

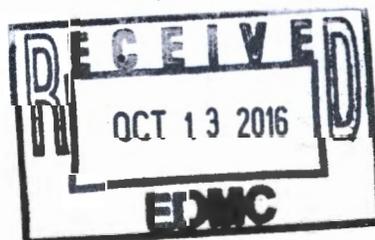
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Office of River Protection
TPA Quarterly Milestone Review Meeting Minutes

Department of Ecology Building
Richland, Washington

August 18, 2016



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SIGNATURES

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TRI-PARTY AGREEMENT MILESTONE REVIEW AND MONTHLY SUMMARY REPORT

1.0 ADMINISTRATIVE ITEMS/MILESTONE STATUS

Upcoming Meetings

The next U.S. Department of Energy (DOE) Office of River Protection (ORP) quarterly milestone review is scheduled for November 19, 2016, from 8:30 a.m. to 11:30 a.m. at the Ecology office in Richland, Washington. The next ORP project managers meeting is scheduled for September 14, 2016, from 1:00 p.m. to 3:30 p.m. at the ORP office in Richland, Washington.

Recent Items Entered/To Be Entered into the Administrative Record

ORP provided the monthly Tri-Party Agreement (TPA) and Consent Decree (CD) reports, which will be submitted to the Administrative Record (AR). ORP noted that today's meeting is a quarterly meeting, but the TPA and CD summary reports are generated on a monthly basis and are used for the quarterly meeting.

Tri-Party Agreement Milestone Status

There were no updates provided regarding the milestone status (see monthly summary report).

Office of River Protection/Washington State Department of Ecology Tri-Party Agreement and Consent Decree Agreements, Issues and Action items – August 2016

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

Action No. 1 (TF-15-10-02)

ORP noted that there have been discussions with Washington State Department of Ecology (Ecology) regarding this action and action No. 3. ORP asked if this action had been resolved to Ecology's satisfaction. Ecology responded that going forward, more information would be appreciated and this action should be left open. Ecology added that further internal discussion is needed regarding the adequacy of the mass balance information that was received (action No. 3), and another meeting is needed to ensure the information is adequate. Ecology stated the reason for requesting additional depth of information and another meeting is because some of the facilities are still in the planning stages regarding the piping, what the mass balance is, and what the constituents of concern are at each stage along the way. This action remains open.

Action No. 2 (TF-16-01-01)

ORP stated that Ecology participated in the 30 percent design review for Low Activity Waste Pretreatment System (LAWPS), which is the latest design media available, and recommended closing this action. ORP noted that the package for the 60 percent design is anticipated for submittal by the subcontractor during the last week of January 2017, and the 60 percent design

review is planned for February 2017. ORP stated that the 60 percent design information will be provided to Ecology for review prior to the design review in February. Ecology agreed to close this action. This action was closed.

Action No. 3 (TF-16-01-02)

ORP noted that this action was discussed under action No. 1 (TF-15-10-02). This action remains open.

Action No. 4 (TF-16-01-03)

ORP stated that this action was closed last month during the ORP project managers meeting, and it will be removed from the action table next month.

Action No. 5 (TF-16-05-01)

ORP reported that the in-tank video for T-112 was provided to Ecology today, and a meeting is scheduled with Ecology on August 31, 2016, to discuss the basis for ventilation work on T-112. This action remains open.

Action No. 6 (TF-16-07-01)

ORP noted that DOE Richland Operations Office (RL) environmental has taken the lead on this action, and the action will be addressed when the staff returns from leave. This action remains open.

Action No. 7 (TF-16-07-01)

ORP stated that Ecology has received routine copies of the Direct Feed Low Activity Waste (DFLAW) schedule that reflects the connectivity between the LAWPS project and the elements for the Waste Treatment and Immobilization Plant (WTP). ORP noted that the schedule float between the two is minimal. Ecology stated that as long as the schedules continue to be provided, this action could be closed.

Ecology noted that an issue that needs to be resolved sooner than later is determining which transfer lines belong in which permits and getting consensus agreement among the parties. Ecology expressed concern about defining the lines that need to be part of the double-shell tank (DST) system and permitted through the DST approach. Ecology stated that it appears efforts are moving forward fairly quickly from an Effluent Management Facility (EMF) standpoint and LAWPS standpoint, but the transfer lines that are attached to the DSTs are not keeping pace with those efforts. Ecology stated that it is setting up a meeting to discuss the permitting issue regarding the DST transfer lines. ORP suggested establishing a new action. Ecology stated that the issue is being addressed and a formal action was not needed at this time. Ecology added that if needed, an action could be established at a later time. This action was closed.

Action No. 8 (TF-16-07-01)

ORP stated that the level 2 baseline change proposal (BCP) was related in part to the vapor mitigation, and that has been overcome by the July 11, 2016 stop work demand by the Hanford

Atomic Metal Trades Council (HAMTC) union and the injunction that was issued by the Attorney General which mirrors HAMTC's demands. ORP stated that it is evaluating Washington River Protection Solutions (WRPS's) letter regarding the stop work demand and its impacts, and ORP has 14 days to respond to the letter. ORP indicated that when a response is provided to WRPS, there should be enough information to provide a briefing to Ecology. ORP noted that the level 2 BCP would more accurately be termed as a baseline change request (BCR). This action remains open.

Action No. 9 (TF-16-07-01)

ORP stated that a meeting is being set up with Ecology on August 31, 2016, to discuss the Resource Conservation and Recovery Act (RCRA) facility investigation (RFI). This action remains open.

Action No. 10 (TF-16-07-01)

ORP reported that a meeting is scheduled August 30, 2016, which will start the meetings with Ecology that were requested. This action was closed.

Action No. 11 (TF-16-07-01)

ORP stated that an outline of the performance assessment (PA) was provided to Ecology. ORP added that its position is that the environmental impact statement (EIS) model was turned over to RL in 2013, and RL groundwater staff were present during the groundwater modeling meetings. ORP noted that Ecology and ORP senior management are meeting to reach a decision regarding the groundwater modeling. This action remains open.

Action No. 12 (TF-16-07-01)

ORP stated that this action is closely related to action No. 5 (TF-16-05-01), and it will be addressed during the meeting scheduled with Ecology on August 31, 2016. ORP stated that a piping and isometric drawing (P&ID) for T-112 will be provided during the meeting, and some of the other exhausters will be discussed. This action remains open.

2.0 SYSTEM PLAN

ORP reported that to date, the System Plan team has defined 12 scenarios, and nine scenarios have been prioritized to be analyzed. A draft document will be routed to each of the organizations. ORP stated that the first week of September 2016 is being targeted for submittal of the scenario selection in order to meet the milestone due date of October 31, 2016. Ecology raised a concern regarding ORP's use of the phrase "if resources are available." Ecology stated the concern was whether resources would be available if 11 scenarios were selected, and asked if ORP had a set amount of dollars for scenario selection. ORP responded that eight to nine modelers have been identified, and that resource has to be spread over all of the system planning efforts. ORP noted that due to the complexity of the model, a modeler cannot be brought in and be ready to operate immediately. ORP added that the resource limitation is the physical skill set.

Ecology asked what would be eliminated from the list if funding does become an issue. ORP responded that the scenarios are ranked, and they are grouped into three categories: Category A

has to be modeled; the first two or three in Category B will be modeled, but if necessary, the last ones in B will not; the scenarios in Category C will be the first ones to be eliminated if there is a resource limitation.

3.0 ACQUISITION OF NEW FACILITIES

ORP noted that M-090-13 and M-047-07 are in dispute, and stated that ORP will be relying on System Plan 8 to inform the path forward for these two milestones. ORP added that the same situation applies to M-090-00 and M-047-00 regarding System Plan 8. Ecology pointed out that ORP's position that M-090-13 and M-047-07 are to be informed by System Plan 8 does not mean that Ecology is in agreement.

4.0 SUPPLEMENTAL TREATMENT AND PART B PERMIT APPLICATIONS

ORP noted that seven of the milestones listed in the monthly summary report are in dispute, and three of the milestones are on schedule.

5.0 242-A EVAPORATOR STATUS

ORP reported that the current status is that the evaporator campaign-06, which was scheduled for late July, early August 2016, was not performed due to the preliminary injunction that was issued (see discussion under action No. 8, TF-16-07-01). ORP stated that the current schedule calls for the campaign in January 2017, but the time frame could change, depending on the results of the upcoming court hearing. ORP noted that the campaign is considered a waste disturbing activity, which precludes performing the campaign, and alternative work will be done. ORP stated that maintenance calibrations and preventive maintenance will be done, and additional maintenance items will be done that would have been scheduled during that time period.

ORP stated that one of the major activities will be the integrity assessment, and there will be access to the evaporator room where measurements will be taken for the reboiler procurement. Laser mapping will be performed, and some valve work associated with the P-B-2 pump will be done.

Ecology noted that there were 2,000 gallons per minute running through the evaporator system this morning, and asked why water was still running through the system. ORP responded that it would follow up with Ecology's inquiry. Ecology agreed to take a screen shot and contact ORP later today.

Ecology Request 1: ORP to provide explanation for water running through the evaporator system at 2,000 gallons per minute.

Oregon Department of Energy (ODOE) asked if the delay in running the evaporator campaign could potentially impact any milestones associated with tank retrieval. ORP responded that there is the potential to impact the ability for waste volume reduction based on the prior schedule. ODOE asked when it would become a serious issue if the schedule for the evaporator campaigns continues to get delayed. ORP responded that there are so many variables, that it would be difficult to speculate. ORP added that the impact from the stop work demand and the injunction is being evaluated with WRPS. ORP pointed out that the AX-102 and AX-104 retrievals will start in two years, and the evaporator will need to be running to complete the retrievals.

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

6.0 LIQUID EFFLUENT RETENTION FACILITY/200 AREA EFFLUENT TREATMENT FACILITY

ORP stated that processing the backlog out of Basin 43 continues. ORP reported that the total volume processed by the 200 Area Effluent Treatment Facility (ETF) was 3.6 million gallons as of yesterday. ORP is planning for fiscal year (FY) 2017, which will include a list of key performance goals. ORP noted that the Groundwater Monitoring Plan Addendum D was submitted to Ecology for informal review, and it will be a Class 2 permit modification. Ecology recommended including the activity associated with the groundwater monitoring plan addendum D Class 2 modification under the significant planned actions in the next six months. Ecology noted that the Class 2 modification will be more than a revision to the groundwater monitoring plan, and there will be changes to the permit to add two container storage areas. Ecology suggested listing the items that will revise the groundwater monitoring plan to include the container storage areas.

Ecology noted the discussion regarding the effort between ORP and Ecology to identify the transfer lines going in and out of Liquid Effluent Retention Facility (LERF) (see action No. 7, TF-16-07-01). ORP referred to the email that was sent to Ecology within the last month showing the interface control document between Bechtel National, Inc. (BNI) and WRPS. Ecology responded that the information in the email was useful, but there are additional follow-up questions that need to be discussed. Ecology added that the discussion will focus on identifying all of the parties' needs between WTP, 242-A, LERF, and all the other facilities. ORP stated that it will work with One System to provide Ecology the information.

7.0 TANK SYSTEM UPDATE

DST Integrity - ORP stated that all of the annulus video inspections are done and the last report is being finalized. Ecology expressed an interest in the annulus video inspection report for SY farms. ORP responded that it would follow up on the release status of the report. ORP noted that inspections continue on AY-102. ORP stated that responses to Ecology's comments on the DST Independent Qualified Registered Professional Engineer (IQRPE) should be available by the next project managers meeting.

Single-Shell Tanks (SST) Integrity - ORP stated that work is continuing on the in-tank video inspections, although they are not considered a high priority, and the stop work demand has pushed the completion into FY 2017. ORP noted that a meeting with Ecology has been scheduled to discuss the T-111 intrusion mitigation and then moving on to T-112.

8.0 SINGLE-SHELL TANK INTEGRITY ASSURANCE

ORP noted that the IQRPE is on schedule to be completed by September 30, 2018.

9.0 IN-TANK CHARACTERIZATION SUMMARY

ORP stated that the sampling planned for AY-102 in August 2016 will likely be delayed. ORP added that sampling in AP-107 is still planned for September/October 2016. Ecology stated that in reviewing the history of the Best Basis Inventory (BBI) for T-112, a recent sample for T-112

wasn't listed. ORP responded that BBIs do not reflect just samples, but there is a software program that can measure what is in a tank and the time that passes. That information is used to analyze the decay process and determine what is left in a tank. ORP added that transfers in and out of a tank, retrievals and sampling data also feed into the BBIs. Ecology stated that if a sample has been taken in an analogous tank that provides some indication to other groups of tanks, then adjustments can be made to the other tanks that weren't sampled. It was noted that BBIs feed into planning for DFLAW, all the system plans, risk assessments, retrieval, technical issues associated with the Pretreatment (PT) Facility, and all future planning.

10.0 TANK OPERATIONS CONTRACT OVERVIEW

ORP provided an update on the favorable schedule and cost variances for base operations (5.01). ORP referred to the second bullet under the current month favorable schedule variance and reported that the four Extended Reach Sluicer Systems (ERSSs) have been installed in AY-102. An in-service leak test is planned to start on Monday, August 22, 2016, and has been approved by the judge overseeing the preliminary injunction since it is not considered a waste disturbing activity. ORP noted that retrieval could start up in AY-102 by the end of September 2016, but a decision won't be made until after the court hearing scheduled for October 12, 2016. ORP stated that the definition of waste disturbing activities in the 200-foot boundary has a major impact, and the AY-102 control trailer and the shift offices are within the boundary that would be affected by the startup of AY-102 retrieval going to AP-102.

Ecology pointed out that there should be a July 2016 indicator in terms of the stop work demand. ORP responded that some of the impacts will be reflected in the next monthly summary report. ORP stated that there will be an increase in cost for additional self-contained breathing apparatus (SCBA), and a schedule variance is expected with the stop work demand and increased time to do work on SCBA.

ORP noted that the information for retrieve and close SSTs WBS 5.02 reflects the unfavorable schedule and cost variances for June 2016, and it includes a discussion regarding the stop work demand on July 11, 2016. The crews have been reduced to one work crew, and the priority will be AY-102. Following AY-102, the work will move to C-105, where the Mobile Arm Retrieval System (MARS) vacuum containment box will be removed so the MARS arm can be removed. Currently a crew is working on the AX-102 pits, but there are limitations to where work can be done. ORP noted that a lot of the work had been planned to be done under ventilation from portable 126 and not being on SCBA, and adaptations are being made to those plans. Ecology inquired about the funding challenges associated with the AX retrieval equipment procurements that are being replanned. ORP responded that the funding challenges are due to the vapor impacts. ORP stated that new bottles for SCBA are needed, and there are work/rest limitations on a worker under SCBA versus not being under SCBA. ORP noted that some of the work in the pits had been planned on SCBA, but supporting work that was not planned on SCBA now has to be on SCBA.

ORP stated that WBS 5.03 reflects a positive cost and schedule variance, and noted that generally speaking, this WBS isn't tied to a TPA milestone and is more associated with the area of research and development.

ORP stated that treat waste WBS 5.5 is associated with LAWPS. ORP pointed out that the negative schedule performance index (SPI) for June 2016 of 10.01 reflects a baseline change request that was implemented in June to correct the logic of moving from hydrogen diffusion to an active ventilation system. ORP stated that the current month schedule variances reflects that the goal was met to complete the integrated scale test, which was done at Mid-Columbia Engineering in July 2016. ORP noted that the current month unfavorable cost variance reflects about a four-month slip in the ventilation design, which has been recovered in the current draft construction schedule.

11.0 SINGLE-SHELL TANK CLOSURE AND RETRIEVAL PROGRAM

Closure Program - ORP noted that the status of M-045-00 is at risk, and System Plan 8 will provide information regarding the status for closing all the SST farms by 2043. ORP expressed appreciation to Ecology for its support in a pre-meeting and the annual interim measures meeting associated with M-045-56M. ORP noted that a meeting associated with M-045-61A is scheduled with Ecology on August 31, 2016.

ORP stated that M-045-82 is in dispute at the Inter-Agency Management Integration Team (IAMIT) level and will be discussed during the follow-on IAMIT meeting on August 18, 2016. ORP indicated that Ecology and ORP are close to resolution, and that Ecology will be presenting a tentative agreement to its lawyer. ORP noted that the due date on the IAMIT dispute is the end of this month.

ORP noted that M-045-83 is to be missed, and a detailed schedule for closure of Waste Management Area (WMA) C by 2027 was provided to Ecology.

ORP stated that a meeting is scheduled at the end of this month with Ecology to discuss the RFI/Corrective Measures Study (CMS) and tier 1 process associated with M-045-84. ORP indicated that the status of the tier 1 process could provide the confidence to set interim milestones for the second WMA. ORP added that it did not see a singular path to lead to closure of the second WMA, and a path needs to be determined by the parties.

ORP pointed out that DOE Order 435.1 for the WMA C tank residuals PA was approved, and the report has been issued. ORP stated that a briefing will be provided to Ecology and ORP senior management at the end of September 2016 about what was accomplished in the draft integrated PA.

Retrieval Program - ORP reported that M-045-70 is at risk, which is to complete waste retrieval from all remaining SSTs by 2040. ORP noted that this milestone will be informed by System Plan 8. ORP stated that a third retrieval technology has to be deployed in C-105, which is the remaining tank in C farm. ORP indicated that the third retrieval technology is planned for early calendar year 2017 using enhanced reached sluicers and caustic dissolution. ORP noted that the MARS vacuum system needs to be removed and then install the enhanced reached sluicers and the pump into C-105. ORP expressed appreciation to Ecology for approving the tank waste retrieval work plan (TWRWP) modification for C-105.

12.0 TANK WASTE RETRIEVAL WORK PLAN STATUS

ORP noted that the C-105 TWRWP modification was approved. ORP indicated that the AX TWRWPs are close to being completed. Ecology agreed that the AX TWRWPs should be completed in about four weeks.

13.0 APPENDIX H STATUS – SINGLE-SHELL TANK WASTE RETRIEVAL CRITERIA

There was no change in status to report.

