

Office of River Protection  
Tri-Party Agreement Milestone Review  
Meeting Minutes  
August 21, 2014

Approval: [Signature] Date: 9/25/14  
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Ecology IAMIT Representative

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Approval: [Signature] Date: 23 Sept 14  
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Minutes Prepared by: [Signature] Date: 9-18-14  
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Allen, R. M.	WRPS	Hendrickson, M.L.	Ecology	Nazarali, A.	CTUIR
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Braswell, S.M.	MSA	Jensen, D.*	ORP	Piippo, R.E.*	MSA
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Butler, D. H.	MSA	Johnson, J.M.	ORP	Shattuck, A.F.	MSA
Caggiano, J.A.	Ecology	Kemp, C.J.*	ORP	Skinnarland, E.R.	Ecology
Cimon, S.*	ODE	Koll, R.J.	ORP	Smith, D.M.*	ORP
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Faulk, D.A.	EPA	Mathey, J. W.	Ecology	Wilson, M. B.	MSA
Fletcher, T.W.	ORP	Mattlin, E.M.*	ORP	Wrzesinski, W. R.*	ORP
Gent, P. M.	Ecology	Marlin, B.*	ORP	Young, J. D.*	ORP
Grindstaff, J.F.	ORP	Mauss, B.M.*	ORP	Administrative Record	
Harrington, C.C.	ORP	McDonald, D.*	Ecology		
Harris, S.	CTUIR	McLain, J. A.	WRPS		

\*Attendees

**Office of River Protection  
Tri-Party Agreement Quarterly Milestone Review  
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**Administrative Items/Milestone Status**

ORP referred to the agreements, issues and action items list and noted:

- There was an update to action No. 3 for tank farms (TF-14-06-01). ORP received a letter from Ecology on August 20, 2014, regarding the tank C-101 request to forego a third retrieval technology. Action No. 3 was closed. ORP added that there were statements made about the applicability of Appendix H that ORP believe were inaccurate, and the ORP and Ecology attorneys had prior discussions about the subject. ORP stated that the statements regarding the applicability of Appendix H had been pointed out previously with the C-108 approval, and a letter is being drafted regarding Appendix H and will be shared with Ecology.
- ORP referred to action No. 2 (TF-14-07-02), stating that an internal meeting is scheduled to finalize the presentation on the deferred use lines, and then a briefing will be scheduled with Ecology.
- ORP stated that under action No. 4 (TF-14-06-02), the scheduling oversight for Ecology on the WMA-C PA modeling is being set up starting in September 2014, and there will be several meetings scheduled.
- ORP noted that these meetings are also associated with action No. 6 (TF-14-02-02).
- ORP stated that for action No. 7 (TF-14-01-01), Ecology proposed a different approach to the hose-in-hose transfer line management plan (RPP-12711), which ORP has reviewed. ORP added that Ecology sent a redline strikeout of their comments to Rev. 7, which ORP is reviewing and discussing internally. ORP will schedule a meeting with Ecology in mid-September 2014 to discuss the path forward on revisions to RPP-12711.
- ORP stated that under action No. 9 (TF-13-02-03), Ecology had presented a new proposal for M-045-61, M-045-62 and M-045-82, and a meeting was tentatively scheduled for August 27, 2014, to discuss the proposal. Ecology indicated that there was a conflict with the date. ORP will contact Ecology to set up another date. ORP stated that the meeting notes from the M-045-56 annual meeting to discuss interim measures were signed by ORP and Ecology and will be entered into the Administrative Record (AR). ORP provided a hard copy of the meeting notes

to Ecology.

Under the TPA milestone status, ORP noted that M-062-40ZZ was deleted on August 12, 2014, for the one-time tank waste supplemental treatment technologies report. ORP also noted that M-047-07 and M-090-13 were moved out to March 31, 2016, and the revised date will be reflected in the next monthly report when the milestones for fiscal year 2016 are included. ORP stated that the remaining TPA milestones for FY14 and FY15 are on schedule, with the exception of milestones M-045-61/62/82, which are to be missed. ORP reported that there was no change to the Consent Decree (CD) milestones, noting that discussions are ongoing between DOE and Ecology regarding the CD.

#### **System Plan; M-62-40**

ORP stated that all of the milestones are on schedule. ORP reported that on July 29, 2014, WRPS presented Ecology and ORP the five case results, and during the meeting Ecology requested additional information to better understand the five cases. ORP responded that when it receives direction to provide the information, it will be sent to Ecology. ORP added that during the meeting, it was noted that the five cases are being provided via legal council.

#### **Acquisition of New Facilities; M-90-00, M-47-00**

ORP stated that as reported above, a change package was signed to move milestones M-090-13 and M-047-07 out to March 31, 2016. ORP noted that both of the milestones are necessary for full Waste Treatment Plant (WTP) operations. ORP added that the milestones will consist of providing a conceptual design report, and the remaining deliverables will make up the critical decision 1 (CD-1) package by the March 31, 2016 time frame.

#### **Supplemental Treatment/Part B Permit Applications; M-62-00, -20, -30, -45**

ORP stated that the M-062-40ZZ requirement to submit a one-time tank waste supplemental treatment technologies report has been deleted. ORP added that there had been discussions with Ecology since January 2013 regarding this milestone, and the conclusion was reached that submittal of the report during the milestone due date would not help accomplish the goal. ORP reported that the status of M-062-45ZZ has not changed, and it may be considered during the CD and TPA negotiations that are ongoing.

## **242-A Evaporator Status**

ORP reported that the evaporator has gone through the readiness process, and there are items to be corrected and prestart items to go through. ORP stated that there is a tentative start date of September 5, 2014 for the first evaporator run, but it could potentially start a bit later. It was noted that it will be the first time the 242-A evaporator has run in about four years. Ecology requested information on the evaporator maintenance protocols and the depth and breadth of the maintenance spares. Ecology noted that it had made the request before, and the purpose for requesting the information is to ensure that ORP is in the best position possible to mitigate or eliminate any delays if there are issues with the evaporator. *An action was established to provide Ecology the information.*

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

ORP noted that an internal meeting is scheduled to discuss the deferred use lines, and then a meeting will be scheduled with Ecology at their request. ORP stated that issues associated with tank AY-102 continue to be discussed with Ecology.

## **SST Integrity Assurance; M-45-91**

ORP stated that all of the milestones are on schedule, and a few reports have been completed under the target dates. ORP reported that the samples from the sidewall coring in tank A-106 were sent off for analysis, and the initial results have been positive for strength. The data report is expected soon and will have more details. ORP noted that the expert panel for the SST integrity plan will be on site next week, and agendas have been provided to Ecology and the other stakeholders.

## **In Tank Characterization and Summary**

ORP reported that the readiness assessment for the core sampling platform was completed, and preparations are being made to put the platform in position. Two samples are scheduled to be taken in SY-102. ORP noted that efforts are under way to sample C-107 for the retrieval data report sampling. ORP stated that the Data Quality Objective (DQO) and the sample analysis plan (SAP) are ready, and discussion is needed with Ecology to determine where the drag samples will be taken. Ecology asked when the map for the bottom of C-107 will be completed. ORP responded that it will be completed soon, and that videos were taken after retrieval last week with some panorama shots. Ecology indicated that once the map is ready, the sites can be selected for drag sampling. ORP stated that retrieval data report sampling at C-112 is planned for November 2014, and it is predicated on the response from Ecology on the request to forego a third retrieval technology at C-112.

## **Tank Operations Contract (TOC) Overview**

ORP provided the TOC overview for June 2014. For Retrieval and Closure of SSTs, one of the contributors to the current month unfavorable cost variance was due to additional cost incurred at C-102 because of limited DST space. Ecology asked if the issue would be mitigated by the upcoming 242-A evaporator campaign. ORP responded that it would be mitigated. Regarding waste feed delivery, Ecology inquired about a briefing on the WTP TOC integrated readiness support. ORP responded that it would be ready to have discussions in early October 2014. Ecology requested an action to ensure the discussions occur. *ORP took an action to set up discussions with Ecology on the WTP TOC integrated readiness support starting in October 2014.* Under treat waste, Ecology asked about the LAWPS acronym. ORP responded that LAWPS stands for low activity waste pretreatment system, which is part of the overall direct feed low activity waste program. Ecology asked if ORP is planning to provide a status on how the direct feed low activity waste program is moving forward. ORP responded that a briefing is needed and will be provided to Ecology.

## **Single-Shell Tank Corrective Action; Milestone M-45, -50, -60**

ORP expressed appreciation to the DOE-RL staff who filled in for the past year when a full-time employee retired and the position was not filled.

M-045-22 - ORP stated that the M-045-22 series of milestones are on schedule. ORP noted that there is a decision point that determines whether to continue looking at soil desiccation (M-045-22-T03). ORP stated that currently it is unknown if there is merit to soil desiccation because a larger borehole is needed than can be done with the push rigs. ORP added that soil desiccation doesn't appear to work in a larger borehole, or with barriers. ORP noted that the barriers are part of the discussion in the CD negotiations, and Ecology has been requested to provide more clarity on the discussion it would like to have with ORP in September 2014. ORP indicated that further soil desiccation studies don't appear to be an option, so more discussion on how to complete the milestone will be helpful. ORP noted that if there is no decision made, there are milestones in place for four barriers under the M-045-92 milestone series.

M-045-61 and M-045-62 – ORP noted that the status of these two milestones continues as “To Be Missed”. Ecology asked if ORP plans to respond to its proposal regarding these two milestones. ORP stated that following a discussion with Ecology, a formal response will be provided.

**M-45-00 Series:**

SST Retrieval and Closure Program TPA:

M-045-82 - ORP noted that the status of this milestone continues as "To Be Missed", and it will be part of the discussion with Ecology that is planned for September 2014.

Significant Planned Activities in the next 6 Months – ORP stated that a path forward for post retrieval logging at C-107 is being developed, and that post retrieval logging for C-101 needs to be scheduled.

Tank Waste Retrieval Work Plan (TWRWP) Status - ORP expressed appreciation to Ecology on their efforts with the TWRWPs.

Tank in Appendix H. Status - Single Shell Waste Retrieval Criteria – There were no updates reported.

Tank Retrievals with Individual Milestones – There were no updates reported.

SST Retrieval and Closure CD Milestones and TWRWP Status; D-00B Series:

D-00B-01 – ORP stated that there is an ongoing issue, and it is reported under the CD protocol that tanks C-102 and C-105 are at serious risk to missing the milestones. ORP stated that retrieval is under way in C-102, and it is 67 percent retrieved. The new extended reach sluicer is being redeployed under riser No. 7 to work on a large waste pile with high pressure water. ORP stated that C-105 retrieval has restarted with the mobile arm retrieval system vacuum (MARS-V). ORP noted that the MARS-V is a difficult and complex system to use, and there has been a learning curve by the retrieval crews. ORP added that currently about 300 to 400 gallons per shift are being retrieved in C-105, and retrieval is running 24 hours per day, seven days a week. ORP stated that C-111 has had two enhanced reach sluicers (ERSS) fail during retrieval, and efforts are ongoing to determine the cause of the hydraulic leaks that failed in the Teflon lines. The ERSSs are being repaired, and retrieval is scheduled to restart in C-111 by February or March 2015.

Ecology noted the issues with the various technologies, and asked if ORP has enough information to know whether or not retrieval rates can be sustained, based on past anticipated rates, or if retrieval will have to be reevaluated. ORP responded that it is constantly reevaluating retrieval rates and efficiency, and the rates and efficiencies are different for each waste form. ORP stated that the variability of the C Farm waste was not anticipated 12 years ago, and some tanks retrieve more easily than others. ORP added that there is no one simple answer to retrieval efficiency, and expressed optimism that the MARS-V will be effective.

Ecology asked if new retrieval technologies have been explored for A/AX Farm. ORP responded that it is currently in the contract proposal phase, and negotiations are under way with WRPS. ORP stated that ERSSs and the MARS-V will be used on the sluicing tanks at A/AX. ORP added that the MARS-V will be improved with the lessons learned from using the MARS-V at C-105. ORP indicated that new technologies are being explored, and expressed the importance of working to make the existing equipment more efficient and reliable. Ecology expressed concern regarding all the issues with equipment and the ensuing repairs. ORP stated that it shared Ecology's concern, adding that of more concern is the safety of the workers. Ecology asked if it would be safe to say that as the lessons are learned with the existing equipment, ORP is getting to the point of solving some of the older problems and the level of reliability is increasing. ORP agreed with Ecology's statement, noting that the knowledge of waste forms, mineral forms, understanding of the hydraulics and being able to work 40 feet down through a 12-inch riser is much greater than it was 12 years ago and it will continue to improve.

TWRWP Status - ORP stated that the TWRWP status is the same table that is in the TPA monthly summary report.

**WTP Overall TPA and CD Summary and Milestone Status; M-62-01;  
M-62-49; D-00A-01, -06, -17  
Waste Treatment and Immobilization Plant (WTP) Project**

ORP noted that action No. WTP-13-04-01 was closed when the briefing on the status of RVP Wave I and II was given to Ecology. Regarding action No. WTP-13-04-03, ORP pointed out that a monthly briefing is provided to Ecology on the thermal catalytic oxidizer (TCO), which has been the critical path for some time in the LAW facility, and suggested that this action could be closed. Ecology responded that the action could be closed as long as updates on the TCO are made on a monthly basis. ORP stated that continuing with the TCO updates will be reinforced with the point of contact for LAW. Ecology agreed that action No. WTP-13-04-03 could be closed. ORP reported that the overall cost variance for WTP is staying within reason, but the schedule variance continues to cause difficulties, as anticipated. ORP added that the goal is to have the schedule variance corrected moving forward with the ability to align the project baseline and funding availability.

**WTP Pretreatment (PT) Facility; D-00A-13, -14, -15, -16, -19**

ORP stated that one of the activities going forward is the resumption plan for activities in PT, and the contractor Bechtel has submitted a draft resumption plan, which is one of the first steps in supporting authorization to proceed with

production engineering. ORP indicated that the resumption plan will be similar to what was done in the HLW facility, starting with limited activities and then adding more activities to eventually reach full release of production engineering. ORP noted that a lot of the resumption of activities will be based on the success of the ongoing efforts with technical issue resolution.

Ecology asked if ORP anticipates conducting and signing off on an operability review for PT on the same scale that was done for HLW. ORP responded that an operability review will be conducted, and will likely be done on a larger scale for PT. ORP noted that an operability review won't be a near-term activity since the technical issues have a greater impact on PT. ORP added that fundamental designs are being revisited and will need to be lined out before conducting an operability review. Ecology requested involvement in the PT operability review at the same level that it had with the HLW design and operability review, and at a much higher level than it had for the LAW operability review.

#### **WTP High-Level Waste (HLW) Facility; D-00A-02, -03, -04, -21**

ORP stated that activities in HLW are focused on supporting the authorization to proceed with full production engineering. ORP noted that the current limited production engineering was approved to support completion of activities that were needed and the completion of some corrective actions to allow full authorization to resume production engineering in HLW. ORP expressed confidence that the full authorization to resume production engineering would be issued in the next six months. Ecology stated its understanding that the HLW design and operability review report is in review and is still marked OOU, and repeated its request for a copy of the report. Ecology noted that its office has mechanisms to protect OOU documents that DOE-RL releases. ORP agreed to pass along Ecology's request.

Ecology inquired about the progress on the redesign of RLD vessel 7 to accommodate what will be needed in HLW. ORP responded that some evaluations have been done, and stated its understanding is that RLD-7 will be incorporated as part of the standardized vessel design. Ecology stated that RLD-8 had to be redesigned for a variety of reasons, and the commentary is that RLD-7 had to be altered so that the two vessels would work well together. Ecology noted that an RFP for vendor design on RLD-8 is listed in today's summary report, but nothing is listed for RLD-7, and asked for an update on what is being done to ensure the two vessels are aligned for process flow. ORP responded that an update will be included in next month's summary report. Ecology accepted ORP's response to include the update next month.

