
- ORP briefed the DNFSB in late January on the status of the technical issues noted in the above bullet (i.e., T1 in relation to hydrogen gas events in vessels, T2 in relation to criticality in PJM vessels, and T3 in relation to hydrogen in piping and ancillary vessels). These technical issues have been sufficiently resolved to allow engineering to proceed in support of design and safety basis development. Design, control system changes, and safety basis updates associated with these resolutions will be implemented as part of the facility design process.
- 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 by December 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.

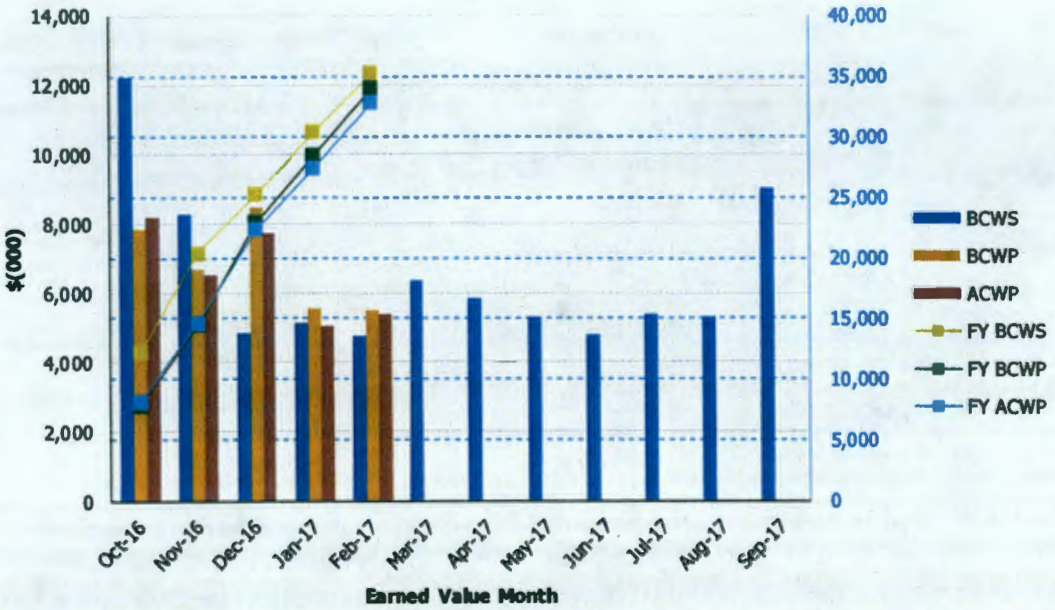
Significant Planned Activities in the Next Three Months:

- 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 control system 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 DNFSB in its *26th Annual Report to Congress*, dated March 2016.
- BNI to issue an update to the localized corrosion test basis document.

Data Set: FY 2017 Earned Value Data Data as of: February 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									
Apr 2017	$5,816									
May 2017	$5,300									
Jun 2017	$4,769									
Jul 2017	$5,384									
Aug 2017	$5,306									
Sep 2017	$9,009									
PTD	$1,883,479	$1,884,277	$1,860,378	1.00	1.01					

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.

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 is under review by ORP for approval.

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:

- BNI incorporated ORP comments into the final HLW Facility Completion Plan submittal.
- BNI transmitted 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.

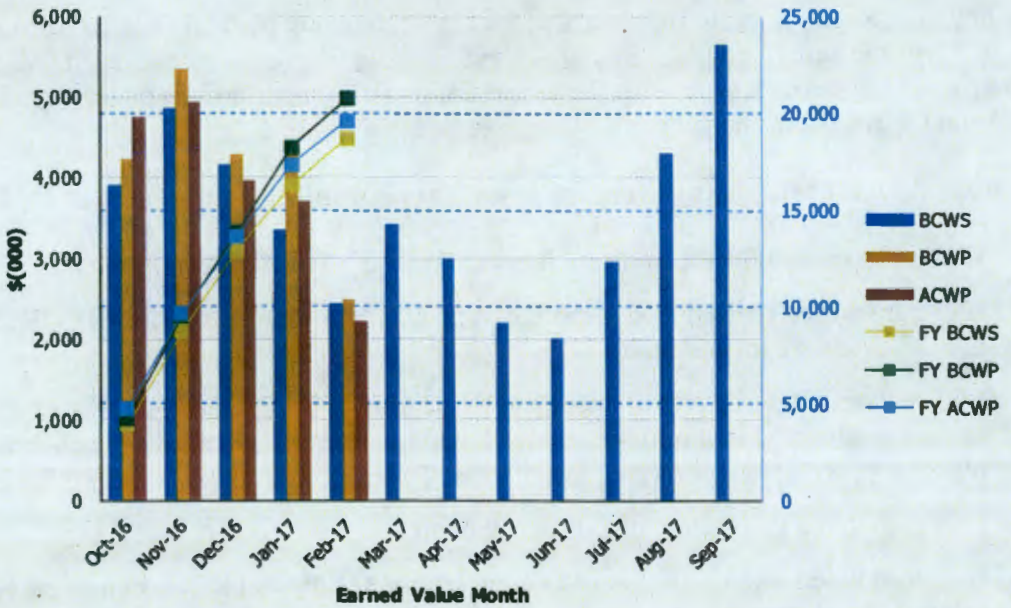
Significant Planned Activities in the Next Three Months:

- 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.
- ORP to approve the HLW Facility Completion Plan.
- BNI to continue focusing on the facility preservation and maintenance.

Data Set: FY 2017 Earned Value Data Data as of: February 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									
Apr 2017	$2,998									
May 2017	$2,208									
Jun 2017	$2,006									
Jul 2017	$2,959									
Aug 2017	$4,305									
Sep 2017	$5,644									
PTD	$1,301,741	$1,302,319	$1,280,574	1.00	1.02					

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.

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 February 2017, the LAW Facility was 60 percent complete overall, with engineering design 81 percent complete, procurement 75 percent complete, construction 84 percent complete, and startup and commissioning 9 percent complete.

Significant Accomplishments during the Prior Three Months:

- 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 installed 200 linear feet of process piping.
- BNI installed 850 linear feet of conduit and pulled 15,010 linear feet of cable.
- BNI completed repairs for the LAW 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 redesign of the melter jack-bolts as progress continues on completing the melters.