14.0 TANK RETRIEVALS WITH INDIVIDUAL MILESTONES

There was no change in status to 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 (see agreements, issues and action items table):

Action No. 1 (WTP-14-10-04)

ORP noted that there have been several meetings with Ecology regarding the schedule for the eight technical team issues. Ecology stated that the meetings are progressing satisfactorily. Ecology noted that a meeting was scheduled for August 17, 2016, but it was canceled by ORP since the quarterly meeting was scheduled for August 18, 2016. Ecology pointed out that the technical issue meetings provide quite a bit more detail than the quarterlies, and that it was not appropriate to allow the quarterly to supersede a technical issue meeting. ORP stated that it would follow up on the status of the schedule and provide the information to Ecology next week. This action remains open.

Action No. 2 (WTP-14-10-05)

Ecology stated that an update on the three-year work plan for High-Level Waste (HLW) Facility was provided, but not for PT Facility. ORP stated that BNI is still working on the three-year schedule for the PT Facility. This action remains open.

Action No. 3 (WTP-14-06-02)

ORP stated that this action would be included as a part of the discussions during the eight technical issues meetings (action No. 1, WTP-14-10-04). Ecology stated that there are other issues, and the technical issues need to feed into the safety design strategy (SDS). Ecology added that a complex, comprehensive view is needed about how the SDS and all the technical issues are considered, and it is beyond just the technical issues. Ecology noted that there have been discussions, but this action may not be closing any time soon due to the length of the technical issues. This action remains open.

Action No. 4 (WTP-14-04-01)

ORP noted that discussions are ongoing, and asked Ecology if this action could be closed. Ecology responded that this action could be closed, and it could be reopened at a later time with a different action. This action was closed.

Action No. 5 (WTP-15-01-01)

This action remains open.

Action No. 6 (WTP-15-06-01)

Ecology indicated that a copy of the corrosion simulant basis document has not been provided. ORP will follow up on the status. This action remains open.

Action No. 7 (WTP-16-02-01)

Ecology stated that it has met with ORP regarding the design features for the standard high solid vessel design (SHSVD), but the full design of the vessels is ongoing and this action has not been completed. This action remains open.

Action No. 8 (WTP-16-05-01)

ORP stated that four or five engineering studies have been provided to Ecology, and there are a few more engineering studies that will be completed in the next couple months. Ecology stated that when the engineering studies that are currently being finalized are provided, this action could be closed. ORP noted that the last engineering study, which will be completed by the end of the year, is the high level off-gas process (HOP) Phase 2 study. This action remains open.

Action No. 9 (WTP-16-05-02)

Ecology indicated that there have been no updates on this action, and it will follow up internally to determine what the status is regarding information received on the welds on the melter lids. This action remains open.

SPARE REBOILER REQUIREMENT STATUS

ORP stated that there are two milestones established for the reboiler. The first milestone is to procure the reboiler by setting a contract in place, and it is on schedule to meet the December 31, 2016 date. The second milestone is associated with building and delivering the reboiler, and it is based on the contract awarded in first milestone.

2.0 SINGLE-SHELL TANK RETRIEVAL

ORP stated that prior to July 11, 2016, when the stop work demand was issued, there were 16 months of float in the schedule to retrieve five tanks under milestone D-16B-03 (which includes a combination of 3 tanks in C Farm and 9 tanks in A and AX Farms). Retrieval was planned to start in 2018, and the schedule float took into account equipment failures and any issues associated with completing AX-102 and AX-104. ORP referred to the letter that WRPS provided last week regarding the impacts of the stop work, which is being evaluated. ORP indicated that it is not reporting 16 months of float, but the status of B-03 is still being reported as on schedule. Ecology asked if ORP would have an answer on the schedule float by next month. ORP responded that it would not have an answer by next month, and that there are too many variables at this time. ORP added that the impacts will be identified after the court case on the injunction.

3.0 TANK WASTE RETRIEVAL WORK PLAN STATUS

The Consent Decree (CD) TWRWP table is identical to the TPA TWRWP table. See discussion under TPA TWRWP status.

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

The Earned Value Management System (EVMS) data is the same as reported in the TPA section of the August 18, 2016 monthly summary.

5.0 WASTE TREATMENT AND IMMOBILIZATION PLANT PROJECT

ORP stated that the three CD milestones that are listed in the monthly summary report are on schedule. ORP noted that the focus in WTP continues to be Low-Activity Waste (LAW) Facility, Balance of Facilities (BOF) and the Analytical Laboratory (LAB), all three known as LBL and DFLAW. ORP stated that a change to the contract was needed to incorporate the DFLAW initiative, and the contract modification and BCP have undergone independent reviews. Ecology inquired about a late September 2016 time frame for approval of the new contract. ORP explained that the Energy System Acquisition Advisory Board (ESAAB) is scheduled for late September 2016, but that is not necessarily when the contract will be signed. ORP stated that the contractor and ORP are in agreement with the terms of the contract, and the next step is to go through business clearance and obtain signatures and approval of the contract. ORP added that the approval process and the ESAAB meeting are separate actions, but will be occurring in parallel. ORP noted that it will be a long period of time before the rebaseline for HLW and PT Facilities are done.

ORP moved to a discussion regarding the EVMS. Ecology asked if the EVMS is ORP's or the EVMS that BNI internal is using. ORP responded that the EVMS is for both BNI and ORP. ORP noted that the EVMS includes the DFLAW BCP, even though it has not yet been approved, because BNI has given its approval.

ORP noted the current month and the fiscal year to date schedule and cost variances, and pointed out that the cumulative schedule and cost variance through June 2016 is from the beginning of the project (see monthly summary report). All of the schedule and cost variances for the three categories are positive, with the exception of the cumulative to date negative schedule variance of \$16.5 million. Ecology asked how the dollars in the schedule variance translate to time. ORP responded that it is a complex method for breaking down the numbers, but in simple terms there would be a positive schedule variance if more work was done than planned, and a negative schedule variance would result if a certain amount of money was anticipated to be earned for work during a month but was not earned.

6.0 PRETREATMENT FACILITY

ORP stated that the continuing focus in PT is the technical issue resolution, and the main focus is on T1 through T3 and also T4 for mixing. ORP noted that the standard test vessel was delivered and installed in the test facility on site, and preparations are under way for the test planning qualifications. ORP stated that the high solids testing is planned to start by December 2016. ORP noted that the low solids and controls testing were previously done with the low solids test vessel. ORP reported that it is anticipated technical issues T1 through T3 will be closed by the end of this year.

ORP stated that it has approved the plutonium particulate criticality safety evaluation engineering study that BNI issued, with the following conditions: 1) BNI to generate the control

set; 2) complete the review and evaluation for the LAB; 3) develop a plan for evaluation of the need for criticality alarm systems.

7.0 HIGH-LEVEL WASTE FACILITY

Ecology referred to the last three milestones listed in the monthly summary report table (pg. 21), and noted that the asterisks have been removed. Ecology stated that the asterisks had indicated the milestones are likely not to be met unless more funding than currently available is received, and inquired about the removal of the asterisks. ORP responded that it did not have a specific answer as to why the asterisks were removed, other than the milestones are many years out in the future. ORP added that the situation remains the same with HLW Facility regarding reduced funding, due to a significant amount of funding going toward support of LBL. ORP stated that there are ongoing discussions with senior management and at DOE-Headquarters about increasing the funding, and all of the parties are aware of and concerned about the funding situation for HLW. Ecology stated that part of the reason for its inquiry is ORP's FY 2018 funding request is about 13 percent more than the FY 2017 request. Ecology added that there is no allocation in the Analytical Building Blocks (ABB) structure for the money, and asked if ORP could clarify the confusion as to how the dollars will be allocated to get a sense of how the money is intended to be spent in FY 2018. ORP responded that it will follow up with Ecology's request to provide clarification, and noted that the funding has not been approved and it remains uncertain.

Ecology Request 1: ORP to provide clarification regarding the FY 2018 funding request and how the dollars are to be allocated.

ORP noted that planning for HLW Facility is for a reduced budget in the next couple of years. Ecology responded that it would be helpful if that information is included in the monthly summary report. ORP stated that the majority of the work in HLW Facility, with the reduced budget, is focused on full authorization for procurement and construction. ORP has provided BNI letters with the criteria for full authorization, and a key condition is updating the preliminary documented safety analysis (PDSA) for HLW.

ORP reported that BNI just issued the five-year plan for HLW. The two-year plan for HLW ends in FY 2016. Ecology requested a briefing on the five-year plan. ORP agreed to provide a briefing.

Ecology Request 2: ORP to provide a briefing on the five-year plan for HLW.

ORP noted that efforts continue with resolution of comments on the design and operability (D&O) review. ORP stated that the high-efficiency particulate air (HEPA) filter testing in support of HLW, LAW and PT Facilities is continuing and has been successful. The initial testing has been completed, and the Nuclear Quality Assurance (NQA)-1 testing is under way at Mississippi State University (MSU). ODOE asked how many filters are being tested. ORP responded that approximately 14 through 22 filters are undergoing NQA-1 testing.

8.0 LOW-ACTIVITY WASTE FACILITY

ORP provided a brief update on the accomplishments and planned actions. ORP noted that Ecology would be provided information on the additional welds required on the melter base and

the melter shield lids. Ecology inquired about the time line for procurement of the spare melters. It was indicated that the time line for procurement is by December 2016.

9.0 BALANCE OF FACILITIES

ORP stated that there have been two main focal areas for BOF over the past several months. ORP noted that there are several support facilities within BOF, and efforts have been focused on initial energization of Building 87, which is the switchgear building for WTP. ORP stated that a majority of the field activities for the construction and startup organization have been geared toward prepping building 87 to get it ready for energization from the permanent power supply. ORP indicated that all of the physical activities associated with that effort should be finishing up by the end of August 2016.

ORP stated that it is getting close to the point of tagging out the entire BOF, and then the authority having jurisdiction (AHJ) will conduct a final inspection. At that point, a date will be established for official energization. ORP noted coordinating activities have to occur between MSA and ORP for energization, and following energization, the kick-off of the startup waterfall for BOF will be initiated.

ORP stated that there has been a lot of trenching activity in the field, and a major portion of that is to support installation of the cathodic protection system supplemental system. The rectifiers have been placed, and final connections are being made between the anodes and the rectifiers at specific locations, followed by backfilling of the trenches. The next step will be to turn the cathodic protection system over to the startup organization to begin system testing and energization steps.

ORP reported that the bid evaluations for the Effluent Management Facility (EMF) evaporator have been initiated. ORP noted that the EMF is the other main focal area in BOF. Preparations are under way for the upcoming pour of the base mat for the EMF. ORP noted that the base mat is the first permit activity for EMF, and biweekly meetings with the Ecology permitting team are ongoing. ORP stated that the 60 percent design review for EMF is scheduled for the week of August 22, 2016, and Ecology's permitting group and engineering group have been invited to attend. ORP noted that the EMF evaporator, which is the primary system within the EMF, will be a focal point of the 60 percent design review. The remaining components are the tanks, pipes and pumps for the evaporator. ORP stated that another field activity associated with the EMF will be excavation and placement of soldier pilings to support installation of the low point drain at the -35-foot level.

ORP stated that another key activity is energization of the WTP switchgear, and it is tentatively scheduled for a weekend in September 2016.

10.0 ANALYTICAL LABORATORY

ORP reported that the main focus continues to be the test engineer's work station and getting it ready to turn over to operations. ORP stated that the test engineer's work station will serve as the main control room until the LAW annex is completed.

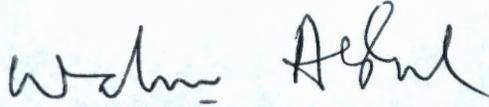
ORP noted that a question was previously asked by Ecology as to what could or could not be done from the test engineer's work station. ORP stated that the test engineer's work station will

have all of the functionality that the LAW control room will have, and it will allow Building 87 to see all the status of LAB once it's operational. ORP added that Building 91 will be able to see the status of the equipment except for four breakers, which can be opened and closed, and that is identical to what can be done from the LAW annex. ORP stated that once the component testing for the Nonradioactive Liquid Disposal (NLD) Facility and the water treatment building is initiated, the test engineer's work station will be able to control the pumps and give readouts of pH while the tests are running. ORP noted that after that point, the LAW annex should be operational.

ORP reported that the LAB startup schedule has been delayed about eight months in order to maximize resources elsewhere within the rest of the BOF turnovers and work towards LAW. As a result of the delay, the laboratory methods development will take place in a temporary laboratory space so that training of laboratory personnel won't be affected and equipment will be able to be purchased sooner. Ecology asked when the resources are being allocated. ORP responded that the spend plan for LBL was overloaded in FY 2017 and FY 2018, and it will be reallocated to the rest of the LBL Facilities in terms of the DFLAW effort, BOF turnovers, and general LAW construction complete. Ecology asked how many LAB personnel will be trained. ORP responded that it would follow up with Ecology's inquiry.

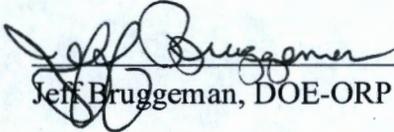
CONCURRENCE SIGNATURES

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



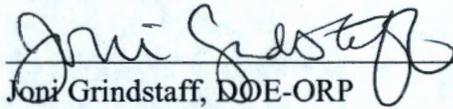
Wahed Abdul, DOE-ORP

Date: 9/13/16



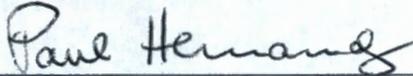
Jeff Bruggeman, DOE-ORP

Date: 9/12/16



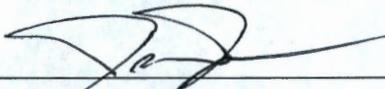
Joni Grindstaff, DOE-ORP

Date: 9/12/16



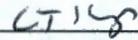
Paul Hernandez, DOE-ORP

Date: 9/7/16



Jeremy Johnson, DOE-ORP

Date: 9/7/16



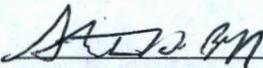
Chris Kemp, DOE-ORP

Date: 9-7-2016



Dan Knight, DOE-ORP

Date: 9/12/16



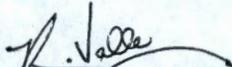
Steve Pfaff, DOE-ORP

Date: 9/7/2016



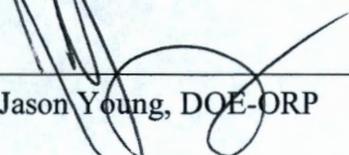
Glyn Trenchard, DOE-ORP

Date: 9-9-16



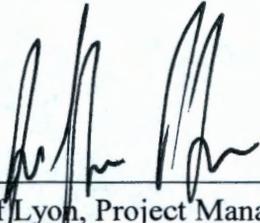
Richard Valle, DOE-ORP

Date: 09/07/2016



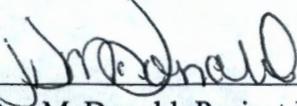
Jason Young, DOE-ORP

Date: 9/12/16



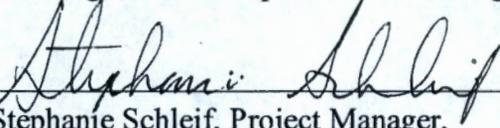
Jeff Lyon, Project Manager,
Washington State Department of Ecology

Date: 9-20-16



Dan McDonald, Project Manager,
Washington State Department of Ecology

Date: 9-20-16



Stephanie Schleif, Project Manager,
Washington State Department of Ecology

Date: 9/20/16

August 18, 2016

Office of River Protection Tri-Party Agreement Quarterly Milestone Review Meeting

Ecology Office, Conference Room 3A/B

Chairperson: Alex Smith



8:30 a.m. - 10:00 a.m.