EPA noted the asterisks and issues on page 8 of the monthly summary report, and asked why none of the issues are listed under significant planned actions in the next

six months. ORP responded that the asterisk is related to specific milestones and the individual facilities that are challenged or at serious risk because of technical issues. ORP added that discussion relating to the asterisk is found in each of the facility discussions, and the asterisk statement is listed below each facility. ORP noted that the format in the summary report is at the request of the lawyers.

#### **WTP Low-Activity Waste (LAW) Facility; D-00A-07, -08, -09**

ORP stated that the contractor has been requested to develop a contract modification to clearly align a path for completing the LAW, BOF and LAB (LBL) work scope through hot commissioning. The contractor was also requested to provide an initial plan and design on direct feed LAW (DFLAW). Ecology stated that there are a variety of pieces to DFLAW, citing the five basic facilities being built or modified under DFLAW: 1) LAW modifications, 2) HLW modifications, 3) design and construction of the Low Activity Waste Pretreatment System (LAWPS), 4) potential changes and rerouting to tank farms, and 5) the potential modification and use of the LERF/ETF facilities. Ecology asked if ORP has an integrated flow sheet that includes all of the pieces. ORP responded that there is a flow sheet, and there are evaluations being done to determine the best method to accomplish the new, up-front treatment in response to the DOE-RL directive for a waste form treatment to meet the low activity waste criteria.

ORP noted that for the LAW facility itself, the direction provided to the BNI contractor is only within the footprint of the WTP site. Specifically, BNI and ORP are conducting an evaluation on what needs to be done to accommodate a waste stream that meets the LAW characteristics if DFLAW waste is sent to LAW. ORP added that there is additional work that has to be done for one system, and an RFP is being put out with potential facilities capable of dealing with the waste form; and within that follows some of the routing, such as with LAWPS, and the connection from there to WTP as well as the Effluent Treatment System (ETF). Ecology requested a briefing on all the pieces and parts necessary to successfully bring DFLAW to fruition. Ecology clarified that all the pieces and parts mean everything from the tank farms going out to LAWPS preconditioning and through the LAW system itself out the back end, which will be the secondary liquids coming off.

Ecology also requested information on how all the contractors and DOE entities are working together to ensure DFLAW comes together appropriately. *ORP took an action to provide a briefing on DFLAW to Ecology. Ecology stated that it also expect a briefing on the LAW design and operability review.* ORP stated that on the WTP side, a lot of what will be considered are any modifications that will be needed inside the LAW facility to accommodate other activities associated with modifications to the Balance of Facilities (BOF). ORP stated that BOF will need to serve a fully operational plant so that PT and HLW can operate at the same time,

and there are modifications and valving that will be needed to tailor BOF to support the LAW facility at a much lower level.

ORP referred to the effluent activity that was discussed, and a Radioactive Liquid Disposal facility had been planned for PT that contained two tanks that would function basically as LERF/ETF does, and the possibility of having a similar function with additional capabilities as LERF/ETF is being considered. Ecology asked if that would potentially mean a new facility. ORP responded that there may be the need for a facility, but there is a current design facility schedule to handle that point. ORP stated that vessels RLD-6A and 6B are currently designed for PT, and when the potential for effluent treatment is discussed, it would be incorporated into the WTP contract.

### **WTP Balance of Facilities (BOF); D-00A-12**

ORP stated that the 62 percent complete overall for BOF is because a large portion of the baseline cost for BOF is in commissioning, which is a complex effort. ORP noted that Bechtel issued the underground piping integrity assessment program, which DOE-RL reviewed this month. ORP referred to the numerous discussions with Ecology regarding cathodic protection, and stated that the other half of cathodic protection is the status of the pipes that have been installed and under ground for some time. ORP stated that the standard is not for pipes to sit under ground for a limited period before being put under cathodic protection and then into operation. ORP noted that due to the length of the WTP project, the pipes have been sitting under ground for some time. ORP has requested that Bechtel develop a method to ensure the integrity of the installed pipes prior to starting operations of those systems. Ecology clarified that the effort would be within the WTP fence, and ORP concurred. Ecology stated that whatever activity occurs coming out of tank farms will have to cross the field in existing transfer lines to potential new ones, and it would be helpful to understand the integrity of those lines as well. Ecology added that the integrity of all the ancillary support systems is as critical as ensuring the primary facilities are working, and it would be helpful to understand the efforts towards those systems as well.

Significant Planned Actions in the Next 6 Months – ORP stated that there were some bad components with the nonradioactive liquid drain system panel, and efforts are under way to receive the replacement panel. Ecology addressed ORP's point regarding liquid for the LAW facility and understanding what constraints and conditions are needed to support DFLAW feed, suggesting that that would be a planned action in the next six months for ORP to get to a point of understanding what is required to support DFLAW. ORP responded that at this point it's not a matter of understanding the work needed to support DFLAW, but a matter of doing a system by system review to determine what modifications and adjustments are needed to support DFLAW versus full operations. ORP noted that the contractor

has been requested to conduct a system review. Ecology asked if ORP anticipated any large equipment reconfigurations. ORP responded that there will be significant reconfigurations, but not necessarily for large equipment. ORP stated that a lot of operability analysis will be needed on scaling back or reconfiguring operations for some functions such as the chiller compressor or the steam plant. ORP added that the purpose of the analysis is to determine the best way to operate the different facilities at a reduced rate.

Ecology expressed concern about the uncertainty of knowing what the reduced rate of operations will look like, stating that understanding the timing about how all the changes will flow would provide a better level of comfort. ORP responded that there is enough of an understanding of what needs to be done and it is being properly communicated with the state of Washington on the plans for DFLAW. Ecology stated that it was not necessarily in agreement with ORP's response.

#### **WTP Analytical Laboratory (LAB); D-00A-05**

ORP reported that the LAB is getting close to a point at which construction activities will cease, and the end of calendar year 2014 is being targeted for what is called ready for systemization. ORP stated that it is working with the startup organization to ensure readiness for system by system turnover by conducting component level testing.

Significant Past Accomplishments – ORP noted that the hydrostatic testing of RLD vessel 164 was completed, and RLD vessels 163 and 164 have been recertified. ORP stated the issues with RLD vessels 163, 164 and 165 began with the discovery of some weld deficiencies. ORP indicated that basically a 100 percent inspection of welds was done on RLD-164 after follow-up on the different deficiencies that were identified. ORP stated that all of the deficiencies have been identified and corrected on RLD-164, and a letter of certification has been sent. Oregon Department of Energy (ODOE) asked what the percentage was of failed or noncompliance welds. ORP responded that the percentage was not available. ORP stated that when a weld deficiency was identified, every weld that fell into that type of weld was inspected. ORP noted that there were enough anomalies in the documentation that was provided by the vendor on a certified vessel that should not have occurred, and the contractor was very proactive and aggressive in their response to the vessel repairs.

Ecology noted that ORP has declared the milestone for LAB construction substantially complete has been met, and that Ecology has not agreed that the milestone is complete. Ecology requested that ORP schedule a technical gathering of both teams where all the information could be presented. Ecology made the request so it could review the validation and verification of the milestone in an effort to come to its own independent conclusion of construction substantially

complete. ORP clarified that when Ecology conducted its review on the documentation for the substantially complete milestone, Ecology's only concern was associated with the RLD vessels. Ecology concurred, adding that the review of instrumentation was set aside since it needs to be done at a later time. ORP responded that it will take Ecology's request to management and put together the documentation.

## ORP/Ecology TPA and CD Agreements, Issues, and Action Items – August 2014

### Agreements:

1. ORP will continue to meet with ECY to discuss funding and work priorities per TPA Paragraphs 148/149 process.
2. Per an ECY standing request, ORP agrees to include any written directives given by DOE to the contractors for work required by the CD in future Semi-Annual CD Reports (see CD Section IV-C-1-e, page 8).
3. The ORP and ECY 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 has a concern with WTP data being reported exclusively in the CD Monthly Summary Report as the current CD reporting process does not allot ECY early review time of the CD Monthly Summary Report. ORP and ECY have raised this concern for discussion at the Senior Management levels.
2. AY-102 Primary Tank Leak: Tank 241-AY-102 (AY-102) is an approximate one million gallon underground double-shell tank (DST) containing mixed radioactive and hazardous waste located in the 241-AY Tank Farm (AY Farm). In August 2012, a leak to the annulus was detected. DOE submitted a pumping plan & revised pumping plan to Ecology, both of which were rejected. On March 21, 2014, Ecology issued Administrative Order Docket #10156 against DOE and WRPS alleging violations of 40 CFR 265.196 and identifying 14 action items that DOE/WRPS must comply with including the pumping of AY-102. On April 18, 2014, DOE and WRPS filed Notices of Appeal and Motions to Stay the Administrative Order with the Washington State Pollution Control Hearings Board (PCHB). A Prehearing Conference was held on May 8, 2014. The legal issues of the case were identified and a case schedule has been set based upon a hearing date in October 2014. DOE will continue working with Ecology on the path forward for this tank and is committed to safely managing the tank farms to protect the workers, public and the environment.
3. T-111 and Other Single Shell Tank Level Decreases: ORP and WRPS have determined that 19 of the 20 single shell tanks showing decreased liquid levels at the Hanford Site are not actively leaking. Evaluation documents are available online at: <http://www.hanford.gov/page.cfm/SingleShellTankEvaluations>

Tank Farms Action Items							
#	Action ID	Start Date	Action	Action Status	Updates / Needs for Closure	Actionee(s)	Date Closed
1	TF-14-07-01	07/17/14	ORP takes the request to report on estimates of volume reductions back to the 242-A Evaporator point of contact for consideration.	Closed.	ORP 242-A Evaporator POC can provide verbal status and further discussion at TPA Meetings.	Koll	08/21/14

**ORP/Ecology TPA and CD Agreements, Issues, and Action Items – August 2014**

Tank Farms Action Items							
#	Action ID	Start Date	Action	Action Status	Updates / Needs for Closure	Actionee(s)	Date Closed
2	TF-14-07-02	07/17/14	ORP will provide a briefing to ECY on the design, history, testing process, and path forward for the deferred use lines.	<b>Open.</b>		Johnson	
3	TF-14-06-01	06/19/14	Response/Letter for the C-101 Request to Forego 3 <sup>rd</sup> Retrieval Technology.	<b>Open.</b>	See ORP Letter 14-TF-0012, dated 02/18/14	Lyon	
4	TF-14-06-02	06/19/14	Schedule an oversight opportunity with ORP and ECY for the WMA C PA modeling	<b>Open.</b>		Kemp / Hildebrand	
5	TF-14-03-02	03/24/14	ECY would like more information on the Tank Waste Characterization and Staging Facility (TWCS) and the Direct Feed HLW Initiative when it becomes available. TWCS CD-0 submittal sent to DOE HQ for approval. ECY will receive a briefing should there be a change in status. No other change in status.	<b>Closed.</b>	ORP provided an initial email with a description of TWCS activities to ECY on 03/24/14. 07/17/14 Update: Action closed until further change in status	Wheeler / Wziesinski	07/17/14
6	TF-14-02-02	02/18/14	ECY would like a schedule/project management plan (if available) for the closure of WMA C.	<b>Open.</b>		Kemp	
7	TF-14-01-01	01/28/14	ORP, ECY, and WRPS are working to complete revisions on the Hose-In-Hose Transfer Line Management Plan (RPP-12711) Revision 7. After Rev. 7 is approved a TPA Chg Pckg will be submitted to make RPP-12711 a primary document.	<b>Open.</b>	ORP and ECY met on 07/28/14 to discuss a new proposal for RPP-12711. ECY to provide Rev. 7 edits/comments for discussion.	Lynch / Mathey / Fox	
8	TF-13-12-01	12/19/13	ECY will provide a list of team members and their roles and responsibilities to ORP so that ORP can provide all applicable invitees to future meetings.	<b>Open.</b>		Lyon / McDonald	
9	TF-13-02-03	02/21/13	ECY and ORP will continue to meet at the project manager level to discuss work on the WMA C PA and other options for M-045-61/-62/-82.	<b>Open.</b>	ECY proposal presented to ORP on 03/26/14. ORP provided redline-strikeout comments to ECY on 04/22/14.	Kemp / Eberlein / Mathey	

**ORP/Ecology TPA and CD Agreements, Issues, and Action Items – August 2014**

WTP Action Items							
#	Action ID	Start Date	Action	Action Status	Updates / Needs for Closure	Actionee(s)	Date Closed
1	WTP-14-06-01	06/19/14	ECY would like a schedule for the full-scale vessel testing	Open.		Wahed Abdul	
2	WTP-14-06-02	06/19/14	ECY requests that DOE provide a presentation on how DOE incorporates, vets, and considers all technical issues (including the Safety Design Strategy).	Open.		Delmar Noyes	
3	WTP-14-06-03	06/19/14	ECY requests a briefing on the LAW design operability review before the September timeframe.	Open.		Jeff Bruggeman	
3	WTP-14-04-01	04/22/14	ORP and ECY have a placeholder action to hold a comprehensive briefing/discussion on the PT efforts.	Open.		Delmar Noyes	
4	WTP-13-04-03	04/23/13	ORP will update ECY on a monthly basis on the path forward for the TCO vendor concerns.	Open.	On-going, status given monthly.	Jeff Bruggeman	
5	WTP-13-04-01	04/23/13	ORP will meet with ECY to discuss status on the RVP Wave I and path forward for RVP Wave II.	Closed.	Briefing was held on 07/15/14.	Wahed Abdul	07/15/14

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**FINAL**

Office of River Protection  
Tri-Party Agreement  
Monthly Summary Report  
August 2014



**Office of River Protection  
Tri-Party Agreement Milestone Review  
August 2014 (Monthly Summary Report/Project Earned Value Management System reflects  
June 2014 information)**

Page	Topic	Leads
1	Administrative Items/Milestone Status	James Lynch/Dan McDonald/Jeff Lyon
2	System Plan; M-062-40	DaBrisha Smith/Jeff Lyon/Dan McDonald
3	Acquisition of New Facilities; M-090-00 and M-047-00	Janet Diediker/Jeff Lyon/Dan McDonald
4	Supplemental Treatment and Part B Permit Applications; M-062-00, M-062-21, M-062-30, and M-062-45	Steve Pfaff/Jeff Lyon/Dan McDonald
5	242-A Evaporator Status	Ron Koll/Jeff Lyon
6	Double-Shell Tank System Update	Jeremy Johnson/Jeff Lyon
6	Single-Shell Tank Integrity Assurance; M-045-91	Jeremy Johnson/ Jim Alzheimer
8	In Tank Characterization and Summary	Billie Mauss/Michael Barnes
9	Tank Operations Contract Overview	Kathy Higgins/Jeff Lyon
16	Single-Shell Tank Corrective Action; M-045-22, M-045-50 series, M-045-60 series, and M-045-92	Chris Kemp/Jeff Lyon
17	Single-Shell Retrieval and Closure Program Tri-Party Agreement (TPA) Milestones Status; M-045-00 series	Chris Kemp/Jeff Lyon
19	Tank Waste Retrieval Work Plan Status	Chris Kemp/Jeff Lyon
20	Tank in TPA Appendix H, Status Tank Retrievals with Individual Milestones	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 Summary Report for WTP Facility-specific information	Delmar Noyes/Dan McDonald