- BNI completed base frame modifications on both melters.
- BNI completed radiographic testing of wet electrostatic precipitator nozzles to verify adequacy of welds.
- BNI issued the 90 percent design review reports for the following:
  - C1 ventilation system (C1V)–C5 ventilation system (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:

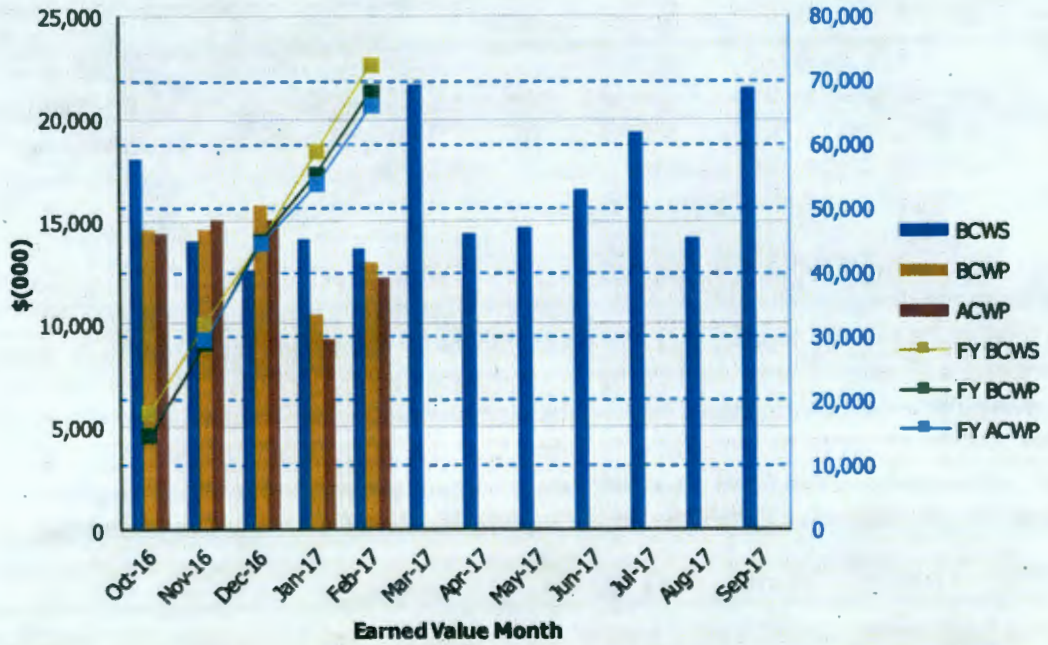
- BNI to place concrete for the caustic scrubber platform.
- BNI to start layout and assembly of cooling jackets for LAW melter feed process vessels.
- BNI to reinstall wet electrostatic precipitator internals now that radiographic testing to verify adequacy of welds is complete.
- BNI to receive and install redesigned melter jack-bolts.
- 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: February 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		0.81	#DIV/0!
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	$21,692									
Apr 2017	$14,379									
May 2017	$14,671									
Jun 2017	$16,536									
Jul 2017	$19,384									
Aug 2017	$14,158									
Sep 2017	$21,550									
PTD	$1,521,451	$1,506,526	$1,502,301	0.99	1.00					

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.

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 February 2017, BOF was 64 percent complete overall, with engineering design 82 percent complete, procurement 80 percent complete, construction 90 percent complete, and startup and commissioning 24 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 public comments received and temporary authorization for EMF concrete placement received. Concrete placement of utility building (Building 26) completed.
- BNI awarded process tank and vessel procurements for EMF.
- BNI completed the low point drain tank excavation and began mud mat placement.
- BNI completed turnover of the following systems to its startup organization:
  - 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 completed the acceptance test report for switchgear Building 87 and BOF switchgear Building 91.

- BNI initiated testing for the cathodic protection system rectifiers.
- BNI completed the following fire protection design acceptance test plans:
  - Cooling tower facility
  - Switchgear building
  - Water treatment building.
- 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.

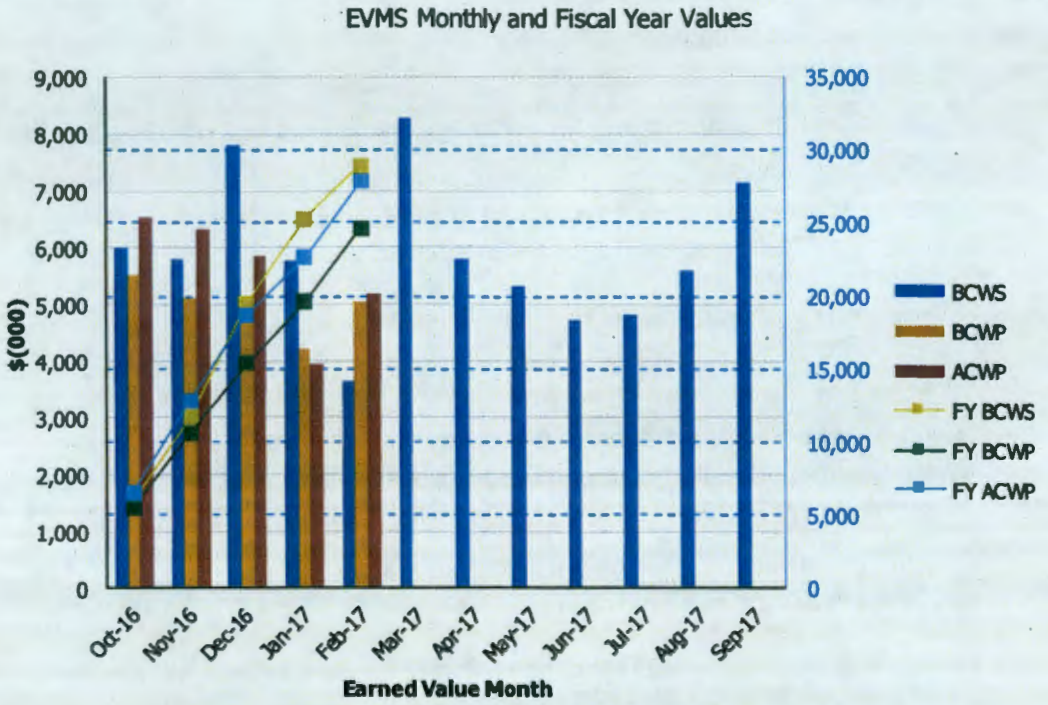
Significant Planned Activities in the Next Three Months:

- BNI expects to turn over the following systems to its startup organization:
  - Water treatment building domestic (potable) water system
  - Water treatment building demineralized water system
  - Water treatment building process service water 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, Plant Service Air System
  - Chiller compressor plant nonradioactive liquid drain 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 formally submit EMF Underground Transfer Line Permit package to ORP.
- 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: February 2017

River Protection Project
Balance of Facilities (WBS 1.05)



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	$8,291									
Apr 2017	$5,796									
May 2017	$5,303									
Jun 2017	$4,726									
Jul 2017	$4,801									
Aug 2017	$5,601									
Sep 2017	$7,126									
PTD	$556,545	$546,430	$551,095	0.98	0.99					

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.

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 February 2017, the LAB was 63 percent complete overall, with engineering design 81 percent complete, procurement 88 percent complete, construction 95 percent complete, and startup and commissioning 16 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 the fire detection and alarm system facility battery-drawdown fire protection acceptance test.
- BNI completed installation of the test engineer's workstation and turned equipment over to startup.
- BNI completed turnover of the fire protection water system in support of the test engineer's workstation to startup.
- BNI completed turnover of the process control system in support of the test engineer's workstation to startup.
- 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:

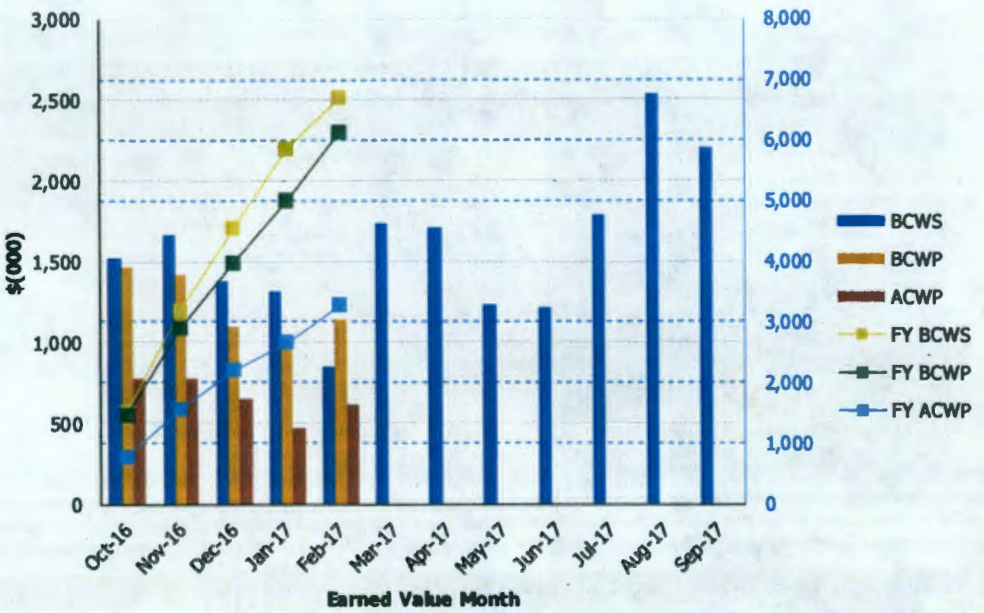
- ORP and BNI to reach an agreement on proposed C5V modifications, if needed.
- BNI to receive bids for the temporary laboratory space request for proposal, which allows for earlier laboratory methods development and training to ensure laboratory staff are ready at the start of commissioning.
- BNI to 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.

Data Set: FY 2017 Earned Value Data Data as of: February 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	$1,732									
Apr 2017	$1,706									
May 2017	$1,229									
Jun 2017	$1,214									
Jul 2017	$1,794									
Aug 2017	$2,537									
Sep 2017	$2,203									
PTD	$345,317	$342,717	$332,301	0.99	1.03					

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.

Waste Treatment Plant Project Percent Complete Status (Table)

Waste Treatment Plant Project - (LBL/Project Services) Percent Complete Status
Through February 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		
Facilities	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
Low-Activity Waste	2,312.0	1,377.8	60%	556.0	450.7	81%	373.4	281.5	75%	886.6	580.6	84%	889.9	60.9	9%	4.0	4.0	100%
Balance of Facilities	759.0	484.3	64%	154.0	127.0	82%	72.4	57.7	80%	258.9	234.7	90%	272.2	64.4	24%	0.5	0.5	100%
Analytical Lab	523.7	330.1	63%	108.3	87.5	81%	65.6	57.4	88%	162.7	154.7	95%	186.5	30.0	16%	0.5	0.5	100%
Direct Feed LAW	397.1	98.5	25%	96.5	59.3	61%	56.2	5.7	10%	235.3	29.2	12%	0.0	0.0	0%	9.1	4.4	48%
LBL Facility Services	609.8	180.7	30%	0.0	0.0	0%	61.1	24.8	41%	133.2	42.7	32%	252.7	59.9	24%	162.8	53.3	33%
Total LBL	4,601.5	2,471.5	54%	914.8	724.6	79%	628.8	427.2	68%	1,479.6	1,041.8	70%	1,401.4	215.3	15%	176.9	62.7	35%
Project Services	1,029.0	419.1	41%	131.8	59.7	45%	73.9	37.7	51%	105.5	73.3	69%	1.7	1.7	100%	716.1	246.7	34%
Total Project Services	1,029.0	419.1	41%	131.8	59.7	45%	73.9	37.7	51%	105.5	73.3	69%	1.7	1.7	100%	716.1	246.7	34%
Total LBL, DFLAW & Project Services	5,630.5	2,890.6	51%	1,046.6	784.3	75%	702.7	464.9	66%	1,585.2	1,115.1	70%	1,403.1	217.0	15%	893.0	309.3	35%
PT/HLW/SS Percent Complete Status Frozen as of September 2012 (due to project rebaselining efforts)																		
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%
Total HLW/PT/SS	8,722.8	5,965.2	68%	2,173.1	1,948.9	90%	1,565.5	1,124.8	72%	2,887.6	1,764.8	61%	758.5	143.2	19%	1,338.1	983.5	73%
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
Total WTP	14,353.3	8,855.8	62%	3,219.7	2,733.2	85%	2,268.2	1,589.7	70%	4,472.8	2,879.9	64%	2,161.6	360.2	17%	2,231.1	1,292.8	58%

Source: Preliminary WTP Contract Performance Report - Format 1, Data for February 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.