Topic	Leads	Time
Administrative Items / Milestone Status / ORP Key Document List	Bryan Trimberger / Dan McDonald / Jeff Lyon	8:30
System Plan	Kaylin Burnett / Jeff Lyon / Dan McDonald	8:35
Acquisition of New Facilities	Janet Diediker / Jeff Lyon / Dan McDonald	8:40
Supplemental Treatment and Part B Permit Applications	Steve Pfaff / Jeff Lyon / Dan McDonald	8:45
242-A Evaporator Status	Paul Hernandez / Jeff Lyon	8:50
Liquid Effluent Retention Facility (LERF) and 200 Area Effluent Treatment Facility (EFT)	Richard Valle / Stephanie Schleif	8:55
Tank System Update	Dusty Stewart / Jeff Lyon	9:00
Single-Shell Tank Integrity Assurance	Dusty Stewart / Jim Alzheimer	9:05
In Tank Characterization and Summary	Dusty Stewart / Michael Barnes	9:10
Tank Operations Contract (TOC) Overview	ORP Project Leads / Jeff Lyon	9:15
Single-Shell Tank Closure Program	Ryan Beach / Jeff Lyon	9:20
Single-Shell Retrieval Program, TPA and Consent Decree (CD), including: <ul style="list-style-type: none">• Tank Waste Retrieval Work Plan Status• Tanks in Appendix H• Tanks with Individual Milestones	Chris Kemp / Jeff Lyon	9:25
Waste Treatment and Immobilization Plant (WTP) Overall TPA and CD Summary and Milestones Status	Joni Grindstaff / Dan McDonald	9:30
WTP Pretreatment (PT) Facility	Dan Knight / Dan McDonald	9:35
WTP High-Level Waste (HLW) Facility	Wahed Abdul / Dan McDonald	9:40
WTP Low-Activity Waste (LAW) Facility	Jeff Bruggeman / Dan McDonald	9:45
WTP Analytical Laboratory (LAB)	Jennifer Sands / Dan McDonald	9:50
WTP Balance of Facilities (BOF)	Jason Young / Dan McDonald	9:55

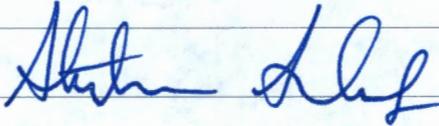
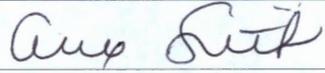
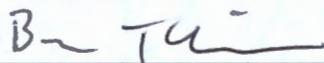
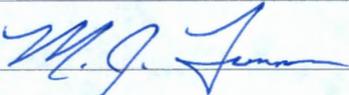
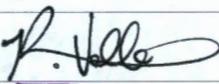
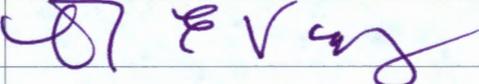
August 18, 2016
Office of River Protection
Milestone Review Meeting

PRINT NAME	SIGN NAME	ORG
Abdul, Wahed	Wahed Abdul	ORP
Alzheimer, Jim	James Alzheimer	ECY
Barnes, Mike	Michael W Barnes	ECY
Beach, Ryan		ORP
Beehler, Steve		ORP
Biyani, Rabindra		ECY
Braswell, Sharon		MSA
Bruggeman, Jeff		ORP
Burnett, Kaylin W	Kaylin W. Burnett	ORP
Carter, Justin		ORP/WED
Chandran, Nitya		ECY
Cimon, Shelly SHAWLEY	Shelly Cimon	OR State
Curn, Barry		BNI
Daniels, Jeff	Jeff Daniels	ORP
Diediker, Janet	Janet Diediker	ORP
Evans, Rana		ORP
Faulk, Dennis ^{Craig} CARNECOURT	Craig Carnecourt	EPA
Fletcher, Thomas		ORP
Gao, Tracy		ECY
Grindstaff, Joni		ORP/WTP
Hamilton, James		WRPS
Hernandez, Paul	Paul Hernandez	ORP
Higgins, Kathleen		ORP
Huffman, Lori		ORP

August 18, 2016
Office of River Protection
Milestone Review Meeting

PRINT NAME	SIGN NAME	ORG
Jones, Mandy		ECY
Jones, Mandy		ECY
Joyner, Jessica		WRPS
Keith, Colleen		ORP
Kemp, Christopher	<i>CK</i>	ORP
Knight, Dan		ORP
Knox, Kathy	<i>Kathy Knox</i>	Court Reporter
Lobos, Rod		EPA
Lowe, Steven	<i>Steven Lowe</i>	ECY
Lynch, James		ORP
Lyon, Jeffery		ECY
MacDonald, Dawn	<i>Dawn MacDonald</i>	ORP
Martell, John		DOH
Mathey, Jared		ECY
McCartney, Anne	<i>Anne McCartney</i>	ORP
McDonald, Dan	<i>Dan McDonald</i>	ECY
Menard, Nina		ECY
Nichols, Stacy		ECY
Parker, Dan		WRPS
Pfaff, Stephen H		ORP
Piippo, Robert E	<i>Robert Piippo</i>	MSA
Pomiak, Andrew	<i>Andrew Pomiak</i>	ECY
Price, John	<i>John Price</i>	ECY
Rambo, Jeffrey		ORP

August 18, 2016
 Office of River Protection
 Milestone Review Meeting

PRINT NAME	SIGN NAME	ORG
Richardson, John		ECY
Rochette, Beth		ECY
Sands, Jennifer		ORP
Schleif, Stephanie		ECY
Schmidt, John		DOH
Shuen, Jian-Shun		ORP
Skorska, Maria		ECY
Smith, Alex		ECY
Stafford, Harold		ORP
Stewart, Dustin		ORP
Trenchard, Glyn		ORP
Trimberger, Bryan		ORP
Turner, Michael		MSA
Utley, Randell		DOH
Valle, Richard		ORP
Varljen, Robin		ECY
Walmsley, Mign		ECY
Wang, Oliver S		ECY
Whalen, Cheryl		ECY
Wold, Kristi		ECY
Wrzesinski, Wendell		ORP
Young, Jason		ORP
Riker, William		ORP

ORP/Ecology TPA and CD Agreements, Issues, and Action Items –August 2016

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 –August 2016

Tank Farms Action Items							
#	Action ID	Start Date	Action	Action Status	Updates / Needs for Closure	Actionee(s)	Date Closed
1	TF-15-10-02	10/15/15	Ecology requests ORP provide information regarding plans and concepts for LERF/ETF to be ready to accommodate Direct Feed Low Activity Waste (DFLAW).	Open		Wendell Wrzesinski	
2	TF-16-01-01	1-21-16	Ecology requests DOE provide current LAWPS technical design media to Ecology	Open		Steve Pfaff/ Janet Diediker	
3	TF-16-01-02	1-21-16	Ecology would like DFLAW program interface information to include mass & energy balance and process flow information.	Open		Wendell Wrzesinski	
4	TF-16-01-03	1-21-16	Ecology would like more information on the contamination issue for AX-104 Riser 9D	Closed		Ryan Beach	7-20-16
5	TF-16-05-01	5-19-16	Ecology requests ORP provide the basis for ventilation work on 241-T-112 as an intrusion tank	Open		Dusty Stewart	
6	TF-16-07-01	7-21-16	Ecology requests ORP to schedule a meeting to discuss any permitting impacts associated with upgrades to components at the 242-A Evaporator (i.e. variable frequency drive for P-B-2 pump; replacement of P-B-2 pump and any other upgrades). The integrity assessment that will follow EC-06 and the recent permit modification that was sent out will also be discussed.	Open		Mary Burandt	
7	TF-16-07-01	7-21-16	Ecology requests ORP to provide an overall comparison of ORP's schedule for LAWPS and the CD requirement for LAW Facility hot commissioning and the float between the two.	Open		Steve Pfaff/ Janet Diediker	

ORP/Ecology TPA and CD Agreements, Issues, and Action Items –August 2016

Tank Farms Action Items							
#	Action ID	Start Date	Action	Action Status	Updates / Needs for Closure	Actionee(s)	Date Closed
8	TF-16-07-01	7-21-16	Ecology requests ORP provide information on the level 2 BCP that was done two to three months ago.	Open		Glyn Trenchard	
9	TF-16-07-01	7-21-16	Ecology request ORP schedule a meeting to discuss unresolved comments regarding the M-045-61A RFI.	Open		Chris Kemp	
10	TF-16-07-01	7-21-16	Ecology requests ORP schedule a meeting to clarify the contents of the Tier 2 and 3 plans; to begin discussions regarding Ecology's comments on the System Plan Tier 1 Closure Plan; and to initiate recurring meetings with Ecology to discuss the RFI/CMS.	Open		Chris Kemp	
11	TF-16-07-01	7-21-16	Ecology requests ORP provide an outline of the PA, and to involve EIS modeling representatives in the PA discussions.	Open		Chris Kemp	
12	TF-16-07-01	7-21-16	Ecology requests ORP to provide the configuration parameters for the SST and DST exhausters.	Open		Dusty Stewart	

ORP/Ecology TPA and CD Agreements, Issues, and Action Items –August 2016

WTP Action Items							
#	Action ID	Start Date	Action	Action Status	Updates / Needs for Closure	Actionee(s)	Date Closed
1	WTP-14-10-04	10/23/14	Ecology requests a status update to include a schedule on the 8 technical team issues for High Level Waste (HLW) and Pretreatment (PT).	Open	Completed for HLW.	Dan Knight	
2	WTP-14-10-05	10/23/14	Ecology requests on update on the details of the 3-year work plan for HLW and PT.	Open	Completed for HLW.	Dan Knight	
3	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).	Open		Joni Grindstaff	
4	WTP-14-04-01	04/22/14	ORP and Ecology have a placeholder action to hold a comprehensive briefing/discussion on the PT efforts.	Open	ORP will follow-up with Ecology to further define and clarify this action so that it can be address and closed.	Joni Grindstaff	
5	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	Open	Impacts will be better understood once the design studies are issued.	Dan Knight	
6	WTP-15-06-01	06/15/15	ORP took an action to provide Ecology a copy of the corrosion simulat basis document.	Open		Dan Knight	
7	WTP-16-02-01	2/18/16	Ecology would like to know what design features are left for SHSVD	Open		Dan Knight	
8	WTP-16-05-01	5/19/16	Ecology requests ORP provide engineering studies that support closure of the HLW Design and Operability review.	Open	ORP will provided studies as they are completed.	Wahed Abdul	
9	WTP-16-05-02	5/19/16	Ecology requests a presentation regarding the additional welds on the melter lids and lessons learned from the first melter lid	Open		Jeff Bruggeman	

Final

**Office of River Protection
Consent Decree 2:08-CV-5085-RMP (2016)**

**Monthly Report
August 2016**

Office of River Protection**Consent Decree 08-5085-FVS and Amended Consent Decree 2:08-CV-5085-RMP****Project Earned Value Management System reflects June 2016 information**

Page	Topic	Leads
4	CD Milestone Statistics/Status	Bryan Trimberger/Dan McDonald/Jeff Lyon
6	Consent Decree Reports/Reviews	
7	Spare Reboiler Requirement Status	Paul Hernandez
8	Single-Shell Tank Retrieval Program • D-16B-01, D-16B-02, D-16B-03	Chris Kemp/Jeff Lyon
10	Tank Waste Retrieval Work Plan Status • Consent Decree Appendix C	Chris Kemp/Jeff Lyon
14	Waste Treatment and Immobilization Plant Project • D-00A-06, D-00A-17, D-00A-01	Joni Grindstaff/Dan McDonald
18	Pretreatment Facility • D-00A-18, D-00A-19, D-00A-13, D-00A-14, D-00A-15, D-00A-16	Dan Knight/Dan McDonald
21	High-Level Waste Facility • D-00A-20, D-00A-21, D-00A-02, D-00A-03	Wahed Abdul/Dan McDonald
25	Low-Activity Waste Facility • D-00A-07, D-00A-08, D-00A-09	Jeff Bruggeman/Dan McDonald
28	Balance of Facilities • D-00A-12	Jason Young/Dan McDonald
30	Analytical Laboratory • D-00A-005	Jennifer Sands/Dan McDonald
32	Waste Treatment Plant Project Percent Complete Status (Table)	

CD = Consent Decree

Acronyms and Abbreviations

BCP	baseline change proposal
BNI	Bechtel National, Inc.
BOF	Balance of Facilities
CV	cost variance
DFLAW	direct-feed low-activity waste
DOE	U.S. Department of Energy
EIR	external independent review
EMF	Effluent Management Facility
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
MARS-V	Mobile Arm Retrieval System-Vacuum
ORP	U.S. Department of Energy, Office of River Protection
PDSA	preliminary documented safety analysis
PT	Pretreatment (Facility)
RLD	Radioactive Liquid Waste Disposal System
SV	schedule variance
WRPS	Washington River Protection Solutions LLC
WTP	Waste Treatment and Immobilization Plant

CD 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		On Schedule
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		On Schedule
Fiscal Year 2030				
D-00A-02 Interim	HLW Facility Construction Substantially Complete	12/31/2030		On Schedule
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

Milestone	Title	Due Date	Completion Date	Status
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 Plan**	12/31/2036		On Schedule

* Milestones B-1, B-2, and B-3 narrative changed in accordance with 2016 amended Consent Decree (CD). Per this amendment, there is no longer a milestone B-4.

** Error in the CD: Last word of the D-00A-01 milestone should be Plant

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: July 31, 2016, Status: Completed.

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, Due: September 25, 2016, Status: On Schedule.

D-006-00-B, Meet Approximately Every Three Years after Entry of Decree to review requirements of the Consent Decree, Due: October 25, 2016, Status: On Schedule.

Spare Reboiler Requirement Status

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

* Error in the Consent Decree, part should be identified as E-A-1.

**Consent Decree 08-5085-FVS, Part IV B.5 as amended by No. 2:08-CV-5085-RMP dated April 12, 2016.

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 (as required per 2016 amended Consent Decree (CD) dated April 12, 2016, Items, IV-C.1.h, and IV-C.2):

- Since issuance of the March 11, 2016, Amended Consent Order, the U.S. Department of Energy (DOE) has provided the contractor with funding to accelerate the planned fiscal year (FY) 2017 work to design and procure the spare E-A-1 reboiler. The DOE Office of River Protection (ORP) authorized the Washington River Protection Solutions LLC (WRPS) to proceed by awarding a not-to-exceed contract action. WRPS is currently underway generating a procurement specification for the new spare 242-A Evaporator reboiler. The current procurement strategy is to award a design/build procurement contract with a vendor by December 21, 2016.
- The functions and requirements evaluation document has been completed. The design specification for the new spare 242-A Evaporator reboiler has been completed. This specification will be attached to a material request and submitted for request for proposal to solicit a design/build vendor.

Single-Shell Tank Retrieval Program

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*	On Schedule
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 advise Ecology accordingly	03/31/2024	On Schedule

* Pursuant to Section IV-B-7 of the Consent Decree, the U.S. Department of Energy (DOE) must submit to the Washington State Department of Ecology (Ecology) a written certification DOE has completed retrieval of a tank in accordance with the requirements of Appendix C, Part 1, of the Consent Decree.

SST = single shell tank.
WMA-C = C Farm waste management area.

Significant Accomplishments during the Prior Three Months:

- Completed post-retrieval sampling of Tank 241-C-111
- Completed proof of concept demonstrations for C-105 Mobile Arm Retrieval System-Vacuum (MARS-V) in-tank equipment removal
- Began development of Tank C-111 Retrieval Data Report
- Completed below grade removal of Buildings AX2707 and AX80
- Completed Building 2724AB demolition and below grade removal
- Completed installation of POR126 system and began cold operational acceptance testing
- Completed installation of the new A/AX change trailers and turned them over to operations
- Completed pit cleanout of AX-02D
- Prepared for concrete foundation pour on the new air and service water building (A-285)
- Completed A Farm ventilation design.

Significant Planned Activities in the Next Three Months:

- Submit retrieval data reports for 241-C-102

- Negotiate contract proposal for installing and performing the third retrieval technology at Tank C-105
- Complete Tank C-105 MARS-V containment box disassembly
- Complete removal of Tank C-105 MARS-V in-tank equipment
- Complete Tank C-105 modified sluicing system design
- Issue Tank C-111 retrieval completion certification
- Complete cleanout of Tank 241-AX-104 pits 04A and 04D, and initiate debris removal from 04C
- Complete AX-2707 fencing and gate upgrades
- Complete Tanks 241-AX-102 and 241-AX-104 extended reach sluicing system procurement
- Complete installation of the A-285 service building.

Issues:

- On July 11, 2016, the Hanford Atomic Metal Trades Council (HAMTC), a labor organization composed of various unions working at Hanford, issued a “stop work” requiring mandatory use of supplied air within the perimeter fence lines of both single-shell and double-shell tank farms. This letter also included six other demands HAMTC expected WRPS to implement immediately. On July 21, 2016, the Washington State Attorney General and Citizens (Local Union 598 and Hanford Challenge) filed motions for preliminary injunction in federal court seeking, among other things, all work inside the perimeter fences of any tank farm be performed while wearing *mandatory* supplied air.
- Funding limitations could potentially limit field activities within AX Farm, which would result in deferring tank preparation activities, which include removal of legacy operational equipment, and installation of retrieval pumps and sluicers into FY 2017 and FY 2018. Due to the prior technical challenges related to completing retrievals at Tank 241-C-102, Tank 241-C-111, and the current modifications to Tank 241-C-105, it is likely funding needed to complete Tank 241-AX-102 and Tank 241-AX-104 farm retrieval system installation will be required through FY 2018 with retrieval operations starting in FY 2019 to meet milestone D-16B-03 by December 31, 2020.
- The HAMTC stop work issued on July 11, 2016, has impacted Tank C-105 equipment removal activities due to C Farm access limitations. Construction resources have been redeployed to other work/contracts as available.
- The HAMTC stop work issued on July 11, 2016, has impacted the AX field work due to equipment availability. Pit cleanouts are currently on hold. Crews will opportunistically attempt to continue pit cleanout when crews and equipment are freed up from AY-102 construction installing four extended reach sluicer system and removal of the C-105 MARS-V.

Tank Waste Retrieval Work Plan Status

Tank	TWRWP	Expected Revisions	First Retrieval Technology	Second Technology	Third Technology
AX-101	RPP-RPT-58932, Draft	Initial Approval	Sluicing with ERSS	High-Pressure Water deployed with ERSS	-
AX-102	RPP-RPT-58933, Draft	Initial Approval	Sluicing with ERSS	High-Pressure Water deployed with ERSS	-
AX-103	RPP-RPT-58934, Draft	Initial Approval	Sluicing with ERSS	High-Pressure Water deployed with ERSS	-
AX-104	RPP-RPT-58935, Draft	Initial Approval	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	Complete	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	-
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

Tank	TWRWP	Expected Revisions	First Retrieval Technology	Second Technology	Third Technology
					Process with ERSS
C-112	RPP-22393, Rev. 7	Complete	Modified Sluicing	Chemical Retrieval Process	-

ERSS = extended reach sluicing system. MARS = Mobile Arm Retrieval System. S = sluicing.
 TBD = to be determined. TWRWP = tank waste retrieval work plan. V = vacuum.

Significant Accomplishments:

- Modification approved to RPP-22520, 241-C-101, and 241-C-105, *Tanks Waste Retrieval Work Plan* to include a third retrieval technology for C-105 retrieval on July 20, 2016.

Significant Planned Activities in the Next Three Months:

- Finalize AX Farm tank waste retrieval work plans.

Issues:

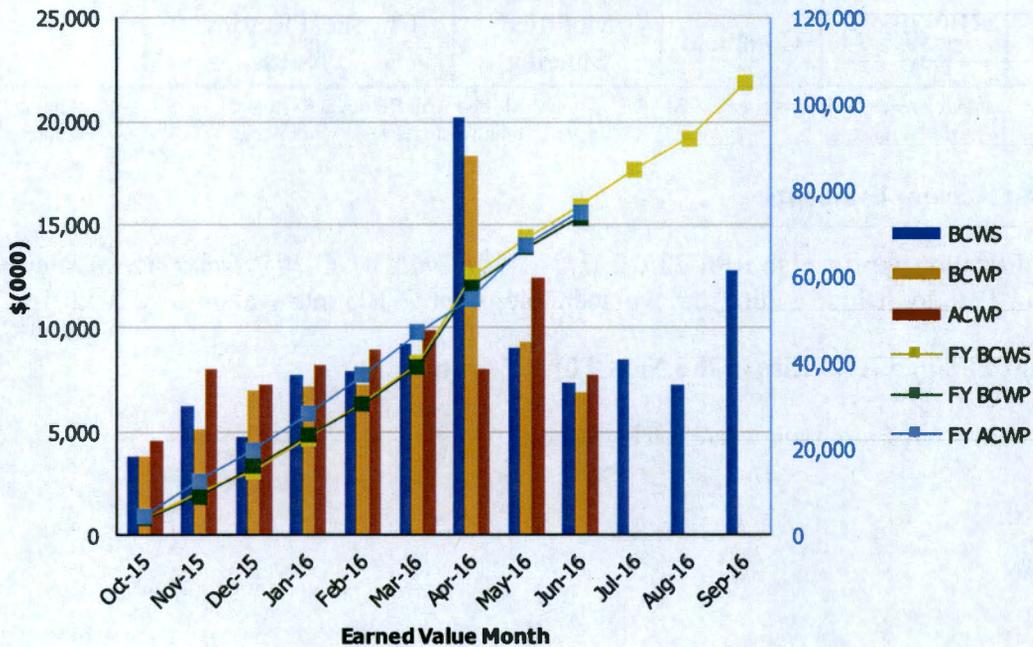
- None.