CD = Consent Decree 08-5085-FVS

Milestone	Title	Due Date	Completion Date	Status
<b>Fiscal Year 2014</b>				
M-062-40C	Select a Minimum of Three Scenario's for the System Plan	12/15/2013	12/12/2013	Completed
M-062-01AB	Submit Semi-Annual TPA Project Compliance Report	01/31/2014	01/31/2014	Completed
M-045-86C	Submit Retrieval Data Report to Ecology for C-104	03/21/2014	02/18/2014	Completed
M-045-22-T02	Submit Results of Vadose Zone Characterization of 241-U to Ecology	04/30/2014	02/20/2014	Completed
M-045-86F	Submit Retrieval Data Report to Ecology for C-108	05/01/2014	11/27/2013	Completed
M-045-86G	Submit Retrieval Data Report to Ecology for C-109	06/04/2014	03/13/2014	Completed
M-045-22-T03	Submit SX Soil Desiccation/Contaminate Removal Tech Results to Ecology	07/31/2014	05/15/2014	Completed
M-045-56J	Ecology and DOE Agree, at a Minimum, to Meet Yearly (by July)	07/31/2014	07/22/2014	Completed
M-062-01AC	Submit Semi-Annual TPA Project Compliance Report	07/31/2014	07/31/2014	Completed
M-045-22-T01	Submit Results of Vadose Zone Characterization of 241-TX to Ecology	09/30/2014		On Schedule
M-045-22	Review M-045-22-T03 Report and Determine Path Forward	09/30/2014		On Schedule
<b>Fiscal Year 2015</b>				
M-062-40D	Submit System Plan	10/31/2014		On Schedule
M-062-40ZZ	Submit One Time Tank Waste Supp Treatment Technologies Report	10/31/2014	Deleted on 08/12/2014	Deleted
M-045-91G-T03	Provide AOR Final Doc. for SSTs on 1,000,000 Gallon Tanks	10/31/2014	07/07/2014	Completed
M-045-91F-T04	Provide Report on 100-Series SSTs as having Leaked in RPP-32681	12/26/2014		On Schedule
M-045-61	Phase 2 RCRA Facility Investigation/Corrective Measures Study	12/31/2014		To Be Missed
M-045-86H	Submit Retrieval Data Report to Ecology for C-110	01/29/2015	08/06/2014	Completed
M-045-91G-T04	Provide AOR Final Doc. for SSTs on 55,000 Gallon Tanks	01/30/2015		On Schedule
M-045-91B-T01	Provide Ecology report on the Concrete Core from Tank A-106 or alt	01/31/2015		On Schedule
M-045-91F-T02	Provide Report of Liner Failures for SSTs	03/31/2015		On Schedule
M-062-45-T01	Comp. Neg's 6-Mo After Last Issuance of System Plan	04/30/2015		On Schedule
M-062-45-ZZ	Negotiate a One Time Supplemental Treatment Selection	04/30/2015		On Schedule
M-062-45-ZZ-A	Convert M-062-31-T01 Thru M-062-34-T01 to Interim Milestones	04/30/2015		On Schedule
M-045-91F	Provide Summary Conclusions Report on Leak Integrity	06/30/2015		On Schedule
M-045-62	Phase 2 Corrective Measures Implementation Work Plan For WMA-C	06/30/2015		To Be Missed
M-045-92O	Barrier 3 Design/Monitoring Approval From Ecology	06/30/2015		On Schedule
M-045-91G	Provide Summary Conclusions Report of AOR for SSTs	07/28/2015		On Schedule
M-045-56K	Ecology and DOE Agree, at a Minimum, to Meet Yearly (By July)	07/31/2015		On Schedule
M-045-91H	Submit Change Pkg (if necessary) to est. Additional Milestones	07/31/2015		On Schedule
M-045-82	Submit Comp. Permit Modification Request for Tiers 1,2,3	09/30/2015		To Be Missed

AOR = Analyses of Record.

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

CR = change request.

DOE = U.S. Department of Energy.

Ecology = Washington State Department of Ecology.

RCRA = Resource Conservation and Recovery Act.

SST = single-shell tank.

TPA = Tri-Party Agreement.

WMA-C = Waste Management Area C.

## System Plan

**M-062-40C, Select a minimum of three scenarios that will be analyzed in the system plan,**  
Due: December 15, 2013, Status: Completed on December 12, 2013.

**M-062-40D, Submit a system plan describing the disposition of all tank waste managed by ORP,**  
Due: October 31, 2014, Status: On schedule.

**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: On schedule.

### Significant Past Accomplishments:

1. On October 24, 2013, Washington State Department of Ecology (Ecology) and U.S. Department of Energy (DOE), Office of River Protection (ORP) signed the Tri-Party Agreement (TPA) Change Control Form M-62-13-02, moving out the due date for this embedded milestone from October 31, 2013 to December 15, 2013, for selection of three, or more, scenarios to be modeled in the System Plan.
2. Ecology has defined five scenarios to be analyzed in System Plan 7. Washington River Protection Solutions LLC (WRPS) has included a description of each scenario in the Selected Scenarios for the River Protection Project System Plan, Rev. 7 document released to ORP on December 4, 2013. See joint ORP and Ecology letter 13-TPD-0070, dated December 12, 2013, for completion and description of M-062-40C scenarios.
3. Detailed assumption review was completed, and has been approved by Ecology.
4. On February 11, 2014, DOE-ORP transmitted a letter (14-TPD-0003) to Washington River Protection Solutions LLC in response to letter (WRPS-1400313) to approve the use of Ecology's Appendix B, "Key Assumptions and Success Criteria," for the ORP 11242, River Protection Project System Plan, Rev. 7.
5. On February 13, 2014 Washington State Department of Ecology presented the five selected scenarios to the Hanford Advisory Board Tank Waste Committee.
6. Ecology, DOE-ORP and WRPS reviewed and provided comments for sections 1 and 2 of the System Plan 7 during the week of February 17, 2014.
7. Ecology, DOE-ORP and WRPS reviewed and provided comments for section 3 of the System Plan 7 during the week of March 21, 2014.
8. Ecology, DOE-ORP and WRPS reviewed and provided comments for Appendix C of the System Plan 7 during the week of April 1, 2014.
9. During the week of April 28, 2014, WRPS and DOE-ORP facilitated meetings for Ecology to define detail spending assumptions for Case 5.
10. On July 29, 2014, WRPS Case authors presented the results of the five cases to Ecology and DOE-ORP.

### Significant Planned Actions in the Next 6 Months:

- Review System Plan Rev. 7
- Issue System Plan Rev. 7

### 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: On Schedule. Created by TPA Change Control Form M-90-12-02, signed by ORP and Ecology on November 19, 2012, to “Submit to Ecology, a Conceptual Design Report Package (Critical Decision-1) for the Interim Hanford Storage Project (storage of the first two years of Hanford Site Immobilized High-Level Waste from WTP operations) and a TPA Change Request (in accordance with TPA Action Plan Section 12.0) to submit to Ecology, a Preliminary Design Report package (Critical Decision-2).”

**M-090-00, Acquire/Modify Facilities for Storage of Immobilized High-Level Waste (IHLW)**, Due: December 31, 2019, Status: On schedule.

**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: On Schedule. Created by TPA Change Control Form M-47-12-02, signed by ORP and Ecology on November 19, 2012, to “Submit to Ecology, a Conceptual Design Report package (Critical Decision-1) for the Secondary Liquid Waste Treatment Project and a TPA Change Request (in accordance with TPA Action Plan Section 12.0) to submit to Ecology, a Preliminary Design Report package (Critical Decision-2).”

**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: On schedule.

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

ORP and Ecology signed TPA Change Packages M-47-14-01 and M-90-14-01 on July 14, 2014 moving the due date for M-047-07 and M-090-13 to March 31, 2016.

#### **Significant Planned Actions in the Next 6 Months:**

None.

#### **Issues:**

None.

**Supplemental Treatment and Part B Permit Applications**

**M-062-40ZZ, Submit a one-time Tank Waste Supplemental Treatment Technologies Report if a supplemental treatment technology is proposed other than a second Low-Activity Waste (LAW), Due: October 31, 2014, Status: Deleted.\***

**M-062-45ZZ (designation for M-062-45 item #3), Negotiate a one-time supplemental treatment selection, Due: April 30, 2015, Status: On schedule. Negotiations are not yet underway.**

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

**M-062-31-T01, Complete final design and submit Resource Conservation and Recovery Act Part B permit modification request, Due: April 30, 2016, Status: On schedule.**

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

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

**M-062-45XX, 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: On schedule.**

**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:**

\*Per ORP letter 14-TF-0052, signed by ORP on May 6, 2014 and provided to Ecology on May 7, 2014, ORP documented the ORP/Ecology discussions for the One-Time Hanford Tank Waste Supplemental Treatment Technologies Report and that ORP does not intend to submit this report. ORP received Ecology's response letter, 14-NWP-110, on May 29, 2014. ORP Letter 14-TF-0088, dated and delivered to Ecology on July 31, 2014, submitted a signed TPA Change Package to delete the requirement of the One-Time Hanford Tank Waste Supplemental Treatment Technologies Report from TPA Milestone M-062-40. Ecology signed TPA Change Package M-62-14-01 deleting M-062-40ZZ on August 12, 2014.

**Significant Planned Actions in the Next 6 Months: None.**

**Issues: None.**

**242-A Evaporator Status**  
(previously reported under Milestone M-48, which has been closed out)

**242-A Evaporator Status:**

The 242-A campaign strategy for fiscal year (FY) 2010 through FY 2015 depicted in the following table has been updated based on ORP-11242, *River Protection Project Plan* and ongoing schedule integration efforts.

Fiscal Year	Campaign No.	Feed Source	Slurry Tank	Comments
FY 2010	10-01	AW-106	AW-106	Campaigns 10-01/10-02 were performed back-to back starting in late August and completing in early October 2010. Campaign 10-02 was an acceleration of previously planned Campaign 11-01.
FY 2010	10-02	AW-106	AW-106	
FY 2011	NA	NA	NA	No campaign conducted in FY 2011 due to ongoing 242-A and tank farm facility life extension and <i>American Recovery and Reinvestment Act</i> funded upgrades.
FY 2012	NA	NA	NA	No campaign conducted in FY 2012 due to ongoing 242-A and tank farm facility upgrades and revision to the 242-A Documented Safety Analysis.
FY 2013	NA	NA	NA	No campaigns to be conducted in FY 2013 due to ongoing 242-A and tank farm facility upgrades and revision to the 242-A Documented Safety Analysis.
FY 2014	13-01	AP-107	AP-107	Estimated start late August to early September 2014. Requires two passes to achieve waste volume reduction.
FY 2014	14-01	AW-106	AP-107	Estimated start November 2014.
FY 2015	14-02	AZ-102	AP-103	Estimated start February 2015.
FY 2015	14-03	AW-106	AP-103	Estimated start March 2015.
FY 2015	15-01	AZ-102	AP-103	Estimated start June 2015.

FY = fiscal year.

NA = not applicable.

On August 11, 2014, the DOE-ORP Readiness Assessment Team presented their findings at the WRPS Exit Briefing. Discussions addressed four WRPS Pre-Start Findings; four WRPS and one DOE Post-Start Findings; eight WRPS and three DOE Observations; and Notable Practices also.

The DOE RA Final Report is scheduled to be issued by August 13, 2014. Tentatively, the Evaporator Campaigns are scheduled to begin in the last quarter of FY2014.

## Double-Shell Tank System Update

### Ultrasonic Testing

- The final UT report for AP-106 is being finalized.
- Vendor is completing system integration of the Phased Array (PAUT)-Electro Magnet Acoustic Transducer (EMAT) equipment. Performance demonstration testing is planned in September 2014 at PNNL.

### Visual Inspection

- Continuing weekly inspections of AY-102 Risers 77, 83, and 87.
- Continuing monthly comprehensive inspection of AY-102 annulus.
- Completed the FY14 comprehensive annulus inspections of tanks AP-101, AP-107, AN-102, AN-107, and AW-105. Completed annulus inspections of AP-104 and AP-106 via four risers.

## Single-Shell Tank Integrity Assurance

**M-045-91G-T03, Provide to Ecology the structural analyses of record final documentation for single-shell tanks (SST) for 1,000,000 gallon tanks (A, AX, and SX Farms), Due: October 31, 2014, Status: Completed. See ORP Letter 14-TF-0074, dated July 7, 2014.**

**M-045-91F-T04, Provide to Ecology, as a Hanford Federal Facility Agreement and Consent Order secondary document, a report on the 100-series SSTs, which have been or will be identified as having leaked in RPP-32681, Rev. 0, Due: December 26, 2014, Status: On schedule.**

**M-045-91G-T04, Provide to Ecology the structural analyses of record final documentation for SSTs for 55,000 gallon tanks (B , C , T , and U Farms), Due: January 30, 2015, Status: On schedule.**

**M-045-91B-T01, Provide Ecology a report containing the results and interpretation of testing and analysis, performed on the concrete core obtained from Tank A-106 or an alternate tank, Due: January 31, 2015, Status: On schedule.**

**M-045-91F-T02, Provide to Ecology as a Hanford Federal Facility Agreement and Consent Order secondary document a report evaluating the common factors of liner failures for SSTs that have leaked and will provide recommendations as appropriate, such as enhanced leak detection, monitoring, and mitigation, Due: March 31, 2015, Status: On schedule.**

**M-045-91F, Provide to Ecology a report (Summary Conclusions Report on Leak Integrity) summarizing and evaluating the information submitted under M-045-91F-T01 through M-045-91F-T04, Due: June 30, 2015 Status: On schedule.**

**M-045-91G, Provide a Summary Conclusions Report of Structural Analysis of Record for SSTs, Due: July 28, 2015, Status: On schedule.**

**M-045-91H, Submit a change package (if deemed necessary by DOE and Ecology) to establish additional milestones based on information obtained from the actions in the preceding M-045-91 series of milestones to date, Due: July 31, 2015, Status: On schedule.**

**M-045-91I, Provide to Ecology an Independent, Qualified, Registered Professional Engineer (IQRPE) certification of SSTs 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:**

- The leak cause and location analysis for 241-TX Farm, RPP-RPT-54917 was approved for External Clearance and Released.
- In support of M-045-91B-T01, destructive testing of the concrete core specimens from the sidewall of SST A-106 was successfully performed last week by CTL Group in Skokie, IL. The testing included determination of elastic modulus, Poisson's ratio, and compressive strength. The testing indicated favorable results with values generally greater (and in many cases significantly greater) than expected. Detailed comparison with the values used in the analysis of record (and with those originally specified) will be performed when the data report is received.

**Significant Planned Actions in the Next 6 Months:**

- Issue report on testing of the Tank A-106 sidewall.
- Issue leak cause and location summary report and SST leak rate analysis.
- An SSTIP Expert Panel meeting is scheduled for the August 28 and 29 in Richland.

**Issues:**

None.

## In Tank Characterization and Summary

For the period from July 1 through July 31, 2014:

### Accomplishments:

- Completed RPP-RPT-46616, *Derivation of Best-Basis Inventory for Tank 241-C-104 as of April 1, 2014*, Rev 6.
- Completed RPP-RPT-45147, *Derivation of Best-Basis Inventory for Tank 241-C-108 as of April 1, 2014*, Rev 4.
- Completed RPP-RPT-51343, *Derivation of Best-Basis Inventory for Tank 241-C-109 as of April 1, 2014*, Rev 4.
- Completed RPP-RPT-44639, *Derivation of Best-Basis Inventory for Tank 241-AP-104 as of April 1, 2014*, Rev 9.
- Completed RPP-RPT-52180, *Derivation of Best-Basis Inventory for Tank 241-SX-106 as of April 2, 2014*, Rev 1.
- Completed RPP-RPT-56866, *Derivation of Best-Basis Inventory for Tank 241-A-103 as of April 1, 2014*, Rev 0.
- Completed RPP-PLAN-57535, *Sampling and Analysis Plan for 242-A Process Condensate*, Rev 0.
- Completed RPP-PLAN-58022, *Sampling and Analysis Plan for 242-A Evaporator Cooling Water and Steam Condensate*, Rev 0.
- RPP-RPT-57968, *Final Report for Tank 241-AY-102A Leak-Detection Pit Liquid Grab Samples June 2014*, was released July 16, 2014.
- Completed monthly 241-AY-102A Leak-Detection Pit liquid grab sampling on July 7, 2014. Three samples were received at the lab.
- Completed 241-C-112 clamshell sampling July 11, 2014. One sample was received at the lab.