FINAL

Office of River Protection

Tri-Party Agreement

Report

April[1] 2017

[1] The narrative descriptions of progress in this report cover the period from March 01–31, 2017. Earned Value Management System data and descriptions cover the period of February 01–28, 2017.

Tri-Party Agreement (TPA) Milestone Review

Page	Topic	Leads
2	Administrative Items/Milestone Status	B. Trimberger D. McDonald, J. Lyon
4	System Plan	K. Burnett J. Lyon, D. McDonald
5	Acquisition of New Facilities	J. Diediker J. Lyon, D. McDonald
6	Supplemental Treatment and Part B Permit Applications	S. Pfaff J. Lyon, D. McDonald
8	242-A Evaporator Status	P. Hernandez J. Lyon
10	Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility	R. Valle S. Schleif
11	Tank System Update	D. Stewart J. Lyon
14	Single-Shell Tank Integrity Assurance	D. Stewart J. Alzheimer
15	In-Tank Characterization and Summary	D. Stewart M. Barnes
17	Single-Shell Tank Closure Program	J. Bovier J. Lyon
21	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 J. Lyon
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
Fiscal Year 2015				
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	Submit Comp. Permit Modification Request for Tiers 1,2,3	09/30/2015		Responsiveness summary to public comments is being prepared
Fiscal Year 2016				
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
Fiscal Year 2017				
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-045-62	Phase 2 Corrective Measures Implementation Work Plan For WMA-C	6 mo after CMS appr. (M-045-61A)		On Schedule
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-045-56M	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
Fiscal Year 2018				
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
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.
CMS corrective measures study.
CR change request.
DOE U.S. Department of Energy.
Ecology Washington State Department of Ecology.
HFFACO Hanford Federal Facility Agreement and Consent Order.
IQRPE independent qualified registered professional engineer.
RCRA *Resource Conservation and Recovery Act.*
RFI RCRA Facility Investigation.
SST single-shell tank.
WTP Waste Treatment and Immobilization Plant.
WMA waste management area.
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 cases 2 and 9 was completed and the results were reviewed by the U.S. Department of Energy, Office of River Protection (ORP) and the Washington State Department of Ecology (Ecology), in March.
- Draft baseline case analysis 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.
- Complete scenario modeling and life-cycle cost modeling by April 10, 2017.

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 immediately follow EC-06.
FY 2018	EC-08	AP 106/107 Blend	AP-103	Will require blending of waste in 102-AW, sampling, and sampling 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
- Extend vessel vent stack height.

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)
Volume (as of April 2, 2017)	~ 5.78 Mgal	~ 1.01 Mgal	~ 7.59 Mgal
AZ-301 Tanker Shipments	-	-	-
MWT-31 and 34 Leachate	~ 126,000 gal	-	~ 98,000 gal
Other (e.g., 325 Building Totes)	-	-	-
242-A Evaporator Campaigns	-	-	-

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

Significant Past Accomplishments:

- Total FY 2017 volume processed (as of April 2, 2017): 2,699,000 gallons.
- LERF Basin 43 waste transfer pump replaced; testing completed on March 16, 2017.

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
- Initiate LERF Basin 42 waste processing through the ETF
- LERF basin cover procurement (e.g., issue request for proposal, award contract, etc.).

Issues:

- None.

Tank System Update

Tank Farms Assistant Manager: Glyn Trenchard

Federal Program Manager: Dusty Stewart

Significant Past Accomplishments

Double-Shell Tank (DST) Integrity:

- Enhanced annulus video inspections:
  - Completed the inspection of AY-101.

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; Meier Architecture Engineering (Meier) was provided with the 242-A Project B-534 and 242-S Certified Vendor Information files containing major process equipment nominal wall thickness data to use for their estimated remaining useful life projection; and documentation of the functional operability checks for instrumentation used to maintain compliance with environmental regulations. Meier participated in the coating and liner inspection of the condenser room and the evaporator room; the inspections included followup on status of the remaining open observations from the 2007 IQRPE report. The E-A-1 reboiler fluorescein dye 24-hour leak test and C-A-1 vapor-liquid separator 24-hour static leak test are scheduled for completion prior to introducing Evaporator Campaign EC-06 hot feed to the facility. Work started 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.
- The initial planning for the IQRPE report for the 219-S facility at the 222-S Laboratory is continuing.
- The strategy for the 2018 IQRPE report for the SSTs has been laid out.

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 (complete)
  - 241-AY-101 (complete)
  - 241-AZ-101 (complete)
  - 241-AZ-102 (complete).
- 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 being drafted)
  - 241-AY-101
  - 241-AZ-101.

SST Integrity:

- The FY 2016 SST Visual Inspection Report (RPP-RPT-59272) is in review at Washington River Protection Solutions LLC (WRPS). 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-BX-107
  - 241-BY-109
  - 241-S-104
  - 241-SX-110
  - 241-T-104
  - 241-T-106
  - 241-T-109
  - 241-TX-105
  - 241-TX-106
  - 241-TX-109
  - 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.
  - A report has been drafted to document the exhauster operation and currently in the WRPS review process.

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:

- Prepare an integrity assessment plan for the SST IQRPE assessment
- Award a contract to an IQRPE.

Issues:

- None.