Earned Value Data: Fiscal Year 2016

June-16

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

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2015	\$3,770	\$3,814	\$4,560	1.01	0.84	\$3,770	\$3,814	\$4,560	1.01	0.84
Nov 2015	\$6,282	\$5,131	\$8,006	0.82	0.64	\$10,052	\$8,946	\$12,566	0.89	0.71
Dec 2015	\$4,769	\$6,970	\$7,255	1.46	0.96	\$14,821	\$15,915	\$19,821	1.07	0.80
Jan 2016	\$7,702	\$7,214	\$8,233	0.94	0.88	\$22,522	\$23,130	\$28,053	1.03	0.82
Feb 2016	\$7,948	\$7,288	\$8,959	0.92	0.81	\$30,470	\$30,417	\$37,012	1.00	0.82
Mar 2016	\$9,249	\$8,693	\$9,857	0.94	0.88	\$39,719	\$39,111	\$46,869	0.98	0.83
Apr 2016	\$20,237	\$18,288	\$8,046	0.90	2.27	\$59,956	\$57,399	\$54,916	0.96	1.05
May 2016	\$9,013	\$9,299	\$12,417	1.03	0.75	\$68,970	\$66,698	\$67,333	0.97	0.99
Jun 2016	\$7,387	\$6,885	\$7,713	0.93	0.89	\$76,357	\$73,584	\$75,045	0.96	0.98
Jul 2016	\$8,496					\$84,852				
Aug 2016	\$7,264					\$92,116				
Sep 2016	\$12,840					\$104,956				

CTD	\$668,834	\$658,811	\$685,018	0.99	0.96
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ACWP = actual cost of work performed.
 BCWP = budgeted cost of work performed.
 BCWS = budgeted cost of work scheduled.
 CPI = cost performance index.

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

Retrieve and Close Single-Shell Tanks (5.02)

The June variances have a minimal variance on Consent Decree and TPA milestones (M-045-15) at A-103 for tank retrieval.

The current month **unfavorable** SV of (\$502k) is due to:

- AX Retrieval equipment procurements have been re-planned based on funding challenges and prioritization; major equipment procurements have been re-scheduled to arrive based on installation activities/requirements. This negative variance does not impact the completion of projects B-1 and B-3 of the Consent Decree milestones.

The current month **unfavorable** CV of (\$827K) is due to:

- Additional health physicist technicians (HPT)/industrial hygienist technicians (IHT), support staff, and duration/time have been required to support in-farm field activities due to vapor impact and lower work productivity. This activity increases the cost of activities at C-105 and AX-102/104 to maintain Consent Decree retrieval milestones. This cost variance is expected to continue through the project along with a “stop work” explained in the second bullet.
- On July 11, 2016, the Hanford Atomic Metal Trades Council (HAMTC), a labor organization composed of various unions working at Hanford, issued a “stop work” requiring mandatory use of supplied air within the perimeter fence lines of both SST and DST farms. This letter also included six other demands that HAMTC expected the Washington River Protection Solutions LLC to implement immediately. On July 21, 2016, the Washington State Attorney General and Citizens (Local Union 598 and Hanford Challenge) filed motions for a preliminary injunction in federal court seeking, among other things, all work inside the perimeter fences of any tank farm be performed while wearing *mandatory* supplied air.

Waste Treatment and Immobilization Plant Project

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 2,936 full-time equivalent contractor (Bechtel National, Inc. [BNI]) and subcontractor personnel. This includes 597 craft, 453 non-manual, and 137 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 low-activity waste [DFLAW] and LBL facility services). As of June 2016, LBL facilities were 48 percent complete, design and engineering was 74 percent complete, procurement was 64 percent complete, construction was 65 percent complete, and startup and commissioning was 11 percent complete.

For the project to manage to the DFLAW initiative, the project is required to update the performance baseline to reflect the new work activities. This requires a change to BNI's contract with the U.S. Department of Energy (DOE), Office of River Protection (ORP). The WTP team has been working with BNI to negotiate the changes in work scope into the contract.

Significant Accomplishments during the Prior Three Months:

- The baseline change proposal (BCP) for LBL/DFLAW was submitted to the DOE Office of Project Management, Oversight, and Assessments for review.
- An External Independent Review (EIR) team led by Office of Project Management, Oversight, and Assessments was required to support the approval process of the new BCP for the LBL/DFLAW initiative. The first EIR review focused on the new scope in the BCP. The second EIR, conducted in May 2016, focused on the cost and schedule.

Significant Planned Activities in the Next Three Months:

- Contract negotiations with BNI to definitize the new LBL/DFLAW scope into the contract have been ongoing and are expected to be completed by the end of the fiscal year.
- ORP will present the new BCP to the Chief Executive for Project Management seeking approval of the LBL/DFLAW BCP for the WTP Project.

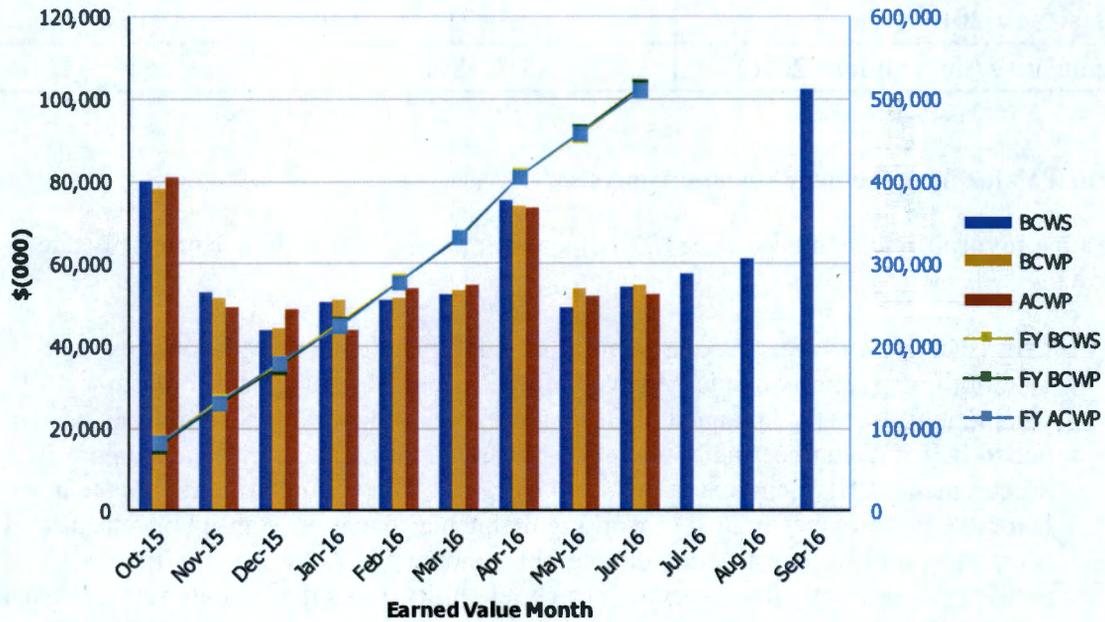
EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2016 Earned Value Data

Data as of: June 2016

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 2015	\$79,800	\$78,230	\$81,000	0.98	0.97	\$79,800	\$78,230	\$81,000	0.98	0.97
Nov 2015	\$52,815	\$51,614	\$49,184	0.98	1.05	\$132,615	\$129,844	\$130,184	0.98	1.00
Dec 2015	\$43,659	\$44,505	\$48,853	1.02	0.91	\$176,275	\$174,348	\$179,037	0.99	0.97
Jan 2016	\$50,515	\$51,167	\$43,662	1.01	1.17	\$226,790	\$225,515	\$222,699	0.99	1.01
Feb 2016	\$51,349	\$51,492	\$54,112	1.00	0.95	\$278,139	\$277,007	\$276,811	1.00	1.00
Mar 2016	\$52,395	\$53,645	\$54,896	1.02	0.98	\$330,533	\$330,653	\$331,707	1.00	1.00
Apr 2016	\$75,610	\$74,244	\$73,679	0.98	1.01	\$406,144	\$404,897	\$405,387	1.00	1.00
May 2016	\$49,478	\$53,800	\$51,914	1.09	1.04	\$455,622	\$458,697	\$457,300	1.01	1.00
Jun 2016	\$54,203	\$54,759	\$52,382	1.01	1.05	\$509,825	\$513,456	\$509,682	1.01	1.01
Jul 2016	\$57,534									
Aug 2016	\$61,420									
Sep 2016	\$102,314									

PTD	\$9,609,588	\$9,593,002	\$9,527,485	1.00	1.01
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- ACWP = actual cost of work performed. CTD = contract to date.
- BCWP = budgeted cost of work performed. EVMS = earned value management system.
- BCWS = budgeted cost of work scheduled. FY = fiscal year.
- CPI = cost performance index. SPI = schedule performance index.

Project Schedule and Cost Variance Performance

Performance Tracking	SV (\$x1,000)	CV (\$x1,000)
Current Period (June 2016)	\$556	\$2,377
Fiscal Year 2016 to-date	\$3,631	\$3,773
Cumulative (through June 2016)	(\$16,586)	\$65,517

SV = schedule variance.

CV = cost variance.

Earned Value Management System Analysis

The June **favorable** schedule variance (SV) of approximately \$0.6 million is primarily due to the following:

- LBL is an overall favorable of \$0.9 million. LBL plant equipment is a favorable \$0.6 million, primarily due to “Active Safety Process Gas Analyzers” milestone completing earlier than planned. LBL engineering is a favorable \$0.4 million, primarily due to DFLAW engineering acceleration of calculations, datasheets, and support to procurement. LBL plant operations is a favorable \$0.4 million, primarily due to a favorable performance related to working maintenance activities ahead of schedule. This is offset by an LBL construction unfavorable amount of (\$0.4 million) – BOF unfavorable primarily due to vacuum truck reliability, as well as facility services receipt of less bulk material than planned. Also, LBL startup is an unfavorable (\$0.1 million) – BOF unfavorable amount is primarily due to delays in writing procedures for the water treatment building, cooling tower facility, and chiller facility.
- High-Level Waste (HLW) Facility construction is an unfavorable (\$0.4 million), primarily due to civil work completed in prior periods.

The June **favorable** cost variance (CV) of approximately \$2.4 million is primarily due to the following:

- Project services is a favorable \$1.5 million. Engineering is a favorable \$0.1 million, primarily due to corrections being completed for relocation charges and process engineering commencing charging to LAW (ahead of budget transfer in July). General/Other services is a favorable \$0.9 million, primarily due to project and business management cost underruns for relocation and subcontracts, and other miscellaneous Project Services labor underruns. Procurement is a favorable \$0.4 million, primarily due to open positions for fiscal year (FY) 2016 to meet project services targets. Construction is a favorable \$0.1 million, primarily due to a favorable non-labor variance and positive labor usage variance, and reversal of erroneous charges for last month on construction distributed support, subcontracts, and bulk materials.
- LBL is a favorable \$1.2 million. Plant operations is a favorable \$0.9 million, with BOF favorable performance related to maintenance activities, such as inspection, refurbishments, and staffing additions later than planned. Startup is a favorable

\$0.5 million, primarily due to the forecast for staffing additions being later than planned. Construction is a favorable \$0.4 million, primarily due to bulks purchased slower than planned, offset by unfavorable performance related to a request for equitable adjustment for the DKB Insulation subcontract. Offsets are:

- Support functions (excluding construction, plant operations, and startup) is an unfavorable (\$0.2 million), primarily due to additional project management support for oversight of startup and site energization, and procurement-apportioned labor charges from shared services above plan driven by LBL prioritization.
- Design agency is an unfavorable (\$0.1 million), as LAW experienced support to construction and new hire training above plan.
- Nuclear safety engineering is an unfavorable (\$0.2 million), with LAW higher than planned support for comment resolution for the process hazard analysis and development of the process hazard analysis summary table.
- PT is an unfavorable (\$0.4 million). Nuclear safety engineering is an unfavorable (\$0.3 million), primarily due to increased support for deliverables for T1 through T3. Technical teams are an unfavorable (\$0.1 million) primarily due to additional resources used to support T1 and unplanned studies for T4.

Pretreatment Facility

Milestone	Title	Due Date	Status
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 Pretreatment (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 U.S. Department of Energy (DOE) continues to focus on resolving five outstanding Waste Treatment and Immobilization Plant (WTP) technical issues as described in the Amended Consent Decree (i.e., preventing potential hydrogen buildup, preventing criticality, ensuring control of the pulse-jet mixers [PJM], protecting against possible erosion and corrosion, and ensuring ventilation balancing), while performing hazards analyses, and completing safety evaluations for process systems in accordance with the revised PT Facility 3-Year Interim Work Plan.

The WTP Project has made sustained progress on resolution of the five outstanding technical issues. The DOE Office of River Protection (ORP) expects to attain resolution and closure of the two nuclear safety technical issues, "Preventing Potential Hydrogen Build-Up" and "Preventing Criticality," by the end of 2016. Work will continue past 2016 on resolving the remaining three issues. ORP has worked with Bechtel National, Inc. (BNI) to develop closure packages for each technical issue, defining work scope, required deliverables, and technical issue closure criteria.

Significant Accomplishments during the Prior Three Months:

- Standard high-solids vessel (SHSV) prototype was delivered and installed for full-scale testing at Atkins Engineering Laboratory.
- BNI issued the plutonium particulate criticality safety evaluation engineering study.
- BNI provided hydrogen in piping and ancillary vessels basis of design change package to ORP for approval. ORP has provided comments back to BNI for resolution.
- BNI issued the Erosion/Corrosion Sliding Bed Report to ORP for approval. ORP continues to review the report at this time.

- ORP accepted the WTP Criticality Safety Evaluation Report, pending conditions of approval, including but not limited to:
 - Developing an appropriate control set to implement the safe subcritical limits for the liquid portion of the waste stream, or establish a clear and defensible basis for why such a control set is not necessary.
 - Conducting a complete review and evaluation of the criticality safety aspects for process conditions at the Analytical Laboratory (LAB) and providing results via formal correspondence.
 - Developing a plan for the evaluation of the need for a criticality alarm system as the design for the WTP becomes more mature.

Significant Planned Activities in the Next Three Months:

- ORP to complete technical issue resolution of hydrogen gas events in vessels; criticality in PJM vessels; and hydrogen in piping and ancillary vessels
- ORP completion of test reports for Phase 1 and Phase 2 of PJM controls system testing
- ORP approval of the SHSV design qualification test plan
- ORP approval of the SHSV PJM control test plan
- ORP completion of the design review of the SHSV
- BNI/ORP to implement internal forecast trends for remaining technical issue resolution
- ORP approval of the Erosion/Corrosion Sliding Bed Report
- BNI to issue PJM controls Phase 3 test software requirements for review
- BNI to finalize erosion/corrosion simulant basis, Newtonian/Non-Newtonian document, and simulant for one-quarter jet impingement and pipe loop testing.

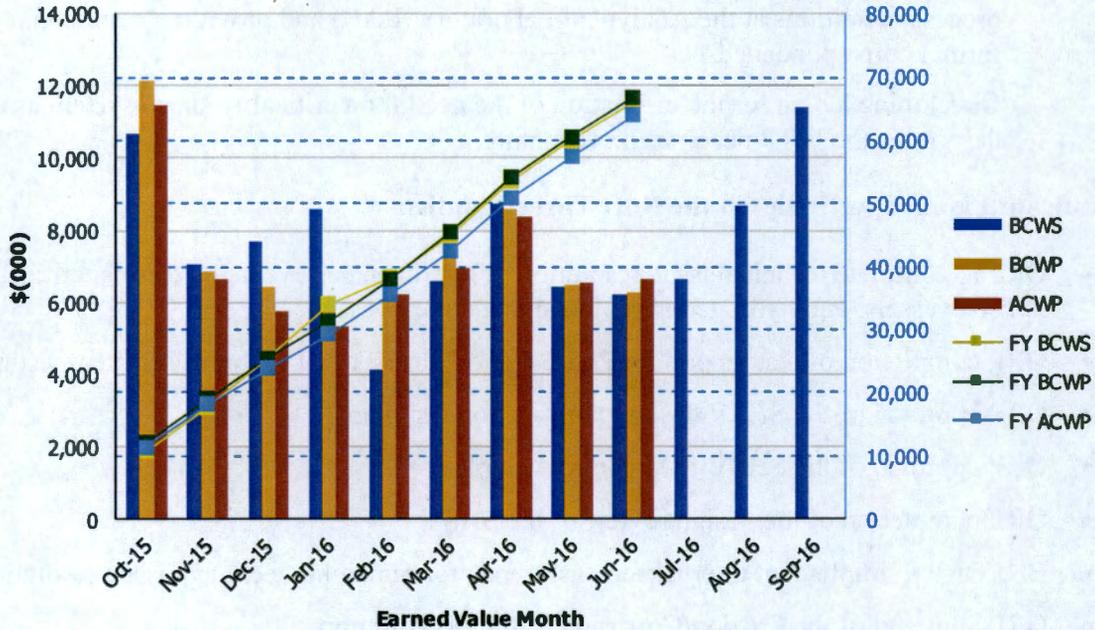
EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2016 Earned Value Data

Data as of: June 2016

**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 2015	\$10,667	\$12,155	\$11,441	1.14	1.06	\$10,667	\$12,155	\$11,441	1.14	1.06
Nov 2015	\$7,074	\$6,836	\$6,648	0.97	1.03	\$17,741	\$18,991	\$18,089	1.07	1.05
Dec 2015	\$7,678	\$6,441	\$5,777	0.84	1.11	\$25,419	\$25,432	\$23,867	1.00	1.07
Jan 2016	\$8,595	\$5,853	\$5,332	0.68	1.10	\$34,014	\$31,285	\$29,199	0.92	1.07
Feb 2016	\$4,105	\$6,545	\$6,220	1.59	1.05	\$38,120	\$37,830	\$35,419	0.99	1.07
Mar 2016	\$6,588	\$7,604	\$6,979	1.15	1.09	\$44,708	\$45,434	\$42,398	1.02	1.07
Apr 2016	\$8,717	\$8,586	\$8,400	0.99	1.02	\$53,425	\$54,020	\$50,798	1.01	1.06
May 2016	\$6,434	\$6,485	\$6,523	1.01	0.99	\$59,859	\$60,506	\$57,321	1.01	1.06
Jun 2016	\$6,249	\$6,258	\$6,630	1.00	0.94	\$66,108	\$66,764	\$63,951	1.01	1.04
Jul 2016	\$6,642									
Aug 2016	\$8,671									
Sep 2016	\$11,427									

PTD	\$1,798,508	\$1,798,596	\$1,776,511	1.00	1.01
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- ACWP = actual cost of work performed.
- BCWP = budgeted cost of work performed.
- BCWS = budgeted cost of work scheduled.
- CPI = cost performance index.
- CTD = contract to date.
- EVMS = earned value management system.
- FY = fiscal year.
- SPI = schedule performance index.