### Planned Action within the Next 6 Months:

#### *Tank sampling:*

- Tank 241-AZ-102 grab sampling (Evaporator campaign 14-02) scheduled for August 2014.
- Monthly 241-AY-102A LDP grab sampling is currently scheduled for the months of August and September 2014.
- Tank 241-AN-101 for C-102/C-112 retrievals planned for August 2014.
- Tank 241-SY-102, 1<sup>st</sup> core sample (Riser #20) is currently scheduled for September 2014.
- Tank 241-SY-102, 2<sup>nd</sup> core sample (Riser #4) is currently scheduled for October 2014.
- Tank 241-C-112 closure clamshell or fingertrap sampling is currently planned for October 2014.
- Tank 241-AW-106 (Evaporator campaign 14-03) is currently planned for October 2014.
- Tank 241-C-107 closure drag sample is currently planned for October 2014.

- Tank 241-C-105 MARS-V drag sampling is currently planned for October 2014.
- Tank 241-C-101 ORSS closure sampling is currently planned for October 2014.
- Tank 241-AN-106 at 100% C-105 retrieval planned for December 2014.
- Tank 241-AZ-102 (Evaporator campaign 15-01) planned for December 2014.
- Tank 241-AY-101 (Evaporator campaign 15-02) planned for January 2015.

**Multi-Media sampling:**

- 241-AZ-301 annual condensate sampling is currently planned for September 2014.

**Best-Basis Inventory (BBI) updates:**

The following tanks were identified for BBI updates in FY 2014 Quarter 3 but have been deferred. These tanks will be included in the list of FY 2014 Quarter 4 tanks for BBI updates that is currently being developed.

- 241-AW-102
- 241-BX-101
- 241-BX-110
- 241-BY-102
- 241-S-111

**Data Quality Objectives (DQO):**

A screening DQO is in-process to obtain data from tank stacks on the odorous tank vapors reported by tank farm workers.

**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.

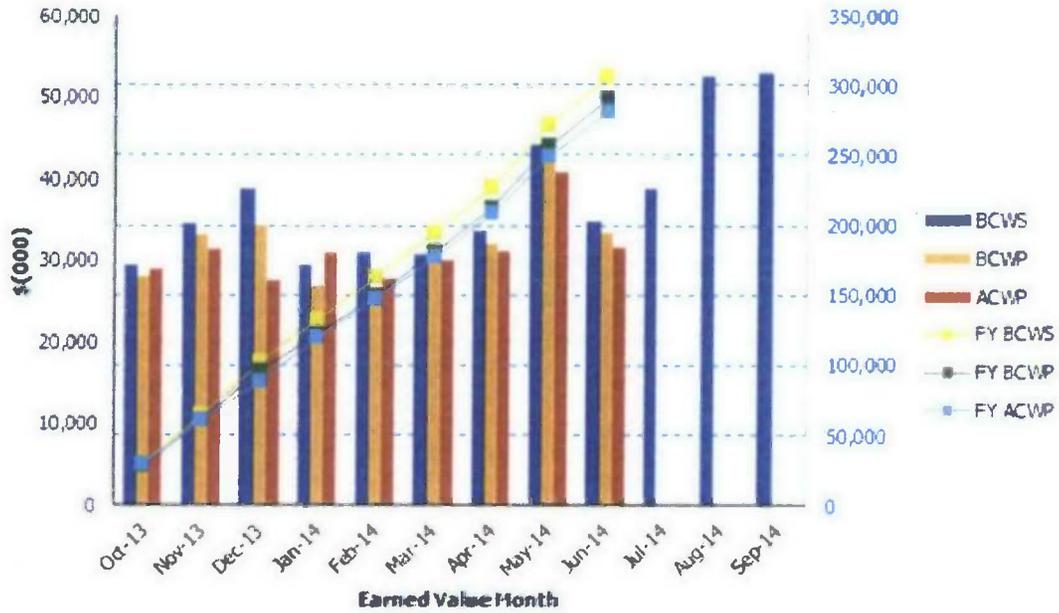
As of June 30, 2014, Washington River Protection Solutions LLC, the Tank Operations Contractor, has worked 104 days without a lost time workday injury and 32 days since the last recordable case. There was no recordable case in the month of June.

June-14										
	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
CM	34,705.6	33,423.7	31,594.5	(1,282.0)	1,829.1	0.96	1.06			
FYTD	306,197.8	290,114.1	280,479.8	(16,083.7)	9,634.3	0.93	1.03	449,661.4	423,357.7	26,303.7
CTD	2,197,941.7	2,181,857.9	2,172,223.6	(16,083.7)	9,634.3	0.99	1.00	3,193,371.9	3,175,195.9	18,176.0

Red shaded cells indicates a SPI/CPI less than 0.90  
 Green shaded cells indicate a SPI/CPI between 0.90 and 0.99  
 Blue shaded cells indicate a SPI/CPI greater than or equal to 1.0.

**Tank Farms ORP-0014**

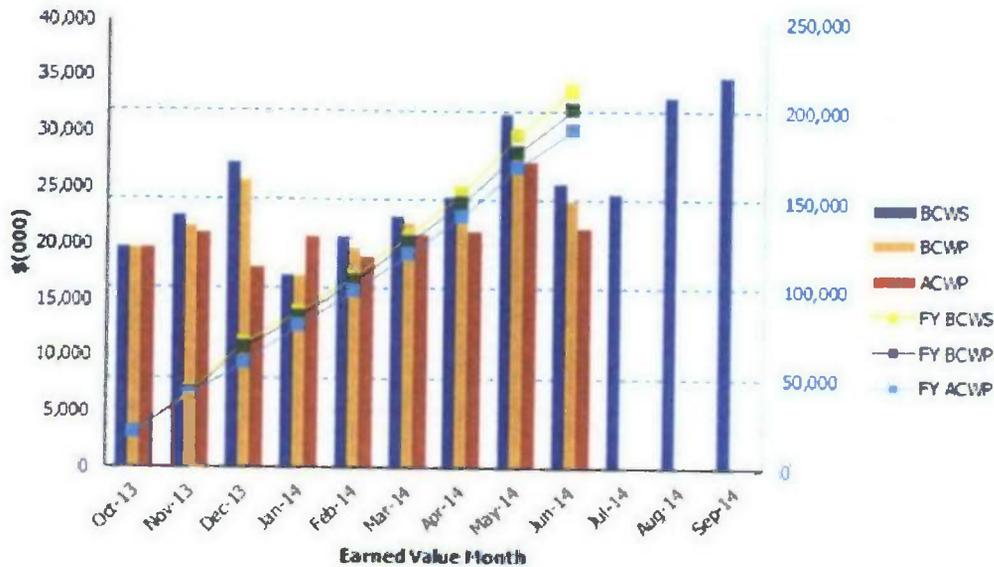
EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2013	\$29,474	\$27,946	\$29,015	0.95	0.96	\$29,474	\$27,946	\$29,015	0.95	0.96
Nov 2013	\$34,535	\$33,081	\$31,448	0.96	1.05	\$64,009	\$61,027	\$60,463	0.95	1.01
Dec 2013	\$38,698	\$34,362	\$27,634	0.89	1.24	\$102,706	\$95,389	\$88,096	0.93	1.08
Jan 2014	\$29,325	\$26,999	\$30,991	0.92	0.87	\$132,032	\$122,388	\$119,087	0.93	1.03
Feb 2014	\$30,875	\$26,774	\$27,782	0.87	0.96	\$162,907	\$149,162	\$146,869	0.92	1.02
Mar 2014	\$30,709	\$31,870	\$30,045	1.04	1.06	\$193,616	\$181,032	\$176,914	0.94	1.02
Apr 2014	\$33,608	\$32,120	\$31,172	0.96	1.03	\$227,224	\$213,152	\$208,086	0.94	1.02
May 2014	\$44,269	\$43,538	\$40,799	0.98	1.07	\$271,492	\$256,690	\$248,885	0.95	1.03
Jun 2014	\$34,706	\$33,424	\$31,595	0.96	1.06	\$306,198	\$290,114	\$280,480	0.95	1.03
Jul 2014	\$38,860									
Aug 2014	\$52,413									
Sep 2014	\$52,860									
<b>CTD</b>	<b>\$2,197,942</b>	<b>\$2,181,858</b>	<b>\$2,172,224</b>	<b>0.99</b>	<b>1.00</b>					

**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 2013	\$19,628	\$19,630	\$19,598	1.00	1.00	\$19,628	\$19,630	\$19,598	1.00	1.00
Nov 2013	\$22,525	\$21,675	\$21,051	0.96	1.03	\$42,153	\$41,305	\$40,649	0.98	1.02
Dec 2013	\$27,266	\$25,724	\$18,016	0.94	1.43	\$69,419	\$67,029	\$58,664	0.97	1.14
Jan 2014	\$17,246	\$17,269	\$20,778	1.00	0.83	\$86,664	\$84,298	\$79,443	0.97	1.06
Feb 2014	\$20,732	\$19,631	\$18,894	0.95	1.04	\$107,396	\$103,929	\$98,337	0.97	1.06
Mar 2014	\$22,587	\$21,924	\$20,834	0.97	1.05	\$129,983	\$125,853	\$119,170	0.97	1.06
Apr 2014	\$24,256	\$22,528	\$21,164	0.93	1.06	\$154,238	\$148,381	\$140,334	0.96	1.06
May 2014	\$31,690	\$28,630	\$27,412	0.90	1.04	\$185,929	\$177,011	\$167,777	0.95	1.06
Jun 2014	\$25,451	\$23,901	\$21,476	0.94	1.11	\$211,380	\$200,912	\$189,252	0.95	1.06
Jul 2014	\$24,492									
Aug 2014	\$33,302									
Sep 2014	\$34,991									
CTD	\$1,416,995	\$1,442,446	\$1,431,978	1.02	1.01					

**Base Operations and Tank Farm Projects**

The current month favorable cost variance (CV) of \$2,425K is primarily due to:

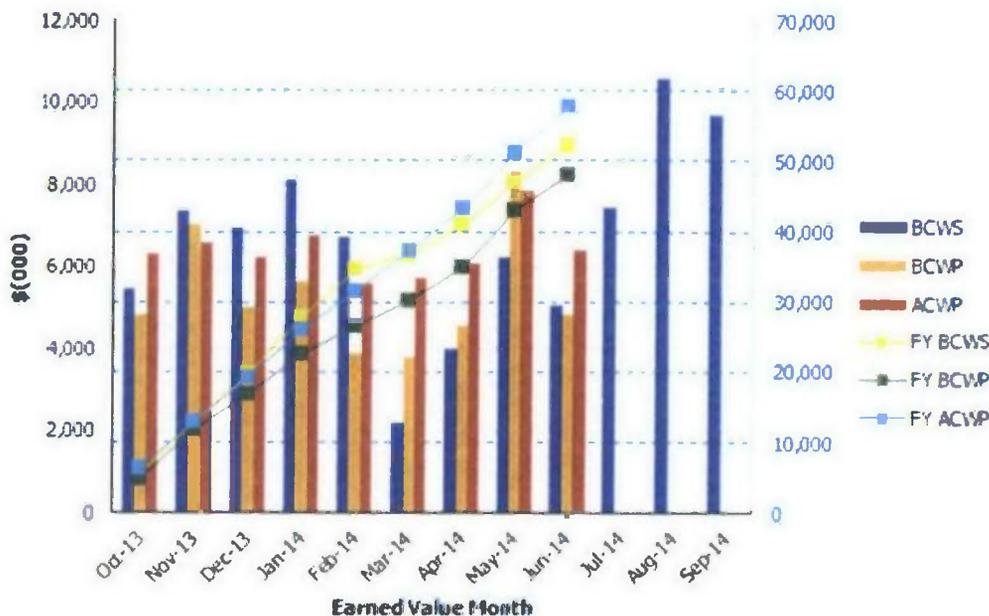
- Less laboratory and chemists were needed to accomplish testing and analysis at 222-S.
- Asbestos abatement planned for DST Integrity work not required.
- A credit to the spares account due to an overcharge.

The current month unfavorable schedule variance (SV) of (\$1,550K) is due to the following:

- Delay in performing the 242-A Readiness Assessment and unplanned corrective maintenance activities on the Pump Room Jumper.
- Delay in performing DST transfers caused by the 242-A Evaporator Campaign.
- AW and AN Farm electrical upgrades and freeze protection delays.
- AY-102 pit and riser video examinations due to lack of industrial hygiene support.

**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 2013	\$5,483	\$4,823	\$6,336	0.88	0.76	\$5,483	\$4,823	\$6,336	0.88	0.76
Nov 2013	\$7,366	\$7,054	\$6,609	0.96	1.07	\$12,849	\$11,876	\$12,945	0.92	0.92
Dec 2013	\$6,970	\$5,002	\$6,231	0.72	0.80	\$19,820	\$16,878	\$19,176	0.85	0.88
Jan 2014	\$8,102	\$5,661	\$6,765	0.70	0.84	\$27,922	\$22,539	\$25,941	0.81	0.87
Feb 2014	\$6,726	\$3,914	\$5,602	0.58	0.70	\$34,647	\$26,453	\$31,543	0.76	0.84
Mar 2014	\$2,201	\$3,805	\$5,729	1.73	0.66	\$36,849	\$30,258	\$37,273	0.82	0.81
Apr 2014	\$4,000	\$4,558	\$6,079	1.14	0.75	\$40,848	\$34,816	\$43,352	0.85	0.80
May 2014	\$6,255	\$8,331	\$7,855	1.33	1.06	\$47,103	\$43,146	\$51,207	0.92	0.84
Jun 2014	\$5,055	\$4,826	\$6,413	0.95	0.75	\$52,158	\$47,972	\$57,621	0.92	0.83
Jul 2014	\$7,437									
Aug 2014	\$10,588									
Sep 2014	\$9,711									
CTD	\$478,997	\$474,811	\$484,460	0.99	0.98					

**Retrieval and Close Single-Shell Tanks**

The current month unfavorable cost variance (CV) of **(\$1,588K)** is due to:

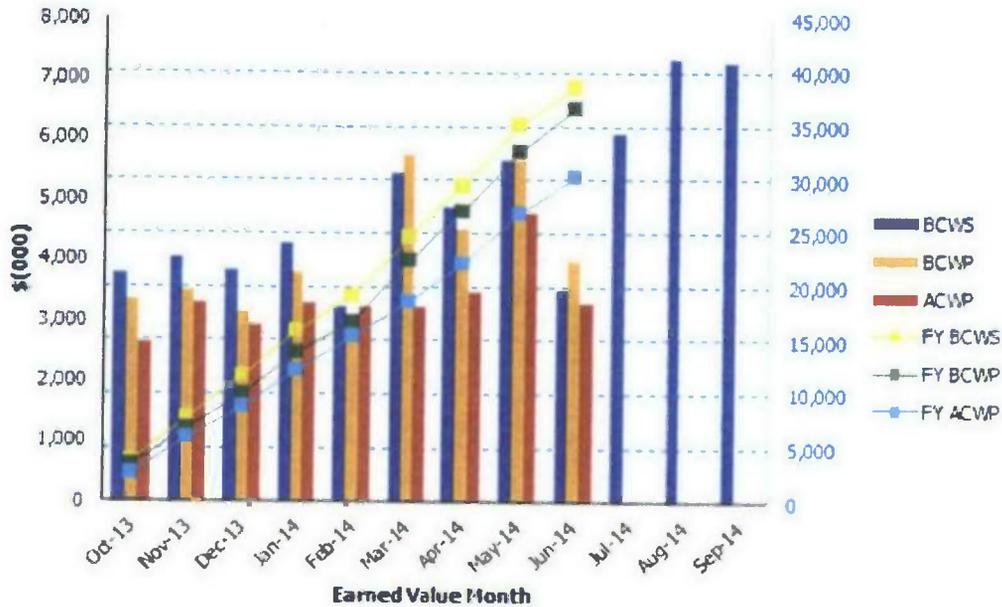
- Additional costs incurred to install and test unplanned freeze protection skids at C-105.
- C-105 Operational Acceptance Test took longer than planned due to procedure changes.
- Additional cost incurred at C-102 due to limited DST space limitations.