In-Tank Characterization and Summary

Tank Farms Assistant Manager: Glyn Trenchard

Federal Program Manager: Dusty Stewart

Accomplishments:

For the period from March 01 through March 31, 2017, the following reports were completed or issued:

- Completed RPP-RPT-59918, *Derivation of Best-Basis Inventory for Tank 241-BX-104 as of January 1, 2017*, Rev 0.
- Completed RPP-RPT-59906, *Derivation of Best-Basis Inventory for Tank 241-U-103 as of February 1, 2017*, Rev 0.
- Completed RPP-RPT-59892, *Derivation of Best-Basis Inventory for Tank 241-A-101 as of January 1, 2017*, Rev 0.
- Completed RPP-RPT-59933, *Derivation of Best-Basis Inventory for Tank 241-U-109 as of February 1, 2017*, Rev 0.
- Completed RPP-RPT-59896, *Derivation of Best-Basis Inventory for Tank 241-U-102 as of January 1, 2017*, Rev 0.
- Completed RPP-RPT-48025, *Derivation of Best-Basis Inventory for Tank 241-S-102 as of January 1, 2017*, Rev 1.
- Completed RPP-RPT-59955, *Derivation of Best-Basis Inventory for Tank 241-BX-105 as of February 1, 2017*, Rev 0.
- Completed RPP-RPT-59923, *Derivation of Best-Basis Inventory for Tank 241-TX-104 as of February 1, 2017*, Rev 0.
- Completed RPP-RPT-59837, *Derivation of Best-Basis Inventory for Tank 241-B-111 as of January 1, 2017*, Rev 0.
- Completed RPP-RPT-59973, *Derivation of Best-Basis Inventory for Tank 241-C-103 as of March 1, 2017*, Rev 0.
- Completed RPP-RPT-59897, *Derivation of Best-Basis Inventory for Tank 241-U-105 as of March 1, 2017*, Rev 0.
- Completed RPP-PLAN-55317, *Sampling and Analysis Plan for Tank 241-AZ-301 Liquid*, Rev. 4.
- Completed RPP-PLAN-61419, *Grab Sampling and Analysis Plan for the 241-AZ-101 Leak Detection Pit*, Rev. 0.
- Completed HNF-EP-0182, *Waste Tank Summary Report for Month Ending January 31, 2017*, Rev 349.

- RPP-RPT-59865, *Final Report for AZ-301 Catch Tank Liquid Samples Taken December 2016*, Rev 0, has been released to ORP for review.
- RPP-RPT-59115, *Final Analytical Report for Tank 241-C-105 Solid Waste Samples in Support of Retrieval Operations*, Rev 2, has been released to ORP for review.

Planned Action within the Next Six Months:

Tank sampling:

- Tank 241-AW-104 grab sampling is planned for April 2017.
- Tank 241-AP-105 grab sampling is planned to for April 2017.
- 241-AZ-101 Leak Detection Pit grab sampling is planned for April 2017.
- Tank 241-AY-102 solids grab sampling is planned for May 2017.
- Tank 241-AP-107 grab sampling is planned for June 2017.
- Tank 241-C-105 grab sampling is planned for August 2017.
- Tank 241-AN-107 grab sampling is planned for August 2017.

Best-Basis Inventory updates:

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

- 241-A-101
- 241-B-111
- 241-BX-104
- 241-BX-105
- 241-C- 103
- 241-S-102
- 241-TX-104
- 241-U-102
- 241-U-103
- 241-U-105
- 241-U-109.

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

- 241-AP-108
- 241-BX-107.

Data Quality Objectives updates:

- RPP-8532, *Double-Shell Tanks Chemistry Control Data Quality Objectives*, Rev. 15, is in-process to identify additional analyses for corrosion mitigation and to simplify quality control parameters and is planned to be completed in April 2017.

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 complete permit modification requests for Tiers 1, 2, and 3 of the SST System**
Due: September 30, 2015
Status: A tentative agreement between Ecology and DOE-ORP to resolve this dispute was signed November 22, 2016 (16-TF-0127, "Transmittal of Tentative Agreement on Negotiations of Hanford Federal Facility and Consent Order Revisions on Interim Milestone M-045-82, Submit Complete Permit Modification Requests for Tiers 2 & 3 of the Single-Shell Tank System to Support Final Closure Requirements for Waste Management Area C"). The tentative agreement is to implement *Hanford Federal Facility Agreement and Consent Order* (HFFACO) Change Control Form M-45-16-01 to (1) modify the M-045-82 milestone for submittal of the draft Tier 2 closure plan, (2) create a new milestone (M-045-82A) to submit the draft Tier 3 closure plans for the C-200 tanks, (3) modify the M-045-62 milestone to require submittal of a Tier 3 closure plan for corrective measures agreed upon through a corrective measures implementation work plan, and (4) modify the M-045-83 milestone for completion of closure of Waste Management Area C (WMA-C). Public review of the tentative agreement was completed on March 17, 2017, and a responsiveness summary is being prepared.

M-045-62 **Submit to Ecology for review and approval as an agreement primary document, a Phase 2 Corrective Measures Implementation Work Plan for WMA-C**
Due: Six months after the approval of the corrective measures study submitted under milestone M-045-61A.

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-045-84 **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.
- The 45-day public comment period for the M-045-82 HFFACO Change Control Form (M-45-16-01) will end on March 17, 2017.
- 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:

- 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.