High-Level Waste Facility

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 High-Level Waste (HLW) Facility will receive the separated HLW concentrate from the Pretreatment (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. Physical percent complete for the HLW and PT facilities were frozen as of September 2012, pending development of a revised baseline to address technical and design issues.

Currently, HLW Facility activities are being performed in accordance with the fiscal year (FY) 2015/FY 2016, 2-Year Interim Work Plan. Efforts are focused on completing activities required to obtain full-production authorization by the U.S. Department of Energy (DOE), including developing longer-term work plans. Limited construction is continuing with the concrete placements, installation of support steel, and crane rails in the melter caves.

Engineering is focused on activities to support implementation of technical core team recommendations, performance of engineering studies, and analysis to disposition design and operability review comments. One of these engineering studies, the decontamination handling system engineering study, has been issued. Phase II of the HLW Facility melter offgas treatment process/process vessel vent engineering study, which is evaluating options for system changes to improve the design and operability is in progress. Design of the remaining portions of the radioactive liquid disposal (RLD) system (Phase II) is in progress following incorporation of the recently approved RLD Preliminary Documented Safety Analysis (PDSA) Change Package.

Process hazard analysis has been completed and preparation of the facility PDSA update to align design and the safety basis has begun, with the expected submission to the DOE Office of River Protection (ORP) in November 2016.

Systems engineering continues to develop system design descriptions, and incorporate system design description requirements into a requirements management system to ensure all requirements are incorporated into the facility design and subsequently verified prior to completion of HLW Facility commissioning.

Multiple high-efficiency particulate air (HEPA) filter media designs are planned to be tested to ensure the qualified filters support the needs for the HLW Facility, along with the Low-Activity Waste (LAW) Facility, Analytical Laboratory (LAB), and Balance of Facilities (BOF) (collectively known as LBL, including LBL facility services). Testing of the full-scale filter designs at Mississippi State University is ongoing. One filter design, known as “Design 4” has been through three rounds of successful full-scale design testing. The final round of testing on the “Design 4” filter was completed, again showing positive and successful test results. Following issuance of a filter selection report, NQA-1 qualification testing of the “Design 4” filter will proceed. Development of alternate designs is ongoing. Fabrication of the additional filters and testing continues. Qualification testing of Flanders filters has begun.

Significant Accomplishments during the Prior Three Months:

- Completed successful full-scale tests of the fourth “Design 4” HEPA filter.
- Began NQA-1 HEPA filter qualification testing of Flanders filters.
- Issue decontamination handling system engineering study.
- Completed HLW Facility melter handling system and HLW Facility offgas process system Phase I engineering studies to disposition some of the design and operability issues and recommendations.
- Issued HLW Facility hazards analysis to support PDSA update.
- Release material procurement and fabrication of RLD-8. RLD-8 is located in the Wet Process Cell and must be installed prior to concrete slab placement to support roof installation.
- Completed roof flashing at interface between the annex and the main facility, thereby rain-proofing the annex.

Significant Planned Activities in the Next Three Months:

- Begin NQA-1 HEPA filter qualification testing of the “Design 4” filters
- Continue full-scale HEPA filter testing to select and qualify additional filter(s) that will support the Waste Treatment and Immobilization Plant (WTP) ventilation and offgas needs
- Release material procurement and fabrication for vessel RLD-7
- Issue the radioactive waste handling system and melter cave support handling system engineering studies
- Issue an engineering study detailing the potential addition of a melter assembly building/airlock and an additional import/export dock for waste handling

- Submit draft PDSA revision to the ORP
- Continue civil build-out of the HLW Facility focusing on weathering in the building.

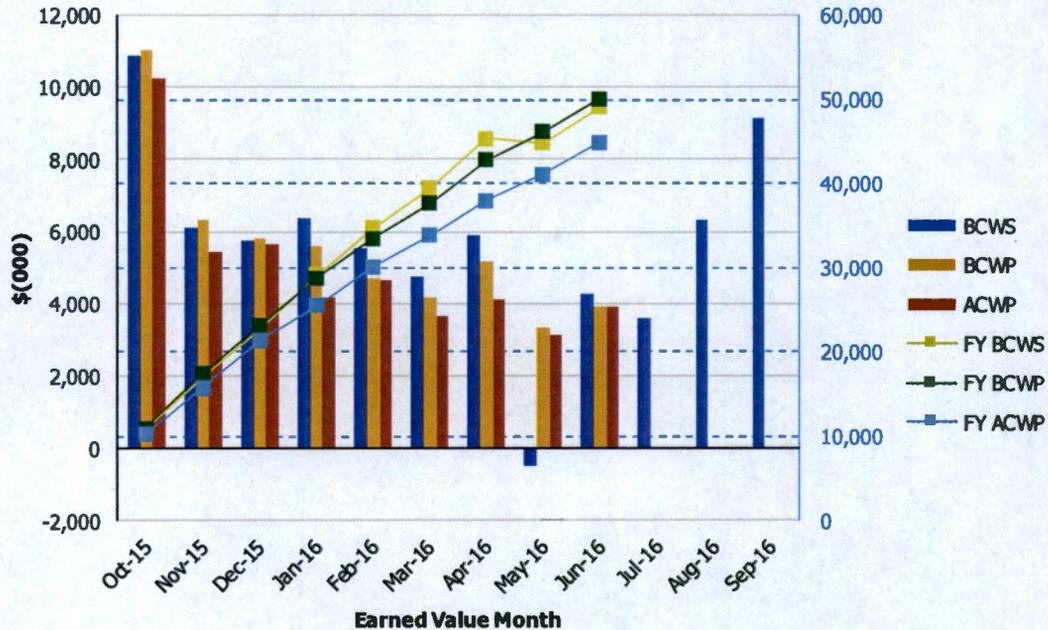
EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2016 Earned Value Data

Data as of: June 2016

**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 2015	\$10,905	\$11,028	\$10,257	1.01	1.08	\$10,905	\$11,028	\$10,257	1.01	1.08
Nov 2015	\$6,103	\$6,326	\$5,452	1.04	1.16	\$17,008	\$17,355	\$15,708	1.02	1.10
Dec 2015	\$5,737	\$5,795	\$5,634	1.01	1.03	\$22,745	\$23,150	\$21,343	1.02	1.08
Jan 2016	\$6,368	\$5,591	\$4,174	0.88	1.34	\$29,113	\$28,741	\$25,517	0.99	1.13
Feb 2016	\$5,551	\$4,711	\$4,631	0.85	1.02	\$34,664	\$33,453	\$30,148	0.97	1.11
Mar 2016	\$4,740	\$4,169	\$3,673	0.88	1.14	\$39,405	\$37,622	\$33,821	0.95	1.11
Apr 2016	\$5,921	\$5,168	\$4,141	0.87	1.25	\$45,325	\$42,789	\$37,962	0.94	1.13
May 2016	(\$497)	\$3,353	\$3,116	-6.74	1.08	\$44,828	\$46,143	\$41,078	1.03	1.12
Jun 2016	\$4,259	\$3,918	\$3,904	0.92	1.00	\$49,087	\$50,060	\$44,982	1.02	1.11
Jul 2016	\$3,616									
Aug 2016	\$6,321									
Sep 2016	\$9,148									

PTD	\$1,250,375	\$1,250,326	\$1,231,112	1.00	1.02
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|------|---|----------------------------------|------|---|---------------------------------|
| ACWP | = | actual cost of work performed. | CTD | = | contract to date. |
| BCWP | = | budgeted cost of work performed. | EVMS | = | earned value management system. |
| BCWS | = | budgeted cost of work scheduled. | FY | = | fiscal year. |
| CPI | = | cost performance index. | SPI | = | schedule performance index. |

Low-Activity Waste Facility

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 Low-Activity Waste (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, and heated to 2,100 degrees Fahrenheit 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 June 2016, the LAW Facility was 55 percent complete overall, with engineering design 76 percent complete, procurement 72 percent complete, construction 80 percent complete, and startup and commissioning 6 percent complete.

Significant Accomplishments during the Prior Three Months:

- Thermal catalytic oxidizer assembly was welded in place in its final location on greater than the 48 foot elevation
- First seven of nine refractory placements were made on gas barrier lid #2
- Installed 210 linear feet of process piping
- Installed 710 linear feet of conduit and pulled 30,100 linear feet of cable
- Installed 40 process area penetration seals
- Completed melter #1 gas barrier lid welding
- Completed the fire protection sprinkler piping hydrostatic test in the LAW Facility 21-foot elevation.

Significant Planned Activities in the Next Three Months:

- Complete second melter lid castable refractor placement
- Perform additional welds required on the melter base and melter shield lids to support seismic analysis
- Address public comments and receive approval of melter dangerous waste permits. Bechtel National, Inc. (BNI); U.S. Department of Energy (DOE), Office of River Protection (ORP); and the Washington State Department of Ecology will work to resolve all comments received

- Complete radiographic testing on the caustic scrubber and deliver the vessel
- Continue the rebaselining review process
- Start procurement evaluation process for the spare melter
- Develop hazard identification checklist, what-if tables and process hazard analysis events for accident scenarios to support preliminary documented safety analysis (PDSA) update development.

EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2016 Earned Value Data

Data as of: June 2016

**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 2015	\$19,131	\$16,406	\$19,702	0.86	0.83	\$19,131	\$16,406	\$19,702	0.86	0.83
Nov 2015	\$11,764	\$11,637	\$10,735	0.99	1.08	\$30,896	\$28,043	\$30,436	0.91	0.92
Dec 2015	\$8,520	\$9,132	\$11,880	1.07	0.77	\$39,416	\$37,175	\$42,316	0.94	0.88
Jan 2016	\$9,694	\$14,071	\$11,790	1.45	1.19	\$49,110	\$51,245	\$54,105	1.04	0.95
Feb 2016	\$12,760	\$12,055	\$13,698	0.94	0.88	\$61,870	\$63,300	\$67,804	1.02	0.93
Mar 2016	\$11,541	\$13,513	\$14,986	1.17	0.90	\$73,411	\$76,814	\$82,790	1.05	0.93
Apr 2016	\$20,619	\$19,828	\$19,641	0.96	1.01	\$94,030	\$96,641	\$102,431	1.03	0.94
May 2016	\$13,012	\$13,289	\$13,364	1.02	0.99	\$107,042	\$109,930	\$115,795	1.03	0.95
Jun 2016	\$12,326	\$14,005	\$13,959	1.14	1.00	\$119,369	\$123,936	\$129,754	1.04	0.96
Jul 2016	\$16,201									
Aug 2016	\$13,583									
Sep 2016	\$33,858									

PTD	\$1,337,568	\$1,332,191	\$1,331,243	1.00	1.00
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- BCWP = budgeted cost of work performed.
- BCWS = budgeted cost of work scheduled.
- CPI = cost performance index.
- CTD = contract to date.
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- FY = fiscal year.
- SPI = schedule performance index.

Balance of Facilities

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

The Balance of Facilities (BOF) will provide services and utilities to support operation of the main production facilities: Pretreatment (PT), High-Level Waste (HLW), Low-Activity Waste (LAW), and Analytical Laboratory (LAB). As of June 2016, BOF was 58 percent complete overall, with engineering design 79 percent complete, procurement 77 percent complete, construction 85 percent complete, and startup and commissioning 18 percent complete.

Engineering activities continue in support of the direct-feed low-activity-waste (DFLAW) initiative. Current efforts are focused on progressing the design of the Effluent Management Facility (EMF), providing documents to support the EMF Secondary Containment Permit, and supporting procurement activities. Construction efforts are focused on rebar placement for the EMF basemat and completion of the remaining items required for energization of the Waste Treatment and Immobilization Plant (WTP) switchgear building from the permanent power supply.

Significant Accomplishments during the Prior Three Months:

- Completed drilling activities and installation of vertical anodes for cathodic protection system
- Completed rectifier installation as part of the WTP cathodic protection system upgrade effort
- Initiated bid evaluations and the selection process for the EMF evaporator subcontract
- Continued installing communications in the switchgear buildings and nonradioactive liquid waste disposal
- Completed Underwriter's Laboratory testing of the battery monitoring systems in the switchgear buildings.

Significant Planned Activities in the Next Three Months:

- Perform 60 percent design review of EMF, including representation from Bechtel National, Inc. (BNI); the U.S. Department of Energy (DOE), Office of River Protection (ORP); and Washington State Department of Ecology.
- Begin placement of the construction aids (soldier piles) that support excavation of EMF low point drain.
- Energize WTP switchgear from the permanent power supply and complete energized testing in support of DFLAW. Key steps going forward are completion of the direct-current electrical system testing, building de-energization to support an authority having jurisdiction inspection, and the final pre-energization testing of the medium-voltage electrical system.

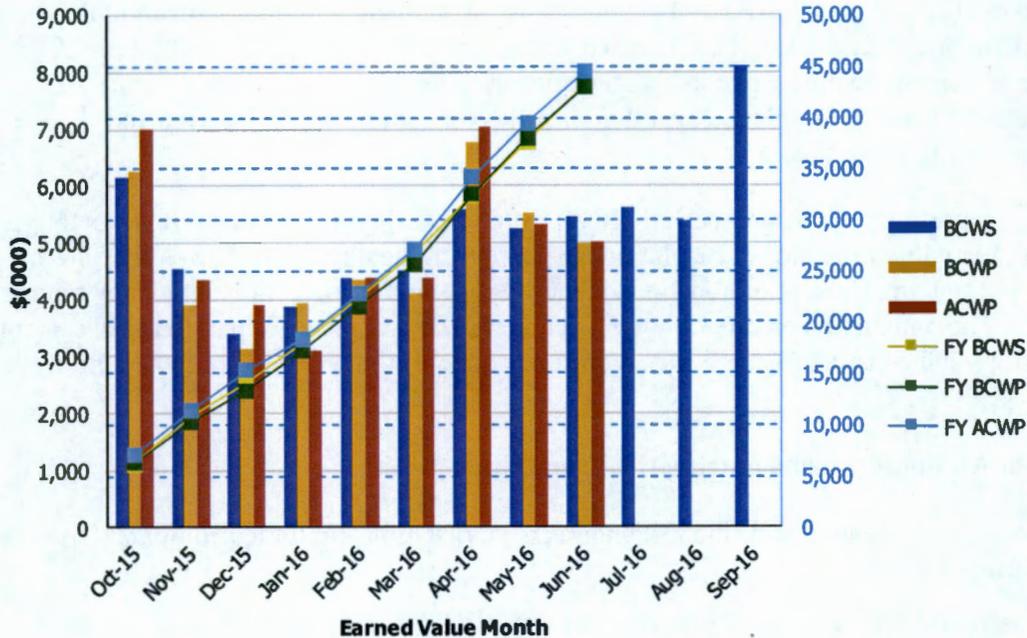
EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2016 Earned Value Data

Data as of: June 2016

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

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2015	\$6,160	\$6,249	\$7,006	1.01	0.89	\$6,160	\$6,249	\$7,006	1.01	0.89
Nov 2015	\$4,555	\$3,913	\$4,344	0.86	0.90	\$10,715	\$10,162	\$11,350	0.95	0.90
Dec 2015	\$3,400	\$3,134	\$3,917	0.92	0.80	\$14,115	\$13,296	\$15,267	0.94	0.87
Jan 2016	\$3,874	\$3,917	\$3,108	1.01	1.26	\$17,989	\$17,214	\$18,375	0.96	0.94
Feb 2016	\$4,367	\$4,344	\$4,357	0.99	1.00	\$22,356	\$21,557	\$22,732	0.96	0.95
Mar 2016	\$4,492	\$4,111	\$4,381	0.92	0.94	\$26,848	\$25,668	\$27,113	0.96	0.95
Apr 2016	\$5,581	\$6,780	\$7,042	1.21	0.96	\$32,429	\$32,448	\$34,155	1.00	0.95
May 2016	\$5,233	\$5,511	\$5,307	1.05	1.04	\$37,662	\$37,959	\$39,461	1.01	0.96
Jun 2016	\$5,435	\$4,995	\$5,016	0.92	1.00	\$43,097	\$42,954	\$44,477	1.00	0.97
Jul 2016	\$5,621									
Aug 2016	\$5,374									
Sep 2016	\$8,097									

PTD	\$472,591	\$468,155	\$468,100	0.99	1.00
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- ACWP = actual cost of work performed.
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Analytical Laboratory

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

LAB = analytical laboratory.