The current month unfavorable schedule variance (SV) of **(\$229K)** is due to:

- Issues with the waste accumulation tank level proves impacted the operations acceptance testing completion and limited the operating efficiency of the MARS-V at C-105.
- Delays in completing and approving the AX Farm work package due to recent vapor issues which required additional work for Interim Barrier Characterization.
- Delays in the review of the next generations MARS-V design document. These delays are due to focus on C-105 troubleshooting and repairs.

**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 2013	\$3,766	\$3,335	\$2,640	0.89	1.26	\$3,766	\$3,335	\$2,640	0.89	1.26
Nov 2013	\$4,041	\$3,488	\$3,295	0.86	1.06	\$7,807	\$6,824	\$5,934	0.87	1.15
Dec 2013	\$3,813	\$3,150	\$2,941	0.83	1.07	\$11,620	\$9,973	\$8,875	0.86	1.12
Jan 2014	\$4,282	\$3,803	\$3,277	0.89	1.16	\$15,902	\$13,776	\$12,152	0.87	1.13
Feb 2014	\$3,225	\$2,926	\$3,239	0.91	0.90	\$19,126	\$16,702	\$15,391	0.87	1.09
Mar 2014	\$5,438	\$5,757	\$3,240	1.06	1.78	\$24,565	\$22,459	\$18,631	0.91	1.21
Apr 2014	\$4,876	\$4,507	\$3,480	0.92	1.30	\$29,441	\$26,966	\$22,112	0.92	1.22
May 2014	\$5,651	\$5,649	\$4,780	1.00	1.18	\$35,092	\$32,626	\$26,892	0.93	1.21
Jun 2014	\$3,497	\$3,991	\$3,300	1.14	1.21	\$38,588	\$36,617	\$30,192	0.95	1.21
Jul 2014	\$6,091									
Aug 2014	\$7,323									
Sep 2014	\$7,264									
CTD	\$254,833	\$252,861	\$246,436	0.99	1.03					

**Waste Feed Delivery/Treatment/Double-Shell Tank Closure**

The current month favorable cost variance (CV) of \$690K is due to:

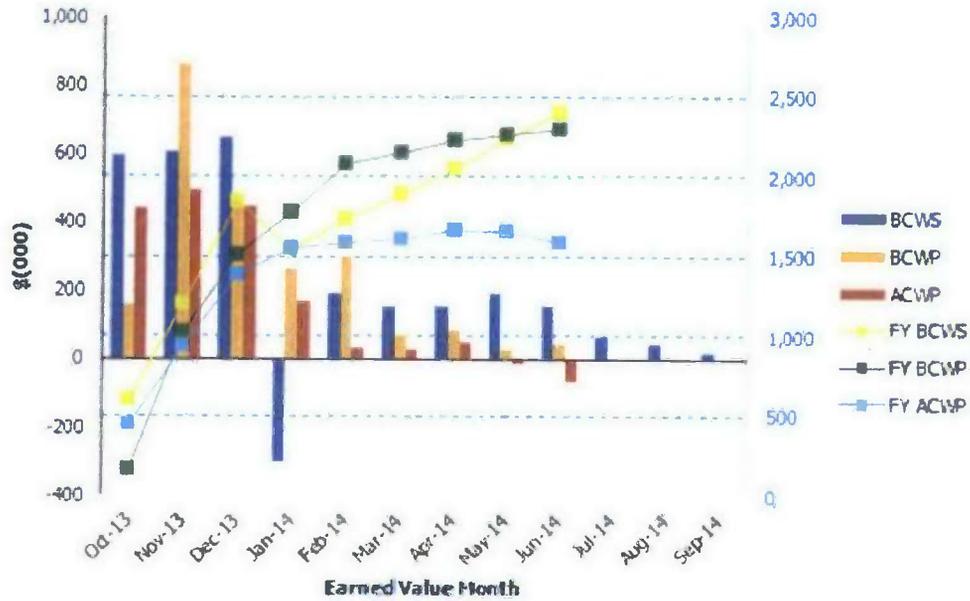
- Fewer resources required for WTP Interface Management and WTP TOC Integrated Readiness support than planned due to utilizing experienced personnel with knowledge of scope.

The current month favorable schedule variance (SV) of \$494K is due to:

- Continued delay in the readiness of the core sampling platform causing a 5 month delay to sampling activities at DST SY-102.
- Slow resource (sub-contractor) ramp up of the development and qualification tasks, adsorption-desorption measurements and Hydrogeological data work scope for IDF Glass Testing being performed by PNNL.

**Tank Farms ORP-0014  
Supplement Treatment 5.04**

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 2013	\$597	\$158	\$441	0.26	0.36	\$597	\$158	\$441	0.26	0.36
Nov 2013	\$603	\$864	\$494	1.43	1.75	\$1,200	\$1,022	\$934	0.85	1.09
Dec 2013	\$648	\$486	\$446	0.75	1.09	\$1,848	\$1,508	\$1,380	0.82	1.09
Jan 2014	(\$304)	\$266	\$171	-0.88	1.56	\$1,544	\$1,775	\$1,551	1.15	1.14
Feb 2014	\$194	\$302	\$34	1.56	8.91	\$1,737	\$2,077	\$1,585	1.20	1.31
Mar 2014	\$153	\$68	\$29	0.45	2.36	\$1,890	\$2,145	\$1,614	1.14	1.33
Apr 2014	\$153	\$85	\$51	0.56	1.67	\$2,043	\$2,230	\$1,665	1.09	1.34
May 2014	\$191	\$26	-\$13	0.14	-1.98	\$2,234	\$2,256	\$1,652	1.01	1.37
Jun 2014	\$156	\$43	-\$67	0.28	-0.64	\$2,390	\$2,299	\$1,585	0.96	1.45
Jul 2014	\$66									
Aug 2014	\$42									
Sep 2014	\$18									
CTD	\$19,983	\$19,892	\$19,179	1.00	1.04					

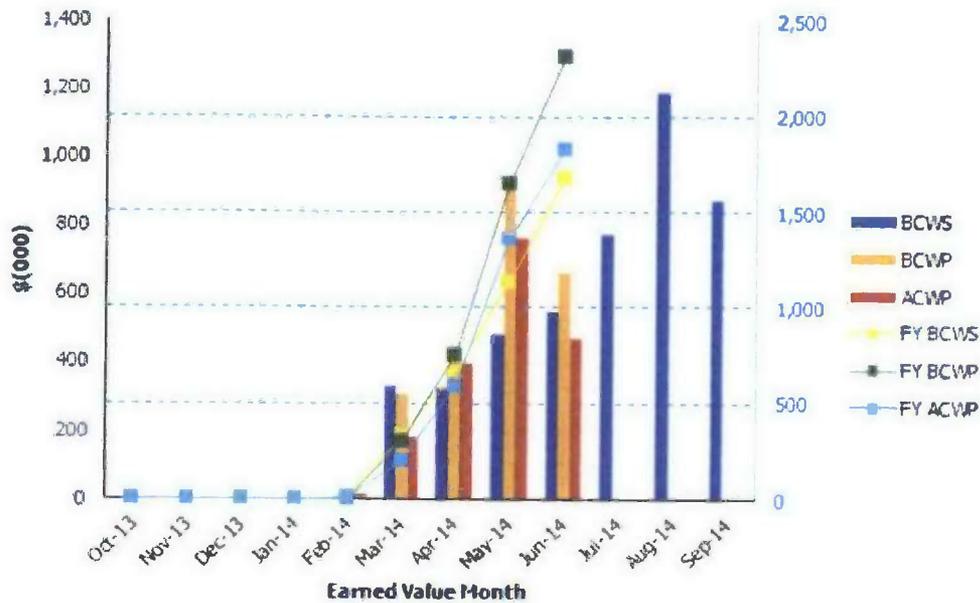
**Supplemental Treatment**

The current month favorable cost variance (CV) of \$109K is within threshold.

The current month unfavorable schedule variance (SV) of (\$113K) is with threshold.

**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 2013	\$0	\$0	\$0	0.00	0.00	\$0	\$0	\$0	0.00	0.00
Nov 2013	\$0	\$0	\$0	0.00	0.00	\$0	\$0	\$0	0.00	0.00
Dec 2013	\$0	\$0	\$0	0.00	0.00	\$0	\$0	\$0	0.00	0.00
Jan 2014	\$0	\$0	\$0	0.00	0.00	\$0	\$0	\$0	0.00	0.00
Feb 2014	\$0	\$0	\$0	0.00	0.00	\$0	\$0	\$0	0.00	0.00
Mar 2014	\$330	\$306	\$183	0.93	1.67	\$330	\$306	\$196	0.93	1.56
Apr 2014	\$324	\$443	\$397	1.37	1.11	\$653	\$748	\$593	1.15	1.26
May 2014	\$482	\$903	\$765	1.88	1.18	\$1,135	\$1,651	\$1,358	1.45	1.22
Jun 2014	\$547	\$664	\$472	1.21	1.41	\$1,682	\$2,315	\$1,830	1.38	1.27
Jul 2014	\$775									
Aug 2014	\$1,188									
Sep 2014	\$874									
CTD	\$1,682	\$2,315	\$1,830	1.38	1.27					

**Treat Waste**

The current month favorable cost variance (CV) of \$192K is due to:

- Efficiencies in revising the LAWPS design documents due to using experienced engineers.

The current month favorable schedule variance (SV) of \$117K is due:

- Acceleration of LAWPS conceptual design activities.

## Work Breakdown Structure 5.2 Retrieve and Close Single-Shell Tanks

**M-045-22, Review M-045-22-T03 Report and Determine Path Forward**, Due: September 30, 2014, based on M-045-20 TPA Change Package M-45-12-05, Status: On schedule. This ORP/Ecology decision point will determine whether to continue with soil desiccation/contaminant removal testing and other interim measures, and if the remaining work in Milestone M-045-92 should be modified. See ORP letter 13-TF-0014, dated March 18, 2013 and TPA Change Package M-45-12-05 (approved on April 1, 2013) for more information.

**M-045-22-T01, Submit Results of Vadose Zone Characterization of 241-TX to Ecology**, Due: September 30, 2014, based on M-045-20 TPA Change Package M-45-12-05, Status: On schedule.

**M-045-22-T02, Submit Results of Vadose Zone Characterization of 241-U to Ecology**, Due: April 30, 2014, based on M-045-20 TPA Change Package M-45-12-05, Status: Complete. ORP submitted this deliverable to ECY on February 20, 2014, via letter 14-TF-0015.

**M-045-22-T03, Submit SX Soil Desiccation/Contaminate Removal Tech Results to Ecology**, Due: July 31, 2014, based on M-045-20 TPA Change Package M-45-12-05, Status: Complete. ORP submitted this deliverable to ECY on May 15, 2014, via letter 14-TF-0054.

**M-045-56J, Complete Implementation of Agreed to Interim Measures**, Due: July 31, 2014, Status: Complete. The M-045-56 annual meeting was held on July 22, 2014 and meeting minutes are in the review process.

**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: On schedule.

**M-045-61, Submit to Ecology for review and approval as an Agreement primary document a Phase 2 RCRA Facility Investigation/Corrective Measures Study Report for WMA Area C (WMA-C)**, Due: December 31, 2014, Status: To be missed. Please see issues.

**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: June 30, 2015, Status: To be missed. Please see issues.

**M-045-92, Complete Installation of Four (4) Additional Interim Barriers** (see interim milestones below), Due: October 31, 2017, Status: On schedule. TPA Change Package M-45-12-04 describes these milestones and how the process to move forward with construction/design of additional barriers will depend on discussions and decisions per TPA Milestone M-045-22.

**M-045-92N, Construct Barriers 1 and 2 in 241-SX Farm**, Due: October 31, 2015, Status: On schedule. The decision to move forward with construction/design of additional barriers is dependent on discussions per M-045-22.

**M-045-920, Submit a Final Design and Monitoring Plan for Interim Barrier 3, Due:** June 30, 2015, Status: On schedule. The decision to move forward with construction/design of additional barriers is dependent on discussions per M-045-22.

**Significant Past Accomplishments:**

- Automated data collection systems for T Farm and TY Farm interim barrier monitoring continue gathering data
- Pore water extraction test south of SX Farm under the M-045-20 work plan has been completed and the report provided to ECY to complete M-045-22-T03
- Data collection in U Farm for electrical resistivity characterization was completed. Data analysis and reporting was completed, and the report provided to ECY to complete M-045-22-T02
- Direct-push field work in TX Farm under the M-045-20 work plan and M-045-21 sampling and analysis plan has been completed. Sample analysis has been completed and the final report is being prepared.
- Documentation of the WMA-C Phase 2 Resource Conservation and Recovery Act Facility Investigation Report continues.

**Significant Planned Actions in the Next 6 Months:**

- Issue the report on the results of soil characterization in TX farm to meet TPA Target Date M-045-22-T01.
- Complete documentation of the WMA-C Phase 2 Resource Conservation and Recovery Act Facility Investigation Report.

### **SST Retrieval and Closure Program**

**M-045-82, Submit complete permit mod requests for Tiers 1, 2, and 3 of the SST, Due:** September 30, 2015, Status: To be missed. Please see issues.

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

**M-045-83, Complete the closure of WMA-C, Due:** June 30, 2019, Status: On schedule.

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

**M-045-70, Complete waste retrieval from all remaining SSTs, Due:** December 31, 2040, Status: On schedule.

**M-045-00, Complete closure of all SST farms, Due:** January 31, 2043, Status: On schedule.

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

- M-045-86C: Retrieval Data Report for C-104 was due March 21, 2014. Completed on February 18, 2014 with letter 14-TF-0013
- M-045-86F: Retrieval Data Report for C-108 was due May 1, 2014. Completed on November 27, 2013 with letter 13-TF-0120
- M-045-86G: Retrieval Data Report for C-109 was due June 4, 2014. Completed on March 13, 2014 with letter 14-TF-0020
- M-045-86H: Retrieval Data Report for C-110 was due January 29, 2015. Completed on August 6, 2014 with letter 14-TF-0086.

**Significant Past Accomplishments:**

- Submitted the Retrieval Data Report for C-110
- Completed post-retrieval logging of the drywells near C-104, C-109, and C-110 to support the retrieval data reports
- Retrieval completion certification for C-110 was transmitted to Ecology on January 29, 2014 under ORP letter 14-TF-0007
- See discussions above and related discussions in Consent Decree report.

**Significant Planned Activities in the Next 6 Months:**

- Continue developing the WMA-C performance assessment
- Develop a draft of the Tier 1 (framework) closure plan for WMA C as required by the TPA
- See discussions above and related discussions in Consent Decree report.

**Issues:**

ORP and Ecology continue to meet to develop an integrated path forward that addresses all the deliverables associated with Milestones M-045-61, M-045-62, and M-045-82.

### Tank Waste Retrieval Work Plan Status

Tank	TWRWP	Expected Revisions	First Retrieval Technology	Second Technology	Third Technology
C-101	RPP-22520, Rev. 8	Complete	Modified Sluicing with ERSS	High-Pressure Water deployed with the ERSS	-
C-102	RPP-22393, Rev. 7	In Process	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	-
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 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:**

None.