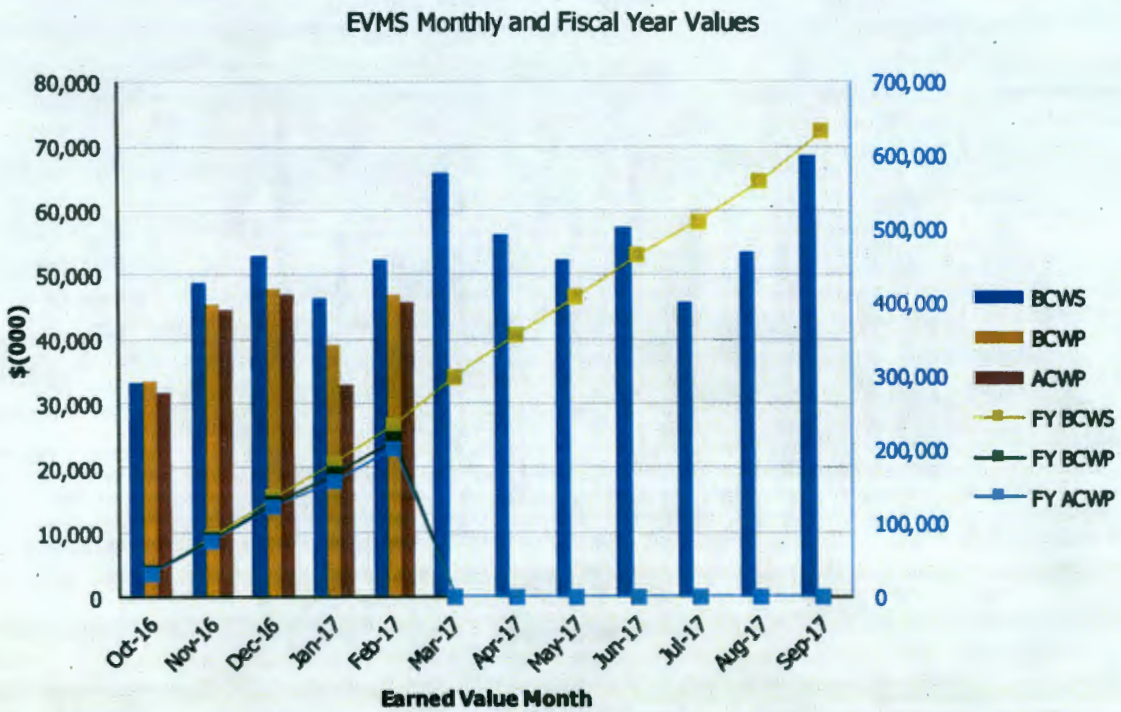
February-17										
	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
CM	52,366	47,088	45,690	(5,278)	1,398	0.90	1.03			
FYTD	233,363	212,975	201,699	(20,388)	11,276	0.91	1.06	633,158		
CTD	3,689,313	3,648,110	3,610,562	(41,203)	37,548	0.99	1.01	4,757,986	4,769,373	(11,388)

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.		

EXC-01a: Fiscal Year Cost and Schedule Report

Earned Value Data: Fiscal Year 2017 February-17

Tank Farms ORP-0014



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	$65,718	$0	$0	0.00	0.00	$299,082	$0	$0	0.00	0.00
Apr 2017	$56,239	$0	$0	0.00	0.00	$355,321	$0	$0	0.00	0.00
May 2017	$52,368	$0	$0	0.00	0.00	$407,688	$0	$0	0.00	0.00
Jun 2017	$57,513	$0	$0	0.00	0.00	$465,202	$0	$0	0.00	0.00
Jul 2017	$45,745	$0	$0	0.00	0.00	$510,947	$0	$0	0.00	0.00
Aug 2017	$53,659	$0	$0	0.00	0.00	$564,606	$0	$0	0.00	0.00
Sep 2017	$68,551	$0	$0	0.00	0.00	$633,158	$0	$0	0.00	0.00
CTD	$3,689,313	$3,648,110	$3,610,562	0.99	1.01					

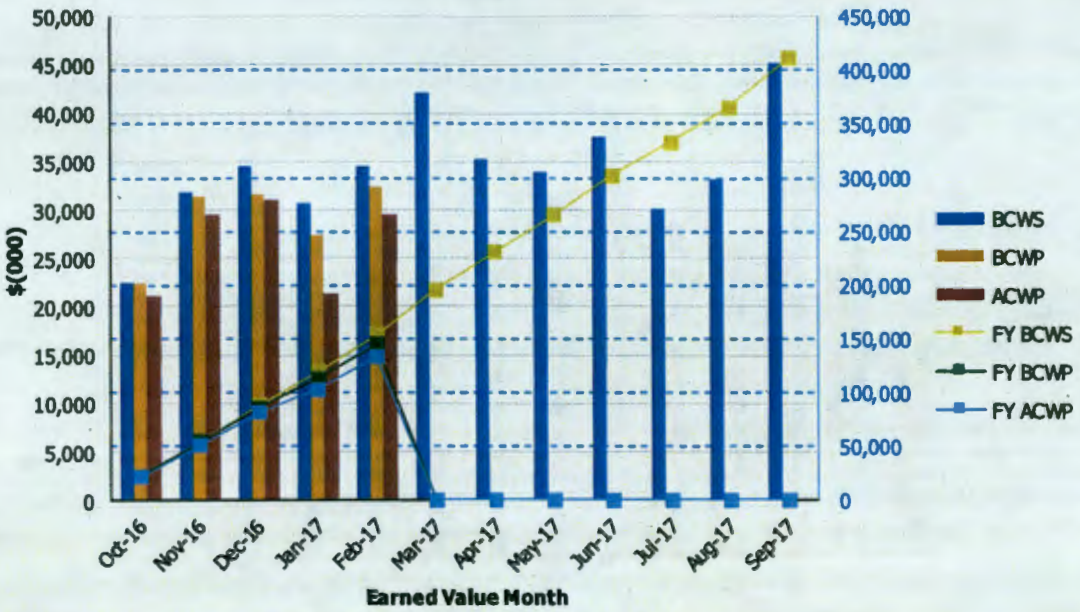
ACWP	actual cost of work performed.	CTD	contract to date
BCWP	budgeted cost of work performed.	EVMS	Earned Value Management System.
BCWS	budgeted cost of work scheduled.	FY	fiscal year.
CPI	cost performance index.	SPI	schedule performance index

EXC-01a: Fiscal Year Cost and Schedule Report

Earned Value Data: Fiscal Year 2017 February-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	$42,094	$0	$0	0.00	0.00	$196,012	$0	$0	0.00	0.00
Apr 2017	$35,240	$0	$0	0.00	0.00	$231,252	$0	$0	0.00	0.00
May 2017	$33,844	$0	$0	0.00	0.00	$265,095	$0	$0	0.00	0.00
Jun 2017	$37,494	$0	$0	0.00	0.00	$302,589	$0	$0	0.00	0.00
Jul 2017	$30,122	$0	$0	0.00	0.00	$332,711	$0	$0	0.00	0.00
Aug 2017	$33,095	$0	$0	0.00	0.00	$365,806	$0	$0	0.00	0.00
Sep 2017	$45,246	$0	$0	0.00	0.00	$411,052	$0	$0	0.00	0.00
CTD	$2,452,596	$2,437,791	$2,400,159	0.99	1.02					

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 February 2017 variances below do not impact or delay TPA milestones.

The **unfavorable** schedule variance (SV) of ($2,057K) is primarily due to the following:

- Delayed start of ultrasonic testing at SST 241-AN-106 and DST in-pit heating installation in the AP Farm due to adverse weather conditions.
- Delay of contract award for design modifications for the tank farms public announcement system for event notification. Additional considerations and coordination efforts were required to develop the scope.