The Analytical Laboratory (LAB) will support Waste Treatment and Immobilization Plant (WTP) operations by analyzing feed, vitrified waste, and effluent streams. As of June 2016, the LAB was 60 percent complete overall, with engineering design 79 percent complete, procurement 88 percent complete, construction 94 percent complete, and startup and commissioning 13 percent complete.

During this reporting period engineering efforts were focused on LAB system reviews to evaluate potential modifications or isolations in support of the direct-feed low-activity waste (DFLAW) initiative. Closure of nonconformance reports and construction deficiency reports continued. The remaining construction work scope will be completed in parallel with system modifications and construction activities required to support the direct feed of low-activity waste.

Significant Accomplishments during the Prior Three Months:

- Completed installation of the test engineers workstation and turned equipment over to startup
- Continued development of procedures for the WTP analytical methods development process
- Began final wall and floor coatings
- Completed turnover of the process control system in support of the test engineers workstation to startup.

Significant Planned Activities in the Next Three Months:

- Complete LAB system walkdowns and design in support of DFLAW modifications
- Complete C5V system operations engineering study in a DFLAW configuration
- Complete LAB startup schedule review to help maximize resources in fiscal year (FY) 2017 and FY 2018
- Complete turnover of the fire protection water system in support of the test engineers workstation to startup
- Select temporary laboratory space, which allows for earlier laboratory methods development and training to ensure laboratory staff are ready at the start of commissioning.

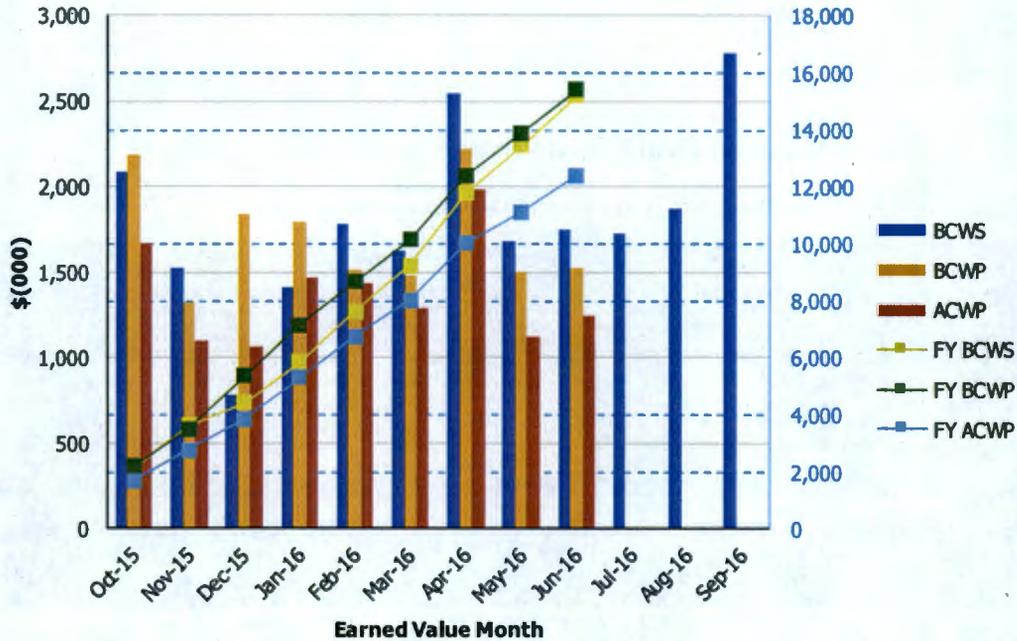
EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2016 Earned Value Data

Data as of: June 2016

**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 2015	\$2,083	\$2,188	\$1,674	1.05	1.31	\$2,083	\$2,188	\$1,674	1.05	1.31
Nov 2015	\$1,528	\$1,324	\$1,093	0.87	1.21	\$3,611	\$3,513	\$2,768	0.97	1.27
Dec 2015	\$789	\$1,844	\$1,060	2.34	1.74	\$4,399	\$5,356	\$3,827	1.22	1.40
Jan 2016	\$1,415	\$1,797	\$1,472	1.27	1.22	\$5,815	\$7,153	\$5,299	1.23	1.35
Feb 2016	\$1,786	\$1,511	\$1,438	0.85	1.05	\$7,601	\$8,665	\$6,738	1.14	1.29
Mar 2016	\$1,628	\$1,478	\$1,291	0.91	1.15	\$9,229	\$10,143	\$8,028	1.10	1.26
Apr 2016	\$2,541	\$2,223	\$1,990	0.87	1.12	\$11,770	\$12,366	\$10,019	1.05	1.23
May 2016	\$1,682	\$1,507	\$1,117	0.90	1.35	\$13,452	\$13,874	\$11,136	1.03	1.25
Jun 2016	\$1,745	\$1,520	\$1,249	0.87	1.22	\$15,197	\$15,394	\$12,385	1.01	1.24
Jul 2016	\$1,724									
Aug 2016	\$1,876									
Sep 2016	\$2,783									
PTD	\$327,762	\$326,313	\$320,734	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.
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Waste Treatment Plant Project Percent Complete Status (Table)

Waste Treatment Plant Project - (LBL/Project Services) Percent Complete Status																		
Through June 2016																		
(Dollars - Millions)	Overall Facility Percent Complete Unallocated Dollars			Design/Engineering Unallocated Dollars			Procurement Unallocated Dollars			Construction Unallocated Dollars			Startup & Plant Operations Unallocated Dollars			Project Management & Shared Services Unallocated Dollars		
	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete
Facilities																		
Low-Activity Waste	2,276.0	1,257.2	55%	537.8	410.2	76%	371.8	266.9	72%	832.2	532.4	80%	699.3	43.6	6%	4.0	4.0	100%
Balance of Facilities	754.2	440.4	58%	149.6	117.9	79%	71.0	54.7	77%	255.6	217.4	85%	277.6	60.0	18%	0.5	0.5	100%
Analytical Lab	528.1	318.4	60%	106.0	83.6	79%	65.4	57.4	88%	161.5	152.4	94%	194.7	24.5	13%	0.5	0.5	100%
Direct Feed LAW	372.7	50.5	14%	80.5	36.7	46%	57.0	1.6	3%	226.3	9.3	4%	0.0	0.0	0%	8.9	2.9	33%
LBL Facility Services	607.4	119.7	20%	0.0	0.0	0%	56.4	17.4	31%	131.2	25.3	19%	251.8	36.7	15%	158.0	38.4	24%
Total LBL	4,638.4	2,186.2	48%	873.9	648.3	74%	621.4	398.0	64%	1,437.8	937.0	65%	1,433.6	166.7	11%	171.9	46.3	27%
Project Services	1,018.4	326.6	32%	128.2	46.8	37%	74.3	30.5	41%	118.1	65.5	55%	1.7	1.7	100%	696.1	182.0	26%
Total Project Services	1,018.4	326.6	32%	128.2	46.8	37%	74.3	30.5	41%	118.1	65.5	55%	1.7	1.7	100%	696.1	182.0	26%
Total LBL, DFLAW & Project Services	5,656.8	2,512.7	46%	1,002.1	695.1	69%	695.7	428.5	62%	1,555.9	1,002.5	64%	1,435.2	168.4	11%	867.9	228.3	26%
PTHLW/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	645.6	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 HLWPT/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%	788.6	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	14,279.5	8,477.9	59%	3,175.2	2,644.0	83%	2,261.2	1,553.3	69%	4,443.5	2,767.3	62%	2,193.7	301.6	14%	2,206.0	1,211.8	55%

Sources: Preliminary WTP Contract Performance Report - Format 1, Data for June 2016

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 PTHLW/SS Interim Work Plan was incorporated into the project OTB baseline resulting in decreases to the PTHLW/SS facility budgets, this was due to a work scope shift from the Distributed budget to US. 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 US. US value for the project for PTHLW/SS is \$2,914M. The percent complete values for the Total WTP are the current total LBL BCWP added to the frozen HLWPT/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 HLWPT and SS and the budgets remaining in US. 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-DOF-LAB-DFLAW and LBL Facility Services. The Project Services Allocation account (PSA), as shown on the CPR Format 1, is not added to LBL for percent complete purposes.

Final

Office of River Protection

Tri-Party Agreement

Monthly Report

August 2016



**Office of River Protection (ORP)
Tri-Party Agreement (TPA) Milestone Review
Project Earned Value Management System reflects June 2016 information**

Page	Topic	Leads
3	Administrative Items/Milestone Status	Bryan Trimberger/Dan McDonald/Jeff Lyon
5	System Plan	Kaylin Burnett/Jeff Lyon/Dan McDonald
6	Acquisition of New Facilities	Janet Diediker/Jeff Lyon/Dan McDonald
6	Supplemental Treatment and Part B Permit Applications	Steve Pfaff/Jeff Lyon/Dan McDonald
8	242-A Evaporator Status	Paul Hernandez/Jeff Lyon
9	Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility	Richard Valle/Stephanie Schleif
10	Tank System Update	Dusty Stewart/Jeff Lyon
11	Single-Shell Tank Integrity Assurance	Dusty Stewart/Jim Alzheimer
11	In Tank Characterization and Summary	Dusty Stewart/Michael Barnes
13	Tank Operations Contract Overview	ORP TPA Program Managers/Jeff Lyon
23	Single-Shell Tank Closure Program	Ryan Beach/Jeff Lyon
25	Single-Shell Tank Retrieval Program	Chris Kemp/Jeff Lyon
27	Tank Waste Retrieval Work Plan Status	Chris Kemp/Jeff Lyon
CD	Waste Treatment and Immobilization Plant (WTP) Overall TPA Summary and Milestone Status; see the U.S. Department of Energy, Office of River Protection Consent Decree 08-5085-FVS Monthly Report for WTP Facility-specific information	Joni Grindstaff/Dan McDonald

Acronyms and Abbreviations

CV	cost variance
DOE	U.S. Department of Energy
DST	double-shell tank
Ecology	Washington State Department of Ecology
FY	fiscal year
HAMTC	Hanford Atomic Metals Trades Council
IQRPE	independent qualified registered professional engineer
MARS-V	Mobile Arm Retrieval System-Vacuum
ORP	U.S. Department of Energy, Office of River Protection
RFI	RCRA Facility Investigation.
SST	single-shell tank
SV	schedule variance
System Plan	<i>River Protection Project System Plan</i>
TPA	Tri Party Agreement
WESP	Wet Electrostatic Precipitator
WMA-C	C Farm waste management area
WTP	Waste Treatment and Immobilization Plant

Administrative Items/Milestone Status
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Milestone	Title	Due Date	Completion Date	Status
Fiscal Year 2015				
M-062-45-T01	Comp. Neg's 6-Mo After Last Issuance of System Plan	04/30/2015		In Dispute
M-062-45-ZZ	Negotiate a One Time Supplemental Treatment Selection	04/30/2015		In Dispute
M-062-45-ZZ-A	Convert M-062-31-T01 Thru M-062-34-T01 to Interim Milestones	04/30/2015		In Dispute
M-045-82	Submit Comp. Permit Modification Request for Tiers 1,2,3	09/30/2015		In Dispute
M-045-91E1	Provide SST Farms Dome Deflection Surveys Every Two Years.	09/30/2015	9/21/15	Complete
Fiscal Year 2016				
M-062-01AF	Submit Semi-Annual Project Compliance Report	01/31/2016	01/29/2016	Complete
M-047-07	CD-1 for Secondary Liquid Waste Treatment and CR for CD-2 to Ecology	03/31/2016		In Dispute
M-090-13	CD-1 for Interim Hanford Storage Project and CR for CD-2 to Ecology	03/31/2016		In Dispute
M-062-31-T01	Comp. Final Design & Submit RCRA Part B Permit Mod Request for Enhanced WTP & Supplemental Treatment	04/30/2016		In Dispute
M-062-01AG	Submit Semi-Annual Project Compliance Report	07/31/2016	07/29/2016	Complete
M-045-56L	Ecology and DOE Agree, at a Minimum, to Meet Yearly (by July)	07/31/2016	07/20/2016	Complete
Fiscal Year 2017				
M-062-40E	Select a Minimum of Three Scenario's	10/31/2016		On Schedule
M-045-61A	Submit to Ecology a primary doc. Phase 2 CMS and Rev. O update to the RFI Report for WMA-C	12/31/2016		On Schedule
M-045-62	Phase 2 Corrective Measures Implementation Work Plan For WMA-C	Six months after CMS approval (M-045-61A)		On Schedule
M-045-84	Comp Neg's of HFFACO Interim Milestones for Closure of 2 nd SST WMA	01/31/2017		At Risk
M-062-01AH	Submit Semi-Annual Project Compliance Report	01/31/2017		On Schedule

Milestone	Title	Due Date	Completion Date	Status
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-045-92	DOE and Ecology will agree on locations for Barriers 3 and 4	09/30/2017		On Schedule

CD-1/-2 = critical decision-1/-2.

CMS = current 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.*

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

Significant Past Accomplishments:

- The *River Protection Project System Plan* (System Plan), Rev. 8 scenario selection discussions to support M-062-40E started between the U.S. Department of Energy (DOE), Office of River Protection (ORP) and the Washington State Department of Ecology (Ecology) on April 25, 2016.
- Both ORP and Ecology presented scenarios for consideration with an initial prioritization of all scenarios on June 27, 2016.

Significant Planned Actions in the Next Six Months:

- Scenario selection discussions will be conducted to support M-062-40E, Due: October 31, 2016
- Submittal of a change request form to align the logic of the evaluation of milestone dates within M-062-45 to System Plan, Rev. 8 to assist in dispute resolution of M-062-45-T01.

Issues:

- None.

Acquisition of New Facilities

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 dispute. Change control form M-90-15-01 was submitted by ORP to Ecology for approval on December 30, 2015. This dispute has been extended to August 1, 2016. To be informed by System Plan, Rev. 8 and to be negotiated within 6 months of System Plan, Rev. 8 issuance in accordance with milestone M-062-45.

M-090-00, Acquire/Modify Facilities for Storage of Immobilized High-Level Waste (IHLW), Due: December 31, 2019, Status: At risk. To be informed by System Plan, Rev. 8 and to be negotiated within 6 months of System Plan, Rev. 8 issuance in accordance with milestone M-062-45.

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 dispute. Change control form M-47-15-01 was submitted by ORP to Ecology for approval on December 30, 2015. This dispute has been extended to August 1, 2016. To be informed by System Plan, Rev. 8 and to be negotiated within 6 months of System Plan, Rev. 8 issuance in accordance with milestone M-062-45.

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: At risk. To be informed by System Plan, Rev. 8 and to be negotiated within 6 months of System Plan, Rev. 8 issuance in accordance with milestone M-062-45.

Significant Past Accomplishments: None.

Significant Planned Actions in the Next Six Months: None.

Issues: None.

Supplemental Treatment and Part B Permit Applications

M-062-45-ZZ (designation for M-062-45 item 3), Negotiate a one-time supplemental treatment selection, Due: April 30, 2015, Status: In dispute.

M-062-45-ZZ-A, Convert M-062-31-T01 through M-062-34-T01 to Interim Milestones, Due: April 30, 2015, Status: In dispute.

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 dispute.

M-062-32-T01, Start construction of supplemental vitrification treatment facility and/or WTP enhancements, Due: April 30, 2018, Status: In dispute.

M-062-33-T01, Complete construction of supplemental vitrification treatment facility and/or WTP enhancements, Due: April 30, 2021, Status: In dispute.

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 dispute.

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 dispute.

M-062-21, Annually submit data that demonstrates operation of the WTP, Due: February 28, 2023, Status: On schedule.

M-062-00, Complete Pretreatment Processing and Vitrification of High-Level Waste and LAW Tank Wastes, Due: December 31, 2047, Status: On schedule.

Significant Past Accomplishments: None

Significant Planned Actions in the Next Six Months: None.

Issues:

On January 30, 2015, ORP provided Ecology Change Control Form M-62-14-02, which proposed adding language under Tri-Party Agreement (TPA) Milestone M-062-45 to defer negotiations required under M-062-45. Ecology did not respond with the 14-day review period that ended February 13, 2015, which is deemed disapproval in accordance with the TPA. In letter 15-TF-0014, "Initiation of Dispute Resolution Regarding Disapproval of Hanford Federal Facility Agreement and Consent Order Change Control Form M-62-14-02," dated February 20, 2015, ORP initiated a dispute resolution. Ecology provided a justification for their disapproval on March 12, 2015, via letter 15-NWP-036, "Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Change Package, Change Number M-62-14-02, dated 01/30/2015." Ecology and ORP signed an extension of the dispute resolution period at the TPA project manager level until August 1, 2016.

242-A Evaporator Status

(previously reported under Milestone M-48, which has been closed out)

The 242-A Evaporator campaign strategy for fiscal year (FY) 2015 through fourth quarter of FY 2016 is depicted in the following table:

Fiscal Year	Campaign No.	Feed Source	Slurry Tank	Comments
FY 2015	EC-01	AP-103 AP-104	AP-107	Completed June 21, 2015. WVR = 381 kgal
FY 2015	EC-02	AZ-102	AP-103	Completed July 21, 2015. WVR = 384 kgal
FY 2015	EC-03	AZ-102	AP-103	Completed September 25, 2015. WVR = 375 kgal
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 2016	EC-06	AY-101	AP-104	Evaporator campaign EC-06 has been postponed until after November 24, 2016, or until the Court rules on the requests for preliminary injunction filed by the State of Washington, and separately, Hanford Challenge and Local 598) in late July.

FY = fiscal year.
 kgal = thousand gallons.
 WVR = waste volume reduction.

Significant Planned Actions in the Next Six Months:

- Laser mapping to support reboiler procurement.
- Future campaign and outage scheduling
- Electrical preventative maintenance activities in 241-AW
- Begin integrity assessment on 242-A Evaporator components
- Replace P-B-2 pump and associated pressure relief valves.

Issues:

- Impacts from preliminary injunction

Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility

The Liquid Effluent Retention Facility liquid levels, inventory, and received waste is shown in the table below.