**Significant Planned Activities in the Next 6 Months:**

None.

**Issues:**

None.

**Tank in Appendix H, "Status - Single Shell Waste Retrieval Criteria"****Tank 241-C-106****Significant Past Accomplishments:**

None.

**Significant Planned Activities in the Next 6 Months:**

Continue U.S. Nuclear Regulatory Commission (NRC) review of the C-106 exception request. A request for additional information was received from the NRC in February 2009.

**Issues:**

It has been discussed with the NRC that much of the additional information requested is dependent upon development of C Farm residual waste Performance Assessment (PA) and, therefore, cannot be provided until the PA is published.

**Tank Retrievals with Individual Milestones****Tank 241-A-103**

**M-045-15, Completion of Tank A-103 SST Waste Retrieval**, Due: September 30, 2022, Status: On schedule. Change Package M-45-11-04 replaced Tank S-102 with Tank A-103 and changed the milestone completion date for M-045-15 to September 30, 2022.

**M-045-15A, Embedded Milestone, Submit a Retrieval Data Report Pursuant to Agreement Appendix I**, Due: September 30, 2022, Status: On schedule. Updated with Tank A-103 and due date of September 30, 2022, per Change Package M-45-11-04.

**M-045-15D, Embedded Milestone, if appropriate, DOE will request an exception to waste retrieval criteria pursuant to Agreement Appendix H**, Due: September 30, 2022, Status: On schedule. Updated with Tank A-103 and due date of September 30, 2022, per Change Package M-45-11-04.

**Significant Past Accomplishments:**

Change Package M-45-11-04 was signed by ORP and Ecology on April 19, 2011.

**No significant planned activities in the next 6 months and no issues for Tank 241-A-103.**

**Tank 241-S-112**

**M-045-13, Interim Completion of Tank S-112 SST Waste Retrieval and Closure Demonstration Project**, Due: To be determined (in accordance with M-045-84 or M-045-85), Status: On schedule.

**M-045-13E, Complete Negotiations for Interim Milestones for Closure of S-112**, Due: To be determined, Status: On schedule as part of M-045-84 or M-045-85.

**Significant Past Accomplishments:**

Ecology letter of January 7, 2008, concurred with ORP that retrieval of Tank S-112 is complete.

**No significant planned activities in the next 6 months and no issues for Tank 241-S-112.**

**FINAL**

Office of River Protection  
Consent Decree 08-5085-FVS

Monthly Summary Report

August 2014

**Office of River Protection****Consent Decree 08-5085-FVS  
Monthly Summary Report****August 2014 (Monthly Summary Report/Project Earned Value Management System  
reflects June 2014 information)**

<b>Page</b>	<b>Topic</b>	<b>Leads</b>
3	Statistics/Status	James Lynch/Dan McDonald/Jeff Lyon
4	Single-Shell Tank Retrieval Program • D-00B-01, D-00B-02, D-00B-03, D-00B-04	Chris Kemp/Jeff Lyon
5	Tank Waste Retrieval Work Plan Status • Consent Decree Appendix C	Chris Kemp/Jeff Lyon
6	Single-Shell Tank Retrieval Monthly and Fiscal Year Earned Value Management System Data	Kathy Higgins/Jeff Lyon
7	Waste Treatment and Immobilization Plant Project • D-00A-06, D-00A-17, D-00A-01	Delmar Noyes/Dan McDonald
10	Pretreatment Facility • D-00A-18, D-00A-19, D-00A-13, D-00A-14, D-00A-15, D-00A-16	Wahed Abdul/Dan McDonald
13	High-Level Waste Facility • D-00A-20, D-00A-21, D-00A-02, D-00A-03	Wahed Abdul/Dan McDonald
16	Low-Activity Waste Facility • D-00A-07, D-00A-08, D-00A-09	Jeff Bruggeman/Dan McDonald
18	Balance of Facilities • D-00A-12	Jason Young/Dan McDonald
20	Analytical Laboratory • D-00A-005	

## CD Milestone Statistics/Status

Milestone	Title	Due Date	Completion Date	Status
<b>Fiscal Year 2013</b>				
D-00A-05	LAB Construction Substantially Complete	12/31/2012	12/31/2012	Completed
D-00A-12	Steam Plant Construction Complete	12/31/2012	12/31/2012	Completed
D-00A-21	Complete Construction of Structural Steel to elevation of 37 feet in HLW Fac.	12/31/2012	10/24/2012	Completed
<b>Fiscal Year 2014</b>				
D-00B-01	Complete Retrieval of Tank Waste from 10 SSTs in WMA-C	09/30/2014		Ongoing*
D-00B-02	Advise Ecology of the 9 SSTs Waste Will be Retrieved by 2022	09/30/2014	08/24/2011	Completed
<b>Fiscal Year 2015</b>				
D-00A-07	LAW Facility Construction Substantially Complete	12/31/2014		Ongoing*
D-00A-19	Complete elevation 98 feet Concrete Floor Slab Placements in PT Facility	12/31/2014		Ongoing*

**\*The United States Department of Energy (DOE) has notified the State of Washington and State of Oregon that a serious risk has arisen that DOE may be unable to meet this Consent Decree milestone.**

DOE	= U.S. Department of Energy.	LAW	= Low-Activity Waste (Facility).
Ecology	= Washington State Department of Ecology.	PT	= Pretreatment (Facility).
HLW	= High-Level Waste (Facility).	SST	= single-shell tank.
LAB	= Analytical Laboratory.	WMA-C	= C-Farm Waste Management Area.

### Consent Decree Reports/Reviews

**D-00C-01 series, Submit to State of Washington and State of Oregon Semi-Annual Report,** Due: Semi-annually – January 31 and July 31 of each year, Status: Ongoing. The July 2014 Semi-Annual Report was issued on July 31, 2014 via ORP Letter 14-ECD-0040.

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

**D-006-00-A, Meet Approximately Every Three Years after Entry of Decree to review requirements of the Consent Decree,** Held: December 10, 2013, Status: Completed.

**D-006-00-A1, Provide State of Oregon notice of meetings in D-006-00-A, etc. no less than 30 days before they are scheduled,** Sent: November 8, 2013, Status: Completed.

## Single-Shell Tank Retrieval Program

Milestone	Title	Due Date	Status
D-00B-01	Complete Retrieval of Tank Wastes from 10 Remaining SSTs in WMA-C	September 30, 2014	Ongoing*
D-00B-01A through D-00B-01J	Submit Tank Retrieval Complete Certification	TBD <sup>a</sup>	Ongoing
D-00B-02	Advise Ecology of the Nine SSTs from which Waste Will Be Retrieved by 2022	September 30, 2014	Completed
D-00B-03	Initiate Startup of Retrieval in At Least 5 of 9 SSTs in D-00B-02	December 31, 2017	Ongoing
D-00B-04	Complete Retrieval of Tank Wastes from the nine SSTs in D-00B-02	September 30, 2022	Ongoing
D-00B-04A through D-00B-04I	Submit Tank Retrieval Complete Certification	TBD	TBD

- a. Pursuant to Section IV-B-5 of the Consent Decree, U.S. Department of Energy (DOE) must submit to the Washington State Department of Ecology a written certification that DOE has completed retrieval of a tank in accordance with the requirements of Appendix C, Part 1, of the Consent Decree. Completed for Single-Shell Tank (SST) C-104 on March 21, 2013, via DOE Office of River Protection (ORP) letter 13-TF-0018. Completed for SST C-108 on May 1, 2013, via ORP letter 13-TF-0025. Completed for SST C-109 on June 4, 2013, via ORP letter 13-TF-0037. Completed for SST C-110 on January 29, 2014, via ORP letter 14-TF-0007.

TBD = to be determined.

WMA-C = C-Farm Waste Management Area.

### Significant Past Accomplishments:

- Continued operation of the Mobile Arm Retrieval System (MARS) – Vacuum system commenced at Tank C-105
- Restarted C-102 modified sluicing operations
- Completed readiness and startup of C-107 hard heel removal.

### Significant Planned Activities in the Next 6 Months:

- Complete retrieval of C-105 using MARS-Vacuum
- Complete retrieval of C-107 using MARS-Sluicing
- Begin startup of hard heel retrieval in C-111 using high-pressure water, with caustic/water dissolution available
- Complete retrieval of C-102 using modified sluicing.

### Issues:

\* The U.S. Department of Energy (DOE) has notified the State of Washington and State of Oregon that a serious risk has arisen that DOE may be unable to meet this Consent Decree milestone.

### Tank Waste Retrieval Work Plan Status

Tank	TWRWP	Expected Revisions	First Retrieval Technology	Second Technology	Third Technology
C-101	RPP-22520, Rev. 8	Complete	Modified Sluicing with ERSS	High-Pressure Water deployed with the ERSS	-
C-102	RPP-22393, Rev. 7	In Process	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	-
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 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:**

None.

**Significant Planned Activities in the Next 6 Months:**

None.

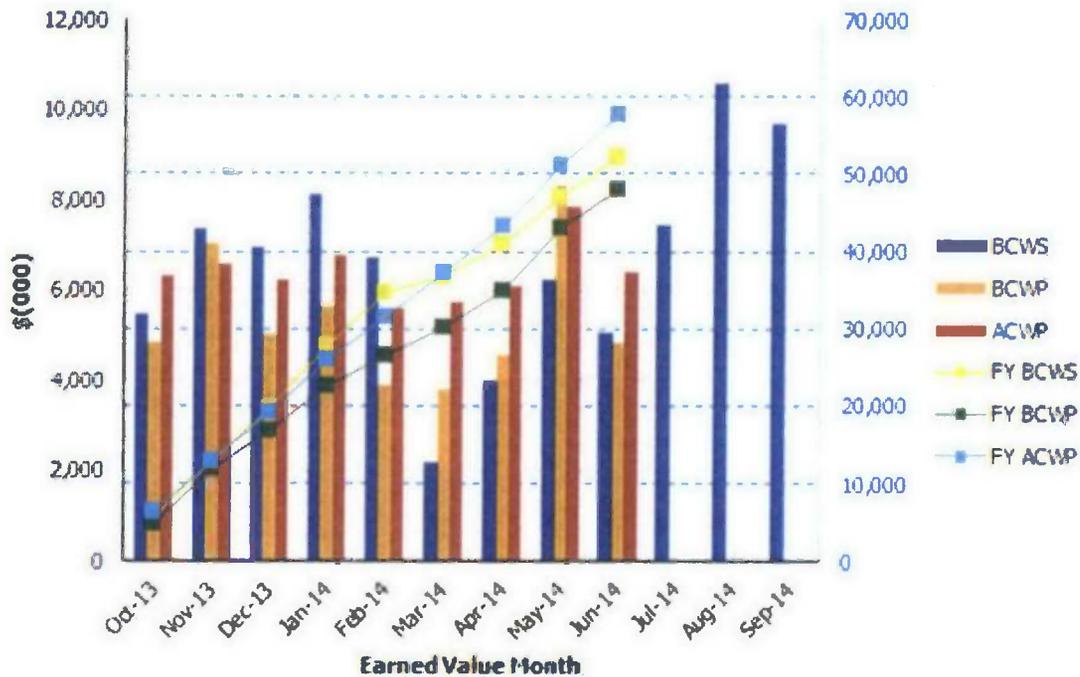
**Issues:**

None.

## Single-Shell Tank Retrieval Monthly and Fiscal Year Earned Value Management System Data

**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 2013	\$5,483	\$4,823	\$6,336	0.88	0.76	\$5,483	\$4,823	\$6,336	0.88	0.76
Nov 2013	\$7,366	\$7,054	\$6,609	0.96	1.07	\$12,849	\$11,876	\$12,945	0.92	0.92
Dec 2013	\$6,970	\$5,002	\$6,231	0.72	0.80	\$19,820	\$16,878	\$19,176	0.85	0.88
Jan 2014	\$8,102	\$5,661	\$6,765	0.70	0.84	\$27,922	\$22,539	\$25,941	0.81	0.87
Feb 2014	\$6,726	\$3,914	\$5,602	0.58	0.70	\$34,647	\$26,453	\$31,543	0.76	0.84
Mar 2014	\$2,201	\$3,805	\$5,729	1.73	0.66	\$36,849	\$30,258	\$37,273	0.82	0.81
Apr 2014	\$4,000	\$4,558	\$6,079	1.14	0.75	\$40,848	\$34,816	\$43,352	0.85	0.80
May 2014	\$6,255	\$8,331	\$7,855	1.33	1.06	\$47,103	\$43,146	\$51,207	0.92	0.84
Jun 2014	\$5,055	\$4,826	\$6,413	0.95	0.75	\$52,158	\$47,972	\$57,621	0.92	0.83
Jul 2014	\$7,437									
Aug 2014	\$10,588									
Sep 2014	\$9,711									
CTD	\$478,997	\$474,811	\$484,460	0.99	0.98					

## Waste Treatment and Immobilization Plant Project

Number	Title	Due Date	Status
D-00A-06	Complete Methods Validations	12/31/2017	Ongoing*
D-00A-17	Hot Start of Waste Treatment Plant	12/31/2019	Ongoing*
D-00A-01	Achieve Initial Plant Operations for WTP	12/31/2022	Ongoing*

WTP = Waste Treatment and Immobilization Plant.

The Waste Treatment and Immobilization Plant (WTP) Project currently employs approximately 2,465 full-time equivalent contractor (Bechtel National, Inc. [BNI]) and subcontractor personnel. This includes 626 craft, 378 non-manual, and 192 subcontractor full-time equivalent personnel working at the WTP construction site (all facilities).

As of June 2014, the combined Low-Activity Waste (LAW) Facility, Analytical Laboratory (LAB), and Balance of Facilities (BOF) (collectively LBL) were 69 percent complete, design and engineering was 83 percent complete, procurement was 85 percent complete, construction was 81 percent complete, and startup and commissioning was 14 percent complete.

In September 2012, the baseline change proposal that implemented the LBL replan was incorporated into the project over-target 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 Pretreatment (PT) and High-Level Waste (HLW) Facilities 2-Year Interim Work Plan was incorporated into the project over-target baseline and the percent-complete values for PT and HLW Facilities were frozen at the September 2012 rate. The WTP Project continues to progress in accordance with the LBL replan and PT/HLW 2-Year Interim Work Plan.

In May 2014, the cumulative to-date WTP Project schedule variance was a negative \$134.0 million, and the cumulative to-date WTP Project cost variance was a negative \$11.8 million. The major contribution to the cumulative to-date cost and schedule variance is based on the progress of the LBL replan and PT/HLW 2-Year Interim Work Plan.

The following is the project status through the end of June 2014.

### Significant Past Accomplishments:

- Began testing of the pulse-jet mixer (PJM) controls at the Full-Scale Testing Facility started on July 25, 2014 (PT)
- Continued conceptual design for a standardized high-solids vessel design (SHSVD) (PT)
- Secured DOE approval of the HLW safety design strategy (HLW)
- Placed the final 12-inch layer of refractory in the center of each melter floor and began placement of the initial layer of brick on the perimeter walls (LAW)
- Installed over 190 linear feet of process piping and hydro-tested 730 linear feet of facility piping (LAW)
- Placed the standby diesel generator on the foundation (BOF)
- Issued Underground Piping Integrity Assessment Program for DOE review (BOF)

- Completed the hydrostatic test of radioactive liquid waste disposal (RLD) vessel 164 (LAB).