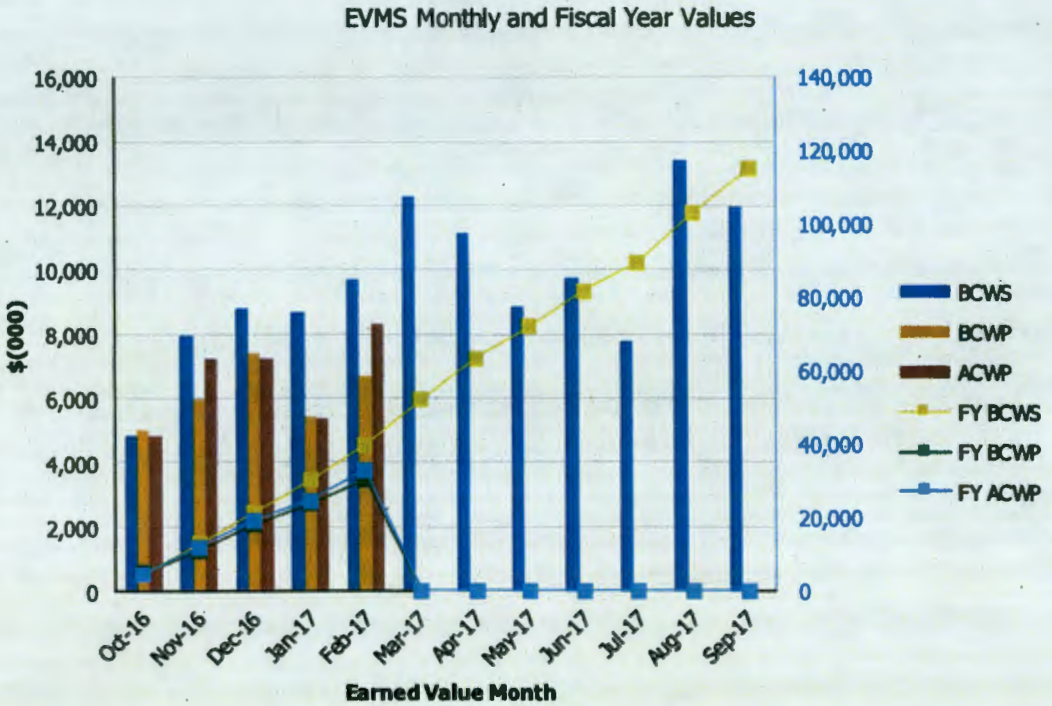
The **favorable** cost variance (CV) of $2,830K is primarily due to the following:

- Less resources required than planned in retrieval as the operating periods were performed in February as a result of the limits of technology reached on February 15, 2017.

EXC-01a: Fiscal Year Cost and Schedule Report

Earned Value Data: Fiscal Year 2017 February-17

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



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	$12,286	$0	$0	0.00	0.00	$52,160	$0	$0	0.00	0.00
Apr 2017	$11,137	$0	$0	0.00	0.00	$63,298	$0	$0	0.00	0.00
May 2017	$8,865	$0	$0	0.00	0.00	$72,163	$0	$0	0.00	0.00
Jun 2017	$9,738	$0	$0	0.00	0.00	$81,901	$0	$0	0.00	0.00
Jul 2017	$7,769	$0	$0	0.00	0.00	$89,670	$0	$0	0.00	0.00
Aug 2017	$13,387	$0	$0	0.00	0.00	$103,057	$0	$0	0.00	0.00
Sep 2017	$11,973	$0	$0	0.00	0.00	$115,030	$0	$0	0.00	0.00
CTD	$749,042	$728,544	$753,700	0.97	0.97					

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

The **unfavorable** SV of ($3,009K) is due to:

- Winter weather and beryllium concerns continue to limit, and at times, suspend field activities within AX Farm and C Farm.
- In-tank equipment removals within AX Farm continue to be delayed as a result of the stop work prohibiting the operation of the ventilation system (as a waste distributing activity).

The **unfavorable** CV of ($1,634K) is due to:

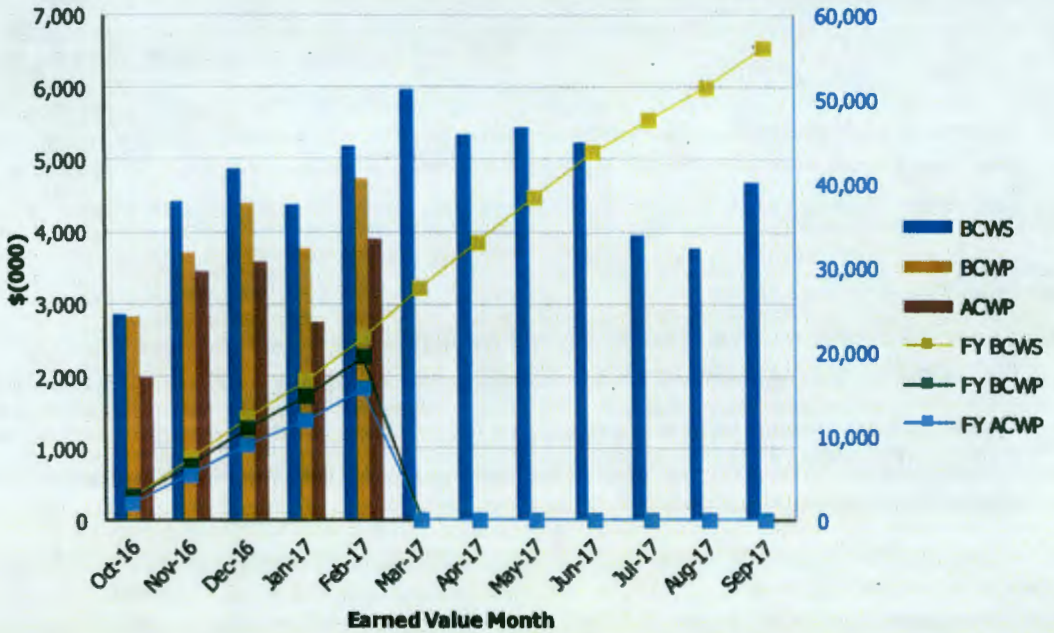
- Labor inefficiencies as a result of ice and snow removal. Crews spent a good portion of the month removing snow and ice to maintain surveillance and monitoring capabilities.
- Previously completed field work packages for AX Farm and C Farm required revisions as a result of beryllium concerns; these revisions required additional labor hours for work planners not originally budgeted.