Note: 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 07/31/2016)	~5.36M gal	~4.50M gal	~6.92M gal
AZ-301 Tanker Shipments	-	-	-
MWBT-31 and 34 Leachate	-	-	~21,000 gal
Perched Water Tanker Shipments	-	-	-
ERDF Leachate Tanker Shipments	-	-	-
Other (325 Building Totes)	-	-	~2,640 gal
242-A Campaigns (EC-04 & 05)	-	-	-

ERDF = Environmental Restoration Disposal Facility.

Gal = gallon.

M gal = million gallons.

MWBT = mixed waste burial trench.

Significant Past Accomplishments:

- Total FY 2016 volume processed by 200 Area Effluent Treatment Facility (as of 07/31/2016): Approximately 2,700,000 gallons
- Initial 2 million gallon Liquid Effluent Retention Facility backlog reduction since Effluent Treatment Facility restart achieved July 7, 2016
- Hanford Dangerous Waste Permit 8C, Operation Unit Group -3, class 2 – Groundwater Monitoring Plan, Addendum D, submitted for informal review on July 28, 2016.

Significant Planned Actions in the Next Six Months:

- Continued waste processing of Basin 43 to achieve second 2 million gallon reduction (DOE key performance goal) by end of FY 2016
- Repair of the concentrated chemical storage tank berm is to be completed in fourth quarter of FY 2016.

Issues: None.

Tank System Update

Significant Planned Actions in FY 2016

Double-Shell Tank (DST) Integrity:

- Enhanced annulus video inspection:
All DST videos are completed and being evaluated by engineering with report preparation in progress
- Ultrasonic testing (UT) inspections (two risers for primary wall/welds, one riser for secondary floor):
 - 241-AN-105 (report complete awaiting clearance)
 - 241-AW-103 (scanning underway)
- Continuing bi-weekly inspections of AY-102 waste accumulation site
- Continuing bi-monthly comprehensive inspection of AY-102 annulus
- Issued RPP-7574, *Double-Shell Tank Integrity Program Plan*
- Issued RPP-RPT-39149, DST Integrity Inspection Report for 241-SY Tank Farm
- Received Ecology comments on DST independent qualified registered professional engineer (IQRPE) integrity assessment report (RPP-RPT-58441) per WAC 173-303-640(2), "Tank systems" and responses are being developed.

Single-Shell Tanks (SST) Integrity:

- In-tank video inspections:
 - 241-TX-103
 - 241-TX-111
 - 241-TX-113
 - 241-TX-116
 - 241-BY-105
 - 241-U-102
 - 241-U-105
 - 241-U-107 (no free riser, replaced with 241-S-105)
- Intrusion mitigation (M-045-56):
 - Complete 241-T-111; evaporation of 241-T-111 continues video was completed, and a report will be issued when evaporation is considered complete

Single-Shell Tank Integrity Assurance

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:

- Continue planning for the SST integrity assessment by an IQRPE (M-045-91I).

Issues: None.

In Tank Characterization and Summary

Accomplishments:

For the period from July 1 through July 31, 2016 the following reports were issued:

- Completed RPP-RPT-59491, *Derivation of Best-Basis Inventory for Tank 241-U-201 as of July 1, 2016*, Rev. 0.
- Completed RPP-RPT-59461, *Derivation of Best-Basis Inventory for Tank 241-T-102 as of July 1, 2016*, Rev. 0.
- Completed RPP-RPT-59473, *Derivation of Best-Basis Inventory for Tank 241-T-104 as of July 1, 2016*, Rev. 0.
- Completed RPP-RPT-59536, *Derivation of Best-Basis Inventory for Tank 241-TY-103 as of July 1, 2016*, Rev. 0.
- Completed RPP-RPT-59519, *Derivation of Best-Basis Inventory for Tank 241-T-105 as of July 1, 2016*, Rev. 0.
- Completed RPP-RPT-59554, *Derivation of Best-Basis Inventory for Tank 241-U-202 as of July 1, 2016*, Rev. 0.
- Completed RPP-CALC-60804, *242-A Evaporator Campaign EC-06 Process Control Plan Calculations*, Rev. 0.
- Completed RPP-PLAN-60912, *Process Control Plan for 242-A Evaporator Campaign EC-06 to Concentrate 241-AY-101 Waste Feed*, Rev. 0.
- Completed HNF-EP-0182, *Waste Tank Summary Report for Month Ending June 30, 2016*, Rev. 342.

- Completed RPP-RPT-59556, *Tank 241-AY-102 Monthly Monitoring Report June 2016*, Rev. 0.

Planned Action within the Next Six Months:

Tank sampling:

- Tank 241-AY-102 annulus grab sampling is planned for August 2016.
- Tank 241-AP-107 core sampling is planned to begin October 2016.
- Tank 241-AP-107 grab sampling is planned to begin September 2016.

Best-Basis Inventory updates:

Best-basis inventory updates for the following tanks were completed in July 2016:

- 241-T-102
- 241-T-104
- 241-T-105
- 241-TY-103
- 241-U-201
- 241-U-202

Best-basis inventory updates for the following tanks currently are planned to be completed in August 2016:

- 241-AN-101
- 241-AP-104
- 241-AW-102
- 241-AY-101
- 241-AY-102
- 241-B-201
- 241-BY-105
- 241-T-108
- 241-T-109
- 241-T-110
- 241-T-112
- 241-TY-104
- 241-TY-105
- 241-U-203

Data Quality Objectives:

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 is planned to be released in August 2016

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.

June-16										
	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
CM	43,107	48,460	48,778	5,353	(318)	1.12	0.99			
FYTD	413,307	409,472	407,667	(3,835)	1,805	0.99	1.00	584,296		
CTD	3,264,442	3,240,724	3,232,345	(23,718)	8,380	0.99	1.00	4,711,123	4,714,433	(3,310)

ACWP = actual cost of work performed.
 BAC = budget at completion.
 BCWP = budgeted cost of work performed.
 BCWS = budgeted cost of work scheduled.
 CM = current month.
 CPI = cost performance index.
 CTD = contract to date.

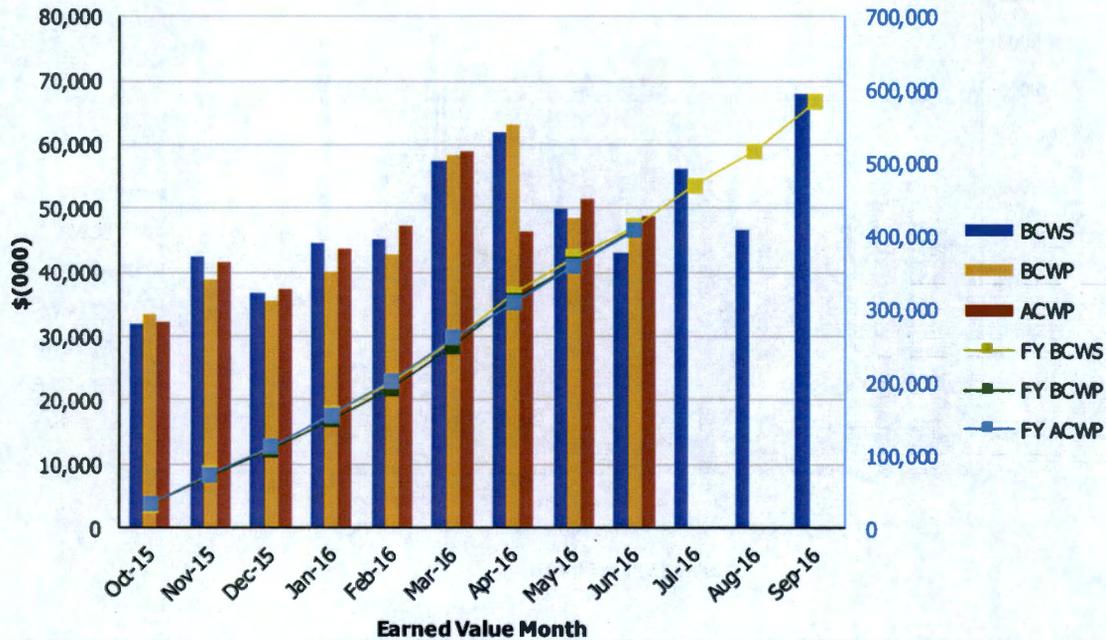
CV = cost variance.
 EAC = estimate at completion.
 FYTD = fiscal year to date.
 SPI = schedule performance index.
 SV = schedule variance.
 VAC = variance at completion.

Earned Value Data: Fiscal Year 2016

June-16

Tank Farms ORP-0014

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2015	\$31,981	\$33,377	\$32,188	1.04	1.04	\$31,981	\$33,377	\$32,188	1.04	1.04
Nov 2015	\$42,365	\$38,998	\$41,461	0.92	0.94	\$74,345	\$72,376	\$73,649	0.97	0.98
Dec 2015	\$36,744	\$35,614	\$37,416	0.97	0.95	\$111,089	\$107,990	\$111,065	0.97	0.97
Jan 2016	\$44,587	\$40,183	\$43,604	0.90	0.92	\$155,677	\$148,173	\$154,669	0.95	0.96
Feb 2016	\$45,043	\$42,790	\$47,389	0.95	0.90	\$200,720	\$190,963	\$202,058	0.95	0.95
Mar 2016	\$57,499	\$58,407	\$59,030	1.02	0.99	\$258,219	\$249,370	\$261,088	0.97	0.96
Apr 2016	\$62,027	\$63,159	\$46,446	1.02	1.36	\$320,246	\$312,529	\$307,534	0.98	1.02
May 2016	\$49,955	\$48,483	\$51,355	0.97	0.94	\$370,200	\$361,012	\$358,889	0.98	1.01
Jun 2016	\$43,107	\$48,460	\$48,778	1.12	0.99	\$413,307	\$409,472	\$407,667	0.99	1.00
Jul 2016	\$56,321					\$469,628				
Aug 2016	\$46,683					\$516,311				
Sep 2016	\$67,985					\$584,296				

CTD	\$3,264,442	\$3,240,724	\$3,232,345	0.99	1.00
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ACWP = actual cost of work performed.
 BCWP = budgeted cost of work performed.
 BCWS = budgeted cost of work scheduled.
 CPI = cost performance index.

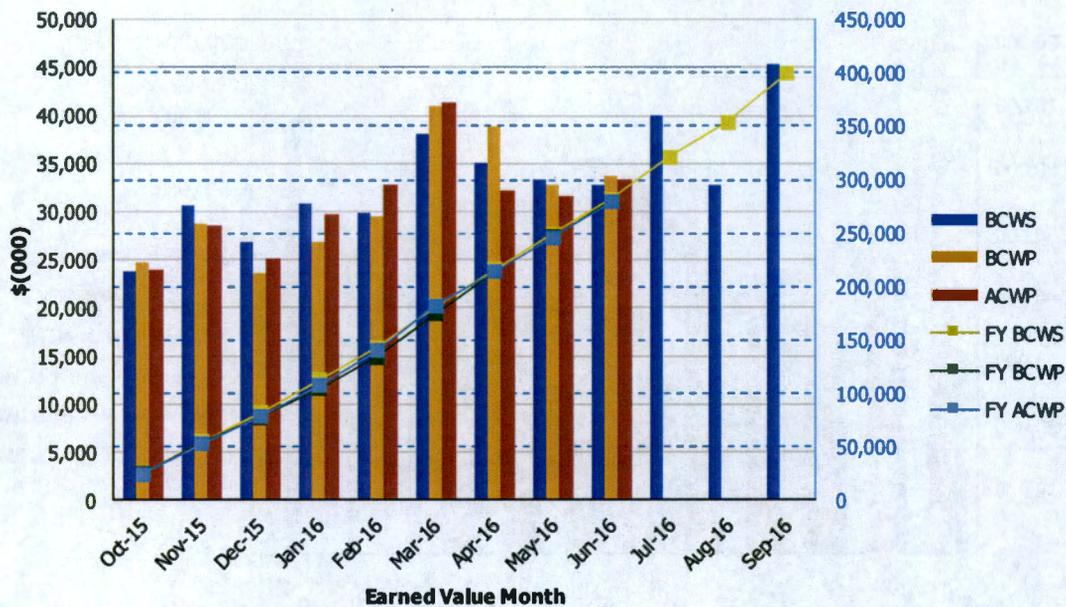
CTD = contract to date
 EVMS = Earned Value Management System.
 FY = fiscal year.
 SPI = schedule performance index

Earned Value Data: Fiscal Year 2016

June-16

**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 2015	\$23,768	\$24,839	\$24,025	1.05	1.03	\$23,768	\$24,839	\$24,025	1.05	1.03
Nov 2015	\$30,658	\$28,752	\$28,562	0.94	1.01	\$54,426	\$53,592	\$52,587	0.98	1.02
Dec 2015	\$26,911	\$23,637	\$25,173	0.88	0.94	\$81,336	\$77,229	\$77,760	0.95	0.99
Jan 2016	\$30,829	\$26,913	\$29,740	0.87	0.90	\$112,165	\$104,142	\$107,500	0.93	0.97
Feb 2016	\$29,963	\$29,524	\$32,689	0.99	0.90	\$142,128	\$133,666	\$140,189	0.94	0.95
Mar 2016	\$38,167	\$40,891	\$41,434	1.07	0.99	\$180,295	\$174,557	\$181,623	0.97	0.96
Apr 2016	\$34,996	\$38,877	\$32,157	1.11	1.21	\$215,291	\$213,434	\$213,780	0.99	1.00
May 2016	\$33,412	\$32,736	\$31,529	0.98	1.04	\$248,703	\$246,170	\$245,308	0.99	1.00
Jun 2016	\$32,672	\$33,750	\$33,375	1.03	1.01	\$281,375	\$279,919	\$278,683	0.99	1.00
Jul 2016	\$39,973					\$321,348				
Aug 2016	\$32,693					\$354,041				
Sep 2016	\$45,356					\$399,397				
CTD	\$2,173,259	\$2,162,132	\$2,152,512	0.99	1.00					

- 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

Base Operations and Tank Farm Projects (5.01)

The June variances below have no impacts on TPA milestones.

The current month **favorable** schedule variance (SV) of \$1,078K is due to:

- Schedule recovery for final design of spare transfer pumps, delay caused by internal pump shaft size change. This allows contractor to have spares in support of tank retrieval and operations.
- AY-102 ERSS Installation work has been accelerated due to favorable weather and experienced crews performing field activities. This action continues to support the completion of retrieval on AY-102 by March 4, 2017 along with the follow up activities of Phase III implementation of the AY-102 Settlement Agreement.

The current month **favorable** cost variance (CV) of \$375K is due to:

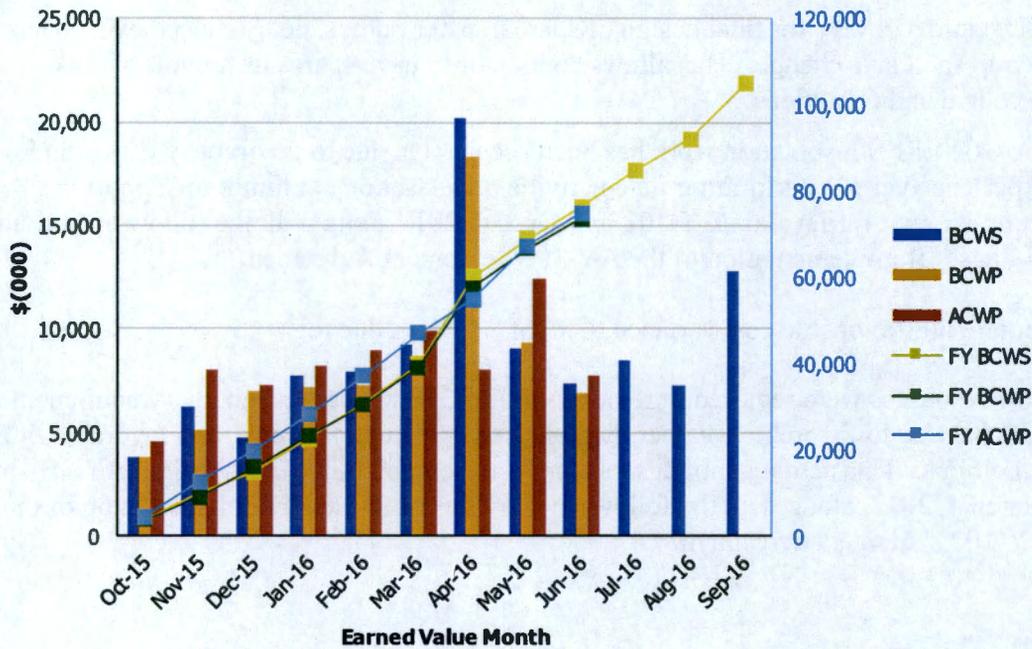
- Less resources were required to remove the AY-02B sluicer and ancillary equipment at AY-102 due to favorable weather, experienced construction crews, and favorable field conditions. This action continues to support the completion of retrieval on AY-102 by March 4, 2017, along with the follow-up activities of Phase III implementation of the AY-102 settlement agreement.

Earned Value Data: Fiscal Year 2016

June-16

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

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2015	\$3,770	\$3,814	\$4,560	1.01	0.84	\$3,770	\$3,814	\$4,560	1.01	0.84
Nov 2015	\$6,282	\$5,131	\$8,006	0.82	0.64	\$10,052	\$8,946	\$12,566	0.89	0.71
Dec 2015	\$4,769	\$6,970	\$7,255	1.46	0.96	\$14,821	\$15,915	\$19,821	1.07	0.80
Jan 2016	\$7,702	\$7,214	\$8,233	0.94	0.88	\$22,522	\$23,130	\$28,053	1.03	0.82
Feb 2016	\$7,948	\$7,288	\$8,959	0.92	0.81	\$30,470	\$30,417	\$37,012	1.00	0.82
Mar 2016	\$9,249	\$8,693	\$9,857	0.94	0.88	\$39,719	\$39,111	\$46,869	0.98	0.83
Apr 2016	\$20,237	\$18,288	\$8,046	0.90	2.27	\$59,956	\$57,399	\$54,916	0.96	1.05
May 2016	\$9,013	\$9,299	\$12,417	1.03	0.75	\$68,970	\$66,698	\$67,333	0.97	0.99
Jun 2016	\$7,387	\$6,885	\$7,713	0.93	0.89	\$76,357	\$73,584	\$75,045	0.96	0.98
Jul 2016	\$8,496					\$84,852				
Aug 2016	\$7,264					\$92,116				
Sep 2016	\$12,840					\$104,956				
CTD	\$668,834	\$658,811	\$685,018	0.99	0.96					

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

CTD = contract to date
 EVMS = Earned Value Management System.
 FY = fiscal year.
 SPI = schedule performance index

Retrieve and Close Single Shell Tanks (5.02)

The June variances have a minimal variance on Consent Decree and TPA milestones (M-045-15) at A-103 for tank retrieval.