**Significant Planned Actions in the Next 6 Months:**

- Complete modification at Full-Scale Vessel Testing Facility to support Phase 2 testing for the PJM controls (PT)
- DOE approval of PT resumption plan to support DOE authorization to proceed with production engineering (PT)
- BNI to submit PT Facility Safety Design Strategy (SDS) Plan for DOE review
- DOE authorization of full production engineering (HLW)
- Complete installation of autosampling system (LAW)
- Complete the LAW Facility design and operability review (LAW)
- Complete construction of the Glass Former Storage Facility (BOF)
- Complete repairs, retest, and recertify RLD vessels (LAB)
- BNI to develop 2-year work plan for fiscal year (FY) 2015 and FY 2016 (PT, HLW).

**Issues:**

\*DOE has notified the State of Washington and State of Oregon that a serious risk has arisen that DOE may be unable to meet this Consent Decree milestone. Technical issues related to the WTP include, among others, PJMs, corrosion/erosion in piping and vessels, hydrogen accumulation, criticality, and ventilation.

Data Set: FY 2014 Earned Value Data

Data as of: June 2014

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

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	OPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY OPI
Oct 2013	\$49,959	\$43,981	\$42,448	0.88	1.04	\$49,959	\$43,981	\$42,448	0.88	1.04
Nov 2013	\$58,047	\$61,276	\$59,935	1.06	1.02	\$108,006	\$105,257	\$102,383	0.97	1.03
Dec 2013	\$48,739	\$41,149	\$40,881	0.84	1.01	\$156,745	\$146,406	\$143,264	0.93	1.02
Jan 2014	\$45,633	\$34,448	\$32,185	0.75	1.07	\$202,378	\$180,854	\$175,449	0.89	1.03
Feb 2014	\$53,315	\$42,491	\$41,349	0.80	1.03	\$255,693	\$223,345	\$216,798	0.87	1.03
Mar 2014	\$55,327	\$44,937	\$44,053	0.81	1.02	\$311,020	\$268,282	\$260,851	0.86	1.03
Apr 2014	\$53,695	\$43,232	\$46,086	0.81	0.94	\$364,715	\$311,514	\$306,937	0.85	1.01
May 2014	\$84,691	\$71,474	\$66,633	0.84	1.04	\$449,406	\$382,988	\$375,570	0.85	1.02
Jun 2014	\$69,440	\$50,571	\$50,680	0.73	1.00	\$518,846	\$433,559	\$426,250	0.84	1.02
Jul 2014	\$54,292									
Aug 2014	\$51,488									
Sep 2014	\$116,961									
PTD	\$8,309,059	\$8,175,034	\$8,186,860	0.98	1.00					

## Pretreatment Facility

Number	Title	Due Date	Status
D-00A-19	Complete Elevation 98' Concrete Floor Slab in PT Facility	12/31/2014	Ongoing *
D-00A-13	Complete Installation of Pretreatment Feed Separation Vessels	12/31/2015	Ongoing *
D-00A-14	PT Facility Construction Substantially Complete	12/31/2017	Ongoing *
D-00A-15	Start PT Facility Cold Commissioning	12/31/2018	Ongoing *
D-00A-16	PT Facility Hot Commissioning Complete	12/31/2019	Ongoing *

PT = pretreatment.

The PT Facility will separate radioactive tank waste into HLW and LAW 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. Construction, procurement, and production engineering activities remain on hold, resulting in no change to the percent-complete status since September 2012. BNI and DOE continue to focus on resolving technical issues, performing hazard analyses, and completing safety evaluations for process systems in accordance with the PT/HLW 2-Year Interim Work Plan.

Technical review teams continue to evaluate open PT Facility technical issues. BNI has completed construction, and commissioning of the Full-Scale Vessel Testing platform, and BNI commenced testing for verification of PJM controls on July 25, 2014, two months ahead of the planned start date of September 2014. Evaluation is ongoing relative to a standardized design for high-solids vessels within the PT Facility. BNI has submitted resolution plans for eight technical issues, which are undergoing DOE review. The eight technical issues are the T1 Hydrogen in Vessels, T2 Criticality, T3 HPAV, T4 Mixing, T5 Erosion Corrosion, T6 PTF Optimization, T7 Vessel Analysis, and T8 Ventilation.

On June 30, 2014, BNI submitted a draft of the PT resumption plan to support DOE authorization to proceed with production engineering, in accordance with DOE direction. BNI is developing a FY 2015–FY 2016 two-year work plan.

### Significant Past Accomplishments:

- Began testing of the PJM controls at the Full-Scale Testing Facility on July 25, 2014
- Completed hydro testing of 2-inch Grayloc, PUREX, and 3-way PUREX test assemblies
- Continued jet impingement testing for erosion; Phase 2 test is complete
- Issued Phase 1 PJM controls test plan
- Continued conceptual design for a standardized high-solids vessel design (SHSVD)
- Continued maintenance activities as result of PT Facility assessment.

### Significant Planned Actions in the Next 6 Months:

- Complete modification at Full-Scale Vessel Testing Facility to support Phase 2 testing for the PJM controls

- Evaluate potential savings relative to storing procured commodities onsite compared to storing at vendor facilities during suspensions of procurements
- DOE approval of PT resumption plan to support DOE authorization to proceed with production engineering
- Finalize technical team strategic plans
- Award contract for sensitivity tests for erosion in vessels and piping
- BNI to submit PT Facility Safety Design Strategy (SDS) Plan for DOE review
- Finalize test plan, simulant composition, and test instrument list for full-scale vessel mixing tests
- Define standardized vessel selection criteria in support of vessel mixing resolution
- Start informational testing in 8-foot test vessel for down selection of features pertaining to SHSVD.

**Issues:**

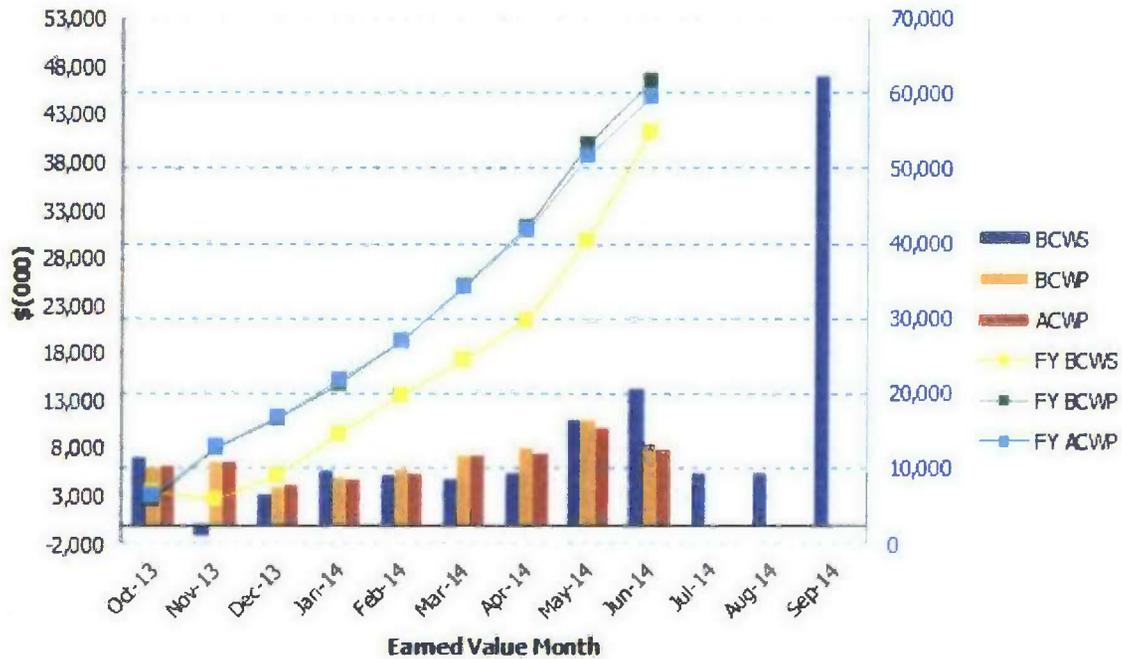
\*DOE has notified the State of Washington and State of Oregon that a serious risk has arisen that DOE may be unable to meet this Consent Decree milestone. Technical issues related to the WTP include, among others, PJMs, corrosion/erosion in piping and vessels, hydrogen accumulation, criticality, and ventilation.

Data Set: FY 2014 Earned Value Data

Data as of: June 2014

**River Protection Project  
Pretreatment Facility**

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 2013	\$6,954	\$5,927	\$6,224	0.85	0.95	\$6,954	\$5,927	\$6,224	0.85	0.95
Nov 2013	(\$1,213)	\$6,673	\$6,646	-5.50	1.00	\$5,741	\$12,600	\$12,870	2.19	0.98
Dec 2013	\$3,109	\$3,957	\$4,053	1.27	0.98	\$8,850	\$16,557	\$16,923	1.87	0.98
Jan 2014	\$5,616	\$4,856	\$4,809	0.86	1.01	\$14,466	\$21,413	\$21,732	1.48	0.99
Feb 2014	\$5,155	\$5,673	\$5,261	1.10	1.08	\$19,621	\$27,086	\$26,993	1.38	1.00
Mar 2014	\$4,751	\$7,210	\$7,173	1.52	1.01	\$24,372	\$34,296	\$34,166	1.41	1.00
Apr 2014	\$5,329	\$7,957	\$7,521	1.49	1.06	\$29,701	\$42,253	\$41,687	1.42	1.01
May 2014	\$10,845	\$10,888	\$10,039	1.00	1.08	\$40,546	\$53,141	\$51,726	1.31	1.03
Jun 2014	\$14,207	\$8,532	\$7,915	0.60	1.08	\$54,753	\$61,673	\$59,641	1.13	1.03
Jul 2014	\$5,437									
Aug 2014	\$5,459									
Sep 2014	\$46,949									

PTD \$1,582,043 \$1,571,682 \$1,567,386 0.99 1.00

## High-Level Waste Facility

Number	Title	Due Date	Status
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	12/31/2016	Ongoing *
D-00A-03	Start HLW Facility Cold Commissioning	6/30/2018	Ongoing *
D-00A-04	HLW Facility Hot Commissioning Complete	12/31/2019	Ongoing *

HLW = High-Level Waste (Facility).

The HLW Facility will receive the separated HLW concentrate from the PT Facility. This concentrate will be blended with glass formers, converted into molten glass in one of the two HLW melters, and then poured into cylindrical stainless steel canisters. After cooling, the canisters will be sealed and decontaminated before shipment 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. Construction, procurement, and production engineering activities have been significantly slowed down, resulting in minimal change to the percent completion status since September. BNI and DOE continue to focus on resolving technical issues, performing hazard analyses, and completing safety evaluations for process systems in accordance with the PT/HLW 2-Year Interim Work Plan.

Construction activities include the placement of walls at the 37-foot elevation, installation of structural steel at the 58- and 77-foot elevation, and installation of cable tray supports and ventilation ducts at the 14-foot elevation. HLW activities are focused on supporting authorization to proceed with a resumption of production engineering. Technical review teams completed evaluations of open technical issues to support this effort. The path forward to ramp up HLW engineering, procurement, and construction is ongoing and includes the following actions:

- Conduct engineering studies to resolve technical safety issues
- Perform risk assessments for the issues noted in Priority Level 1 findings, reliability validation process, project issues evaluation reporting, etc.
- Perform assessment of BNI process improvement for the readiness to proceed.

DOE approved “limited production engineering” activities to facilitate completion of outstanding corrective actions and resolution of existing design issues. The authorization to proceed with full production engineering is imminent, awaiting BNI issuance of the system engineering checklist based on completion of full prerequisite action items. DOE has approved the HLW SDS.

### Significant Past Accomplishments:

- One concrete placement was made in June
- HLW Facility efforts focused on supporting the conditional approval (Critical Decision 1) of the authorization to proceed with engineering, procurement, and construction, and included the following activities:
  - BNI issued the HLW Facility Design and Operability Review report

- DOE has approved BNI action plan for resolution of issues identified in the DOE Design and Operability Review report
- DOE has approved the HLW safety design strategy
- Fabrication of ASX No. 28 is 90 percent complete
- Started initial testing on Porvair high-efficiency particulate air (HEPA) filter at Mississippi State University
- Initiated limited hazard analysis for RLD vessels.

**Significant Planned Actions in the Next 6 Months:**

- DOE authorization of full production engineering
- Issue request for proposal (RFP) for vendor design of RLD-8 vessel
- Glove box 29 and 42 assembly/fabrication for auto samplers
- Twelve tons of steel forecasted for delivery in the Fourth Quarter FY 2014
- Perform gap analysis to identify misalignments with the current Preliminary Documented Safety Analysis and to identify safety analyses necessary to incorporate the SDS into the Preliminary Documented Safety Analysis
- Complete draft analysis of single-point failures in support of failure mode analysis
- Perform HEPA filter qualification testing at Mississippi State University
- Continue activities to support the RLD system redesign in support of vessel re-procurement.

**Issues:**

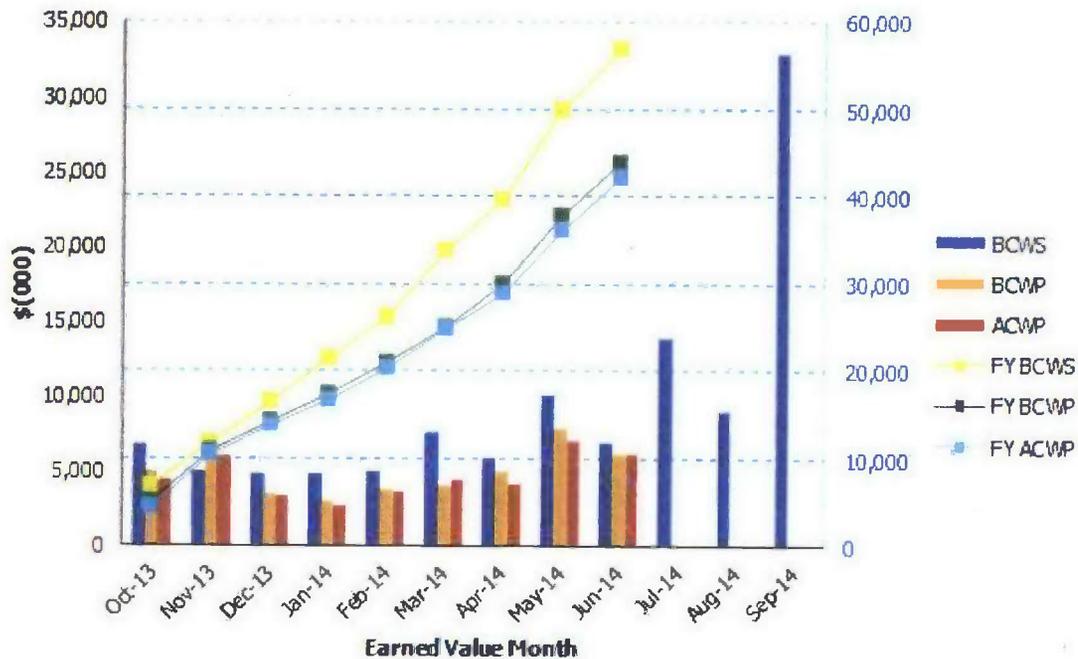
\*DOE has notified the State of Washington and State of Oregon that a serious risk has arisen that DOE may be unable to meet this Consent Decree milestone. Technical issues related to the WTP include, among others, PJMs, corrosion/erosion in piping and vessels, hydrogen accumulation, criticality, and ventilation.