EXC-01a: Fiscal Year Cost and Schedule Report

Earned Value Data: Fiscal Year 2017 February-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	$5,970	$0	$0	0.00	0.00	$27,662	$0	$0	0.00	0.00
Apr 2017	$5,352	$0	$0	0.00	0.00	$33,014	$0	$0	0.00	0.00
May 2017	$5,456	$0	$0	0.00	0.00	$38,470	$0	$0	0.00	0.00
Jun 2017	$5,246	$0	$0	0.00	0.00	$43,716	$0	$0	0.00	0.00
Jul 2017	$3,948	$0	$0	0.00	0.00	$47,664	$0	$0	0.00	0.00
Aug 2017	$3,768	$0	$0	0.00	0.00	$51,432	$0	$0	0.00	0.00
Sep 2017	$4,684	$0	$0	0.00	0.00	$56,116	$0	$0	0.00	0.00
CTD	$394,077	$390,497	$360,510	0.99	1.08					

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 February 2017 variances below have no impacts on the TPA milestones.

The **unfavorable** SV of ($433K) 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 **favorable** CV of $850K is primarily due to many small favorable variances across the projects but two of the larger positive variances were:

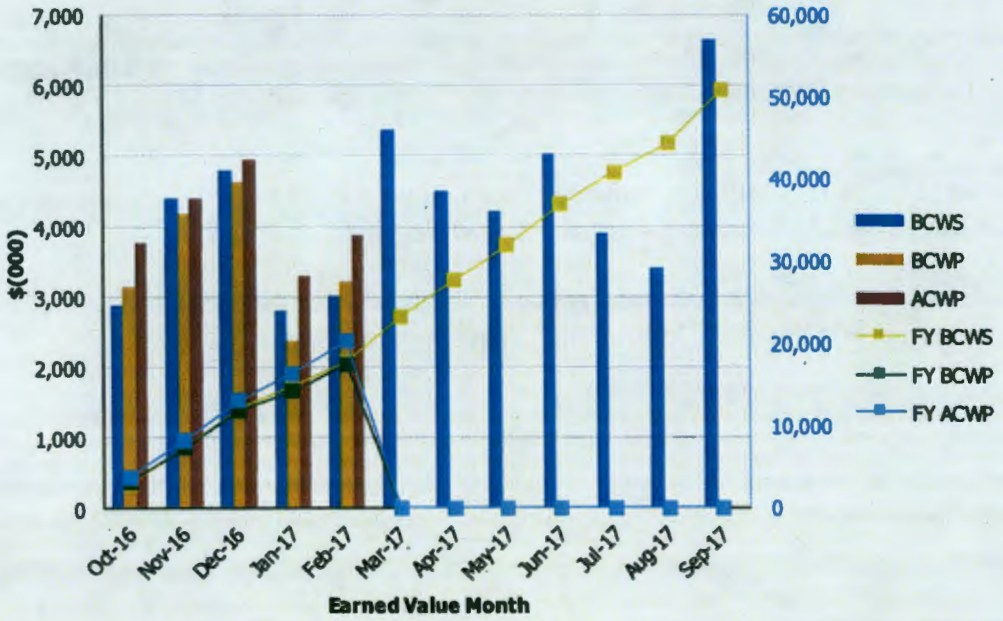
- Resource efficiencies realized by the Pacific Northwest National Lab (PNNL).
- Hanford Site Facility Closures due to adverse weather conditions.

EXC-01a: Fiscal Year Cost and Schedule Report

Earned Value Data: Fiscal Year 2017 February-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	$5,368	$0	$0	0.00	0.00	$23,248	$0	$0	0.00	0.00
Apr 2017	$4,509	$0	$0	0.00	0.00	$27,757	$0	$0	0.00	0.00
May 2017	$4,203	$0	$0	0.00	0.00	$31,960	$0	$0	0.00	0.00
Jun 2017	$5,036	$0	$0	0.00	0.00	$36,996	$0	$0	0.00	0.00
Jul 2017	$3,906	$0	$0	0.00	0.00	$40,902	$0	$0	0.00	0.00
Aug 2017	$3,410	$0	$0	0.00	0.00	$44,312	$0	$0	0.00	0.00
Sep 2017	$6,648	$0	$0	0.00	0.00	$50,959	$0	$0	0.00	0.00
CTD	$73,488	$71,168	$77,032	0.97	0.92					

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 February 2017 variances below have no impacts on TPA milestones.

The **favorable** SV of $221K is due to:

- Long lead procurements work scope previously behind schedule was performed in the current period. The subcontract awards for the cross flow filter and ion exchange column were initially delayed due to extensive negotiations with the vendor. The contracts were awarded in February and the vendor is performing work scope planned in prior periods, primarily completion of the final work plan.

The **unfavorable** CV of ($647K) is due to:

- Preliminary design and design project support work scope required additional resources to support and attend the 60 percent Part A design review. Subject matter experts throughout the company were asked to participate in and attend the review due to their knowledge and expertise of the Low-Activity Waste Pretreatment System design. Hourly rates for these experts exceeded the hourly rate used for planning/estimating the work scope. Additionally, revisions to architectural drawings have been required to ensure alignment with structural drawings for the 60 percent Part A design review.

April 20, 2017
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
Joyner, Jessica		WRPS

April 20, 2017
ORP TPA CD Meeting

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

April 20, 2017
ORP TPA CD Meeting

PRINT NAME	SIGN NAME	ORG
Smith, Alex		ECY
Stewart, Dustin		ORP
Trenchard, Glyn		ORP
Trimberger, Bryan		ORP
Turner, Michael		MSA
Utley, Randell		DOH
Valle, Richard		ORP
Walmsley, Mign		ECY
Wang, Oliver S		ECY
Whalen, Cheryl		ECY
Wilson, Katie		ECY
Wold, Kristi		ECY
Wrzesinski, Wendell		ORP
Young, Jason		ORP