The current month **unfavorable** SV of (\$502k) is due to:

- AX Retrieval equipment procurements have been re-planned based on funding challenges and prioritization; major equipment procurements have been re-scheduled to arrive based on installation activities/requirements. This negative variance does not impact the completion of projects B-1 and B-3 of the Consent Decree milestones.

The current month **unfavorable** CV of (\$827K) is due to:

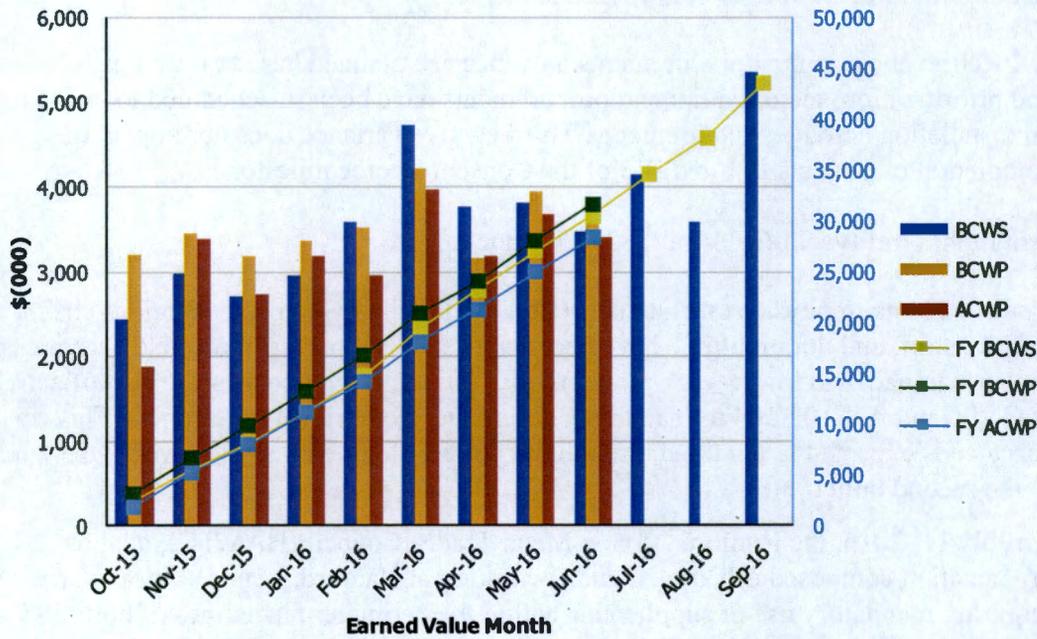
- Additional health physicist technicians (HPT)/industrial hygienist technicians (IHT), support staff, and duration/time have been required to support in-farm field activities due to vapor impact and lower work productivity. This activity increases the cost of activities at C-105 and AX-102/104 to maintain Consent Decree retrieval milestones. This cost variance is expected to continue through the project along with a “stop work” explained in the second bullet.
- On July 11, 2016, the Hanford Atomic Metal Trades Council (HAMTC), a labor organization composed of various unions working at Hanford, issued a “stop work” requiring mandatory use of supplied air within the perimeter fence lines of both SST and DST farms. This letter also included six other demands that HAMTC expected the Washington River Protection Solutions LLC to implement immediately. On July 21, 2016, the Washington State Attorney General and Citizens (Local Union 598 and Hanford Challenge) filed motions for a preliminary injunction in federal court seeking, among other things, all work inside the perimeter fences of any tank farm be performed while wearing *mandatory* supplied air.

Earned Value Data: Fiscal Year 2016

June-16

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 2015	\$2,434	\$3,210	\$1,876	1.32	1.71	\$2,434	\$3,210	\$1,876	1.32	1.71
Nov 2015	\$2,987	\$3,446	\$3,379	1.15	1.02	\$5,421	\$6,656	\$5,255	1.23	1.27
Dec 2015	\$2,714	\$3,193	\$2,743	1.18	1.16	\$8,134	\$9,849	\$7,998	1.21	1.23
Jan 2016	\$2,966	\$3,366	\$3,180	1.13	1.06	\$11,101	\$13,215	\$11,178	1.19	1.18
Feb 2016	\$3,583	\$3,518	\$2,966	0.98	1.19	\$14,683	\$16,733	\$14,144	1.14	1.18
Mar 2016	\$4,740	\$4,210	\$3,979	0.89	1.06	\$19,424	\$20,943	\$18,124	1.08	1.16
Apr 2016	\$3,777	\$3,155	\$3,183	0.84	0.99	\$23,200	\$24,098	\$21,307	1.04	1.13
May 2016	\$3,824	\$3,954	\$3,678	1.03	1.08	\$27,025	\$28,052	\$24,984	1.04	1.12
Jun 2016	\$3,467	\$3,623	\$3,416	1.04	1.06	\$30,492	\$31,675	\$28,401	1.04	1.12
Jul 2016	\$4,142					\$34,634				
Aug 2016	\$3,591					\$38,225				
Sep 2016	\$5,354					\$43,579				
CTD	\$359,164	\$357,951	\$333,483	1.00	1.07					

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

CTD = contract to date
 EVMS = Earned Value Management System.
 FY = fiscal year.
 SPI = schedule performance index

Waste Feed Delivery/Treatment/Double-Shell Tank Retrieval Closure (5.03)

The June variances below have no impacts on TPA milestones.

The current month **favorable** SV of \$155K variance is primarily due to:

- Testing of the technetium melter being completed by Vitreous State Laboratory earlier than planned. The test was originally assumed to have a longer duration and that the analysis phase would not start until the test was complete. The analysis was instead run in parallel with testing and with the analysis from previous tests. The performance of these tasks concurrently optimized the schedule.

The current month **favorable** CV of \$207K variance is primarily due to:

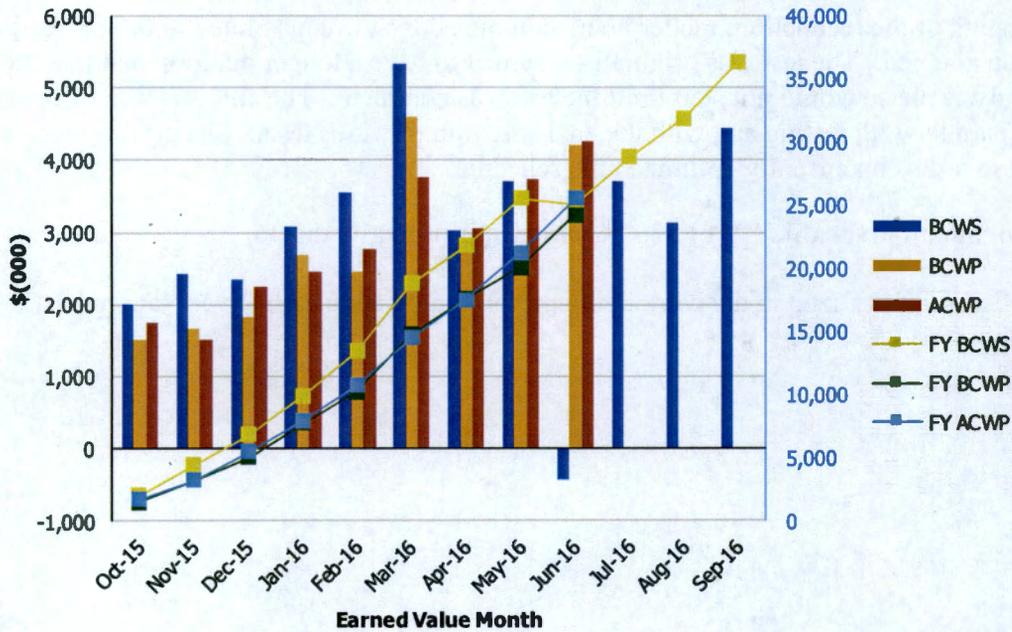
- Efficiencies realized in the work being performed by Savannah River National Laboratory.

Earned Value Data: Fiscal Year 2016

June-16

**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 2015	\$2,008	\$1,513	\$1,735	0.75	0.87	\$2,008	\$1,513	\$1,735	0.75	0.87
Nov 2015	\$2,439	\$1,669	\$1,517	0.68	1.10	\$4,447	\$3,182	\$3,252	0.72	0.98
Dec 2015	\$2,351	\$1,814	\$2,245	0.77	0.81	\$6,798	\$4,996	\$5,497	0.73	0.91
Jan 2016	\$3,090	\$2,691	\$2,451	0.87	1.10	\$9,888	\$7,687	\$7,948	0.78	0.97
Feb 2016	\$3,550	\$2,460	\$2,775	0.69	0.89	\$13,438	\$10,147	\$10,723	0.76	0.95
Mar 2016	\$5,343	\$4,613	\$3,760	0.86	1.23	\$18,781	\$14,760	\$14,482	0.79	1.02
Apr 2016	\$3,018	\$2,838	\$3,060	0.94	0.93	\$21,799	\$17,598	\$17,542	0.81	1.00
May 2016	\$3,705	\$2,495	\$3,732	0.67	0.67	\$25,503	\$20,092	\$21,274	0.79	0.94
Jun 2016	(\$420)	\$4,202	\$4,274	-10.01	0.98	\$25,084	\$24,294	\$25,548	0.97	0.95
Jul 2016	\$3,710					\$28,794				
Aug 2016	\$3,135					\$31,929				
Sep 2016	\$4,434					\$36,363				

CTD	\$43,076	\$41,721	\$42,170	0.97	0.99
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- ACWP = actual cost of work performed.
- BCWP = budgeted cost of work performed.
- BCWS = budgeted cost of work scheduled.
- CPI = cost performance index.
- CTD = contract to date
- EVMS = Earned Value Management System.
- FY = fiscal year.
- SPI = schedule performance index

Treat Waste (5.5)

The June variances below have no impacts on TPA milestones.

The current month **favorable** SV of \$4,622K is due to:

- Recovery of scheduled work in Tech Maturation and Integrated Scale Test Program including receipt of Microbead resin and the procurement, fabrication, and assembly of both the full-scale test and integrated test rig assemblies. Additionally, a portion of the current month variance resulted from the implementation of BCR-RPP-16-171 for the safety control decision changes. This baseline change request was processed to resequence design activities to integrate the logic between existing and new scope to employ active ventilation instead of diffusion of hydrogen gas through concrete.

The current month **unfavorable** CV of (\$73K) is due to:

- Additional effort was required to prepare the piping and instrumentation diagram and ventilation and instrumentation diagram for 30 percent delta design drawings, including the hazard and operability study, management, and independent reviews. Also, development of the safety integrity level/failure modes and effects analysis calculations required additional resources.

Single-Shell Tank Closure Program

M-045-00, Complete closure of all SST farms, Due: January 31, 2043, Status: At risk. To be informed by information in System Plan, Rev. 8.

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. The last annual meeting was held July 20, 2015 (M-045-56L), and the meeting minutes are being finalized.

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-045-61A, Submit to Ecology for review and approval as an Agreement primary document, document review process, a Phase 2 Corrective Measures Study, and Revision 0 update to the RFI Report for WMA-C), Due: December 31, 2016, Status: On schedule.

M-045-62, Submit to Ecology for review and approval as an agreement primary document a Phase 2 Corrective Measures Study Implementation Plan for WMA-C, Due: Six months after the approval of the corrective measures study submitted under milestone M-045-61A. Status: On schedule. TPA change control form M-045-15-02 approved on April 14, 2015.

M-045-82, Submit complete permit mod requests for Tiers 1, 2, and 3 of the SST, Due: September 30, 2015, Status: In dispute.

M-045-83, Complete the closure of WMA-C, Due: June 30, 2019, Status: To be missed.

M-045-84, Complete negotiations of TPA interim milestones for closure of second WMA, Due: January 31, 2017, Status: At risk.

M-045-85, Complete negotiations of TPA interim milestones for closure of remaining WMAs, Due: January 31, 2022, Status: On schedule.

M-045-92 (N, O, P, Q, R) Complete Installation of Four (4) Additional Interim Barriers, Due: October 31, 2020, Status: On Schedule.

July Accomplishments:

- Completed the T and TY Farms Interim Surface Barrier Monitoring Report for FY 2015.
- The low-level waste federal review group voted to approve the C Farm waste management area (WMA-C) Performance Assessment the DOE O 435.1, *Radioactive Waste Management* for release.

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.
- Complete TPA/*Resource Conservation and Recovery Act* Tier 2 and Tier 3 closure plans after input from Ecology and potentially revise Tier 1 submittal by following Figure 9-2 in the TPA.
- Complete the draft TPA Action Plan, Appendix I, Section 2.5, WMA-C Performance Assessment and submit to the WMA-C participants and stakeholders for review.
- The Ecology TPA Project Manager communicated on July 14, 2016, that the following items are to be put into the TPA monthly report:

*“Ecology would like to include 3 items in Single-Shell Tank Closure Program section, under the heading “**Significant Planned Actions in the Next Six Months:**” for our TPA PMM report for the month of July:*

- *Ecology made a “Counter Proposal” on TPA milestones for M-45-82 and M-45-83 that required submittal of SST System Closure and the WMA -C Tier 2&3 closure plans. This proposal include information on additional TPA work related to WMA-C PA, RFI final document, and the CMS. Ecology is awaiting USDOE response. Ecology would like to meet with USDOE to clarify the contents of Tier 2 & 3 submittals.*
- *We have sent comments to USDOE via a letter on the SST System Tier 1 Closure Plan. At the July 5th Ecology/Energy Meeting on DW Permit Status Meeting Ecology informed USDOE that Ecology is ready to meet on the comments. Ecology request USDOE agree to a meeting time to start the process for comment resolution.*
- *In February 2015, Ecology recommended USDOE-ORP schedule a recurring meeting to discuss statements, regulatory interpretations, and the process steps for obtaining an agreeable RFI/CMS process for WMA C Closure (letter 15-NWP-037, February 23, 2015). Ecology notes that we have been meeting on the RFI to resolve comments. However USDOE has not requested a meeting on the contents of a CMS. Ecology would like to request a meeting with USDOE, to review USDOE plans for preparing the document and a discussion about the contents and level of detail.”*

Issues: None.

Single-Shell Tank Retrieval Program

M-045-70, Complete waste retrieval from all remaining SSTs, Due: December 31, 2040,
Status: At risk. To be informed by information in System Plan, Rev. 8.

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

Significant Past Accomplishments:

- Completed post-retrieval sampling of Tank 241-C-111
- Completed proof of concept demonstrations for Tank C-105 Mobile Arm Retrieval System-Vacuum (MARS-V) in-tank equipment removal
- Began development of Tank C-111 Retrieval Data Report
- Completed below grade removal of Buildings AX2707 and AX80
- Completed Building 2724AB demolition and below grade removal
- Completed installation of POR126 system and began cold operational acceptance testing
- Completed installation of the new A/AX change trailers and turned them over to operations.
- Completed pit cleanout of AX-02D
- Prepared for concrete foundation pour on the new air and service water building (A-285)
- Completed A Farm ventilation design.

Significant Planned Activities in the Next Three Months:

- Submit retrieval data report for Tank 241-C-102
- Negotiate contract proposal for installing and performing the third retrieval technology at Tank C-105
- Complete Tank C-105 MARS-V containment box disassembly
- Complete removal of Tank C-105 MARS-V in-tank equipment
- Complete Tank C-105 modified sluicing system design
- Issue Tank C-111 retrieval completion certification
- Complete cleanout of Tank 241-AX-104 pits 04A, and 04D, and initiate debris removal from 04C
- Complete AX-2707 fencing and gate upgrades
- Complete Tank 241-AX-102 and 241-AX-104 extended reach sluicing system procurement
- Complete installation of the A-285 service building.

Issues:

- The HAMTC stop work issued on July 11, 2016, has impacted Tank C-105 equipment removal activities due to C Farm access limitations. Construction resources have been redeployed to other work/contracts as available.
- The HAMTC stop work issued on July 11, 2016, has impacted the AX field work due to equipment availability. Pit cleanouts are currently on hold. Crews will opportunistically attempt to continue pit cleanout when crews and equipment are freed up from AY-102 construction installing four extended reach sluicer systems, and removal of the C-105 MARS-V.

Tank Waste Retrieval Work Plan Status

Tank	TWRWP	Expected Revisions	First Retrieval Technology	Second Technology	Third Technology
AX-101	RPP-RPT-58932, Draft	Initial Approval	Sluicing with ERSS	High-Pressure Water deployed with ERSS	-
AX-102	RPP-RPT-58933, Draft	Initial Approval	Sluicing with ERSS	High-Pressure Water deployed with ERSS	-
AX-103	RPP-RPT-58934, Draft	Initial Approval	Sluicing with ERSS	High-Pressure Water deployed with ERSS	-
AX-104	RPP-RPT-58935, Draft	Initial Approval	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	Complete	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	-
C-110	RPP-33116, Rev. 3	Complete	Modified Sluicing	Mechanical Waste Conditioning with an In-Tank Vehicle	High Pressure Water

Tank	TWRWP	Expected Revisions	First Retrieval Technology	Second Technology	Third Technology
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 sluicing system.
MARS = Mobile Arm Retrieval System.
S = sluicing.
TWRWP = Tank Waste Retrieval Work Plan.
V = vacuum.

Significant Accomplishments:

- Modification approved to RPP-22520, 241-C-101, and 241-C-105, *Tanks Waste Retrieval Work Plan*, to include a third retrieval technology for C-105 retrieval on July 20, 2016.

Significant Planned Activities in the Next Three Months:

- Finalize AX Farm tank waste retrieval work plans.

Issues: None.