Data Set: FY 2014 Earned Value Data

Data as of: June 2014

**River Protection Project  
High-Level Waste Facility**

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 2013	\$6,818	\$4,914	\$4,390	0.72	1.12	\$6,818	\$4,914	\$4,390	0.72	1.12
Nov 2013	\$4,892	\$5,842	\$6,055	1.19	0.96	\$11,710	\$10,756	\$10,445	0.92	1.03
Dec 2013	\$4,811	\$3,559	\$3,420	0.74	1.04	\$16,521	\$14,315	\$13,865	0.87	1.03
Jan 2014	\$4,778	\$2,998	\$2,760	0.63	1.09	\$21,299	\$17,313	\$16,625	0.81	1.04
Feb 2014	\$4,927	\$3,736	\$3,647	0.76	1.02	\$26,226	\$21,049	\$20,272	0.80	1.04
Mar 2014	\$7,612	\$4,010	\$4,391	0.53	0.91	\$33,838	\$25,059	\$24,663	0.74	1.02
Apr 2014	\$5,867	\$4,921	\$4,203	0.84	1.17	\$39,705	\$29,980	\$28,866	0.76	1.04
May 2014	\$10,121	\$7,861	\$7,079	0.78	1.11	\$49,826	\$37,841	\$35,945	0.76	1.05
Jun 2014	\$6,975	\$6,073	\$6,097	0.87	1.00	\$56,801	\$43,914	\$42,042	0.77	1.04
Jul 2014	\$13,796									
Aug 2014	\$9,052									
Sep 2014	\$32,827									

PTD \$1,043,604 \$1,033,094 \$1,024,912 0.99 1.01

## Low-Activity Waste Facility

Number	Title	Due Date	Status
D-00A-07	LAW Facility Construction Substantially Complete	12/31/2014	Ongoing*
D-00A-08	Start LAW Facility Cold Commissioning	12/31/2018	Ongoing*
D-00A-09	LAW Facility Hot Commissioning Complete	12/31/2019	Ongoing*

LAW = Low-Activity Waste (Facility).

The LAW Facility will process the LAW that will be mixed with glass formers, vitrified into glass at a design capacity of 30 metric tons per day, and placed in stainless steel containers anticipated to be disposed of on the Hanford Site in the Integrated Disposal Facility. As of June 2014, the LAW Facility was 70 percent complete overall, with engineering design 82 percent complete, procurement 89 percent complete, construction 76 percent complete, and startup and commissioning 7 percent complete. On February 24, 2014, DOE requested that BNI develop a contract modification proposal for the following:

- Completing the LBL work scope in the current contract through hot commissioning
- Completing initial planning and design for incorporating a permanent capability to accommodate a direct feed LAW (DFLAW) option in the WTP Project.

### Significant Past Accomplishments:

- Issued all DX (Q refrigerant) pipe supports for elevation plus 48-feet for fabrication
- Placed the final 12-inch layer of refractory in the center of each melter floor and began placement of the initial layer of brick on the perimeter walls
- Installed Secondary Off-gas (LVP) HEPA filters 1A and 2A
- Installed over 2,700 linear feet of conduit and pulled over 18,500 linear feet of cable
- Installed over 190 linear feet of process piping and hydro-tested 730 linear feet of facility piping.

### Significant Planned Actions in the Next 6 Months:

- Complete installation of autosampling system
- Award the purchase order for the “active” gas analyzers
- Submit the Thermal Catalytic Oxidizer (TCO) permit package for Independent Qualified Registered Professional Engineer (IQRPE) review
- Complete the LAW Facility design and operability review
- Continue refractory brick installation in the melters.

### Issues:

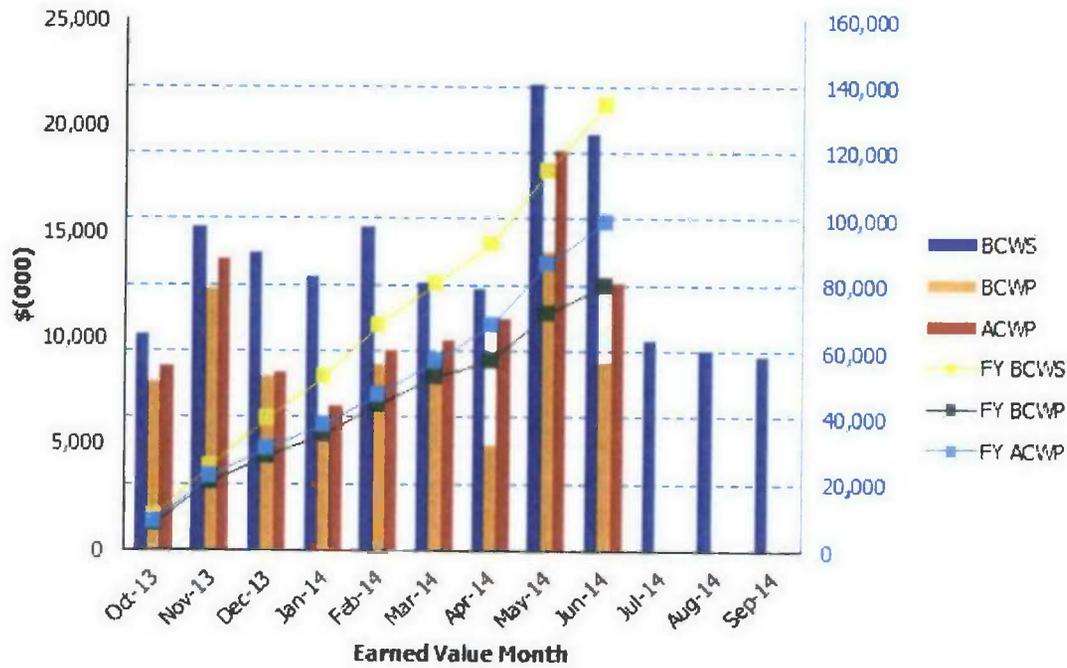
\*DOE has notified the State of Washington and State of Oregon that a serious risk has arisen that DOE may be unable to meet this Consent Decree milestone.

Data Set: FY 2014 Earned Value Data

Data as of: June 2014

**River Protection Project  
Low-Activity Waste Facility**

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 2013	\$10,160	\$7,952	\$8,677	0.78	0.92	\$10,160	\$7,952	\$8,677	0.78	0.92
Nov 2013	\$15,237	\$12,339	\$13,732	0.81	0.90	\$25,397	\$20,291	\$22,409	0.80	0.91
Dec 2013	\$14,003	\$8,214	\$8,389	0.59	0.98	\$39,400	\$28,505	\$30,798	0.72	0.93
Jan 2014	\$12,919	\$6,382	\$6,795	0.49	0.94	\$52,319	\$34,887	\$37,593	0.67	0.93
Feb 2014	\$15,254	\$8,750	\$9,433	0.57	0.93	\$67,573	\$43,637	\$47,026	0.65	0.93
Mar 2014	\$12,596	\$8,478	\$9,852	0.67	0.86	\$80,169	\$52,115	\$56,878	0.65	0.92
Apr 2014	\$12,335	\$4,958	\$10,936	0.40	0.45	\$92,504	\$57,073	\$67,814	0.62	0.84
May 2014	\$21,988	\$14,117	\$18,840	0.64	0.75	\$114,492	\$71,190	\$86,654	0.62	0.82
Jun 2014	\$19,658	\$8,885	\$12,594	0.45	0.71	\$134,150	\$80,075	\$99,248	0.60	0.81
Jul 2014	\$9,943									
Aug 2014	\$9,406									
Sep 2014	\$9,120									
PTD	\$938,649	\$869,565	\$942,528	0.93	0.92					

## Balance of Facilities

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

The BOF will provide services and utilities to support operation of the main production facilities: PT, HLW, LAW, and LAB. As of June 2014, BOF was 62 percent complete overall, with engineering design 84 percent complete, procurement 72 percent complete, construction 82 percent complete, and startup and commissioning 17 percent complete.

Commercial grade dedication activities in support of the emergency turbine generator procurement are the primary focus for the quality, design engineering, and procurement organizations. Construction and startup efforts are focused on completion of the Glass Former Facility and construction of the Standby Diesel Generator (SDG) Facility. The SDG Facility foundation and additional facility support concrete placements have been made to support generator placement in July.

### Significant Past Accomplishments:

- Placed the SDG on the foundation
- Completed excavation and electrical connections for 6 of 10 coupon test stations
- Issued Underground Piping Integrity Assessment Program for DOE review
- Continued recoating activities for fire service water tanks.

### Significant Planned Actions in the Next 6 Months:

- Complete cathodic protection system coupon test station installation
- Complete construction of the Glass Former Storage Facility
- Complete repair work for fire service water tanks
- Receive the replacement nonradioactive liquid waste disposal panel
- Complete component testing of the low-voltage, medium-voltage, and fire detection systems for switchgear Buildings 87 and 91.

### Issues:

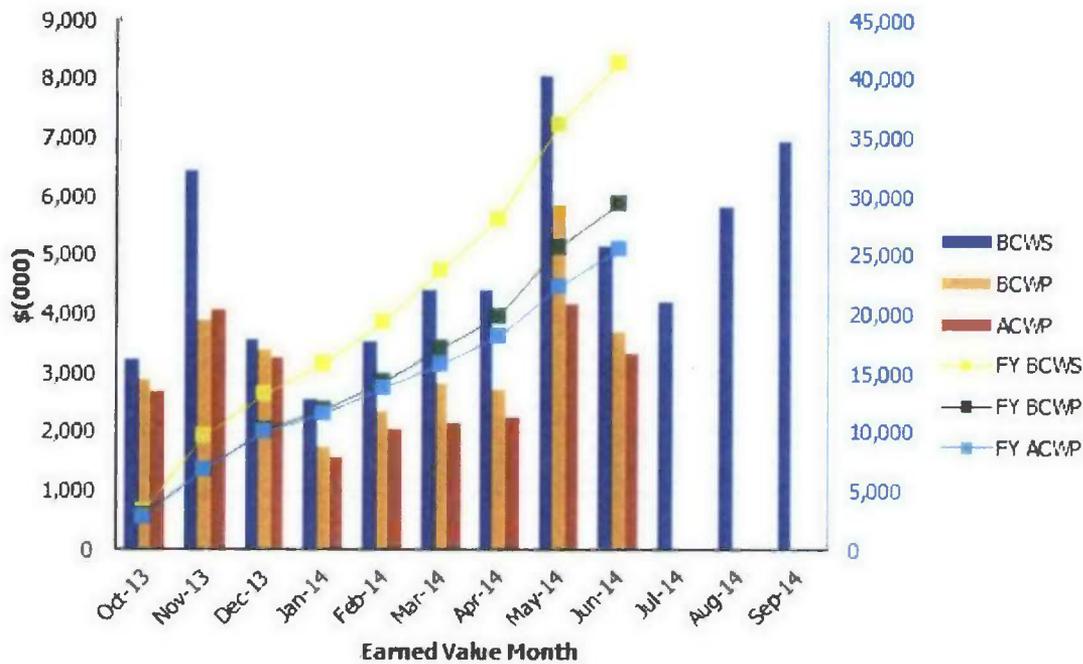
No major issues at this time.

Data Set: FY 2014 Earned Value Data

Data as of: June 2014

**River Protection Project  
Balance of Facilities**

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 2013	\$3,218	\$2,901	\$2,679	0.90	1.08	\$3,218	\$2,901	\$2,679	0.90	1.08
Nov 2013	\$6,431	\$3,886	\$4,067	0.60	0.96	\$9,649	\$6,787	\$6,746	0.70	1.01
Dec 2013	\$3,547	\$3,395	\$3,267	0.96	1.04	\$13,196	\$10,182	\$10,013	0.77	1.02
Jan 2014	\$2,538	\$1,737	\$1,562	0.68	1.11	\$15,734	\$11,919	\$11,575	0.76	1.03
Feb 2014	\$3,528	\$2,356	\$2,047	0.67	1.15	\$19,262	\$14,275	\$13,622	0.74	1.05
Mar 2014	\$4,394	\$2,806	\$2,163	0.64	1.30	\$23,656	\$17,081	\$15,785	0.72	1.08
Apr 2014	\$4,399	\$2,724	\$2,238	0.62	1.22	\$28,055	\$19,805	\$18,023	0.71	1.10
May 2014	\$8,035	\$5,861	\$4,179	0.73	1.40	\$36,090	\$25,666	\$22,202	0.71	1.16
Jun 2014	\$5,161	\$3,711	\$3,320	0.72	1.12	\$41,251	\$29,377	\$25,522	0.71	1.15
Jul 2014	\$4,212									
Aug 2014	\$5,827									
Sep 2014	\$6,945									
PTD	\$367,965	\$347,027	\$336,892	0.94	1.03					

## Analytical Laboratory

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

LAB = Analytical Laboratory.

The LAB will support WTP operations by analyzing feed, vitrified waste, and effluent streams. As of June 2014, the LAB was 75 percent complete overall, with engineering design 83 percent complete, procurement 86 percent complete, construction 92 percent complete, and startup and commissioning 25 percent complete.

Engineering efforts are focused on closure of deficiency reports and preparation of certification documents for RLD vessel 164. Construction efforts are focused on installation of remaining electrical commodities and penetration seals to support the completion of LAB construction.

### Significant Past Accomplishments:

- Completed the hydrostatic test of RLD vessel 164
- Continued cable pulls and terminations
- Continued installation of penetration seals and fireproofing.

### Significant Planned Actions in the Next 6 Months:

- Complete electrical commodity installation
- Complete penetration seal installation
- Recertify RLD vessels 163, 164, and 165
- Initiate component level testing of select LAB systems.

### Issues:

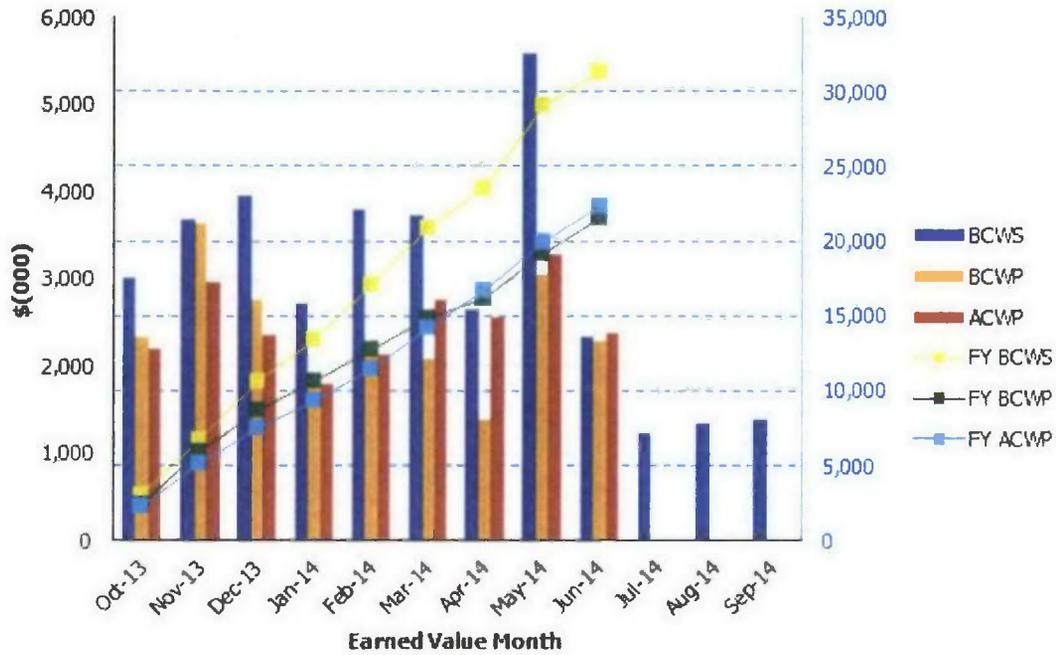
No major issues at this time.

Data Set: FY 2014 Earned Value Data

Data as of: June 2014

**River Protection Project  
Analytical Laboratory**

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 2013	\$3,008	\$2,328	\$2,196	0.77	1.06	\$3,008	\$2,328	\$2,196	0.77	1.06
Nov 2013	\$3,689	\$3,629	\$2,959	0.98	1.23	\$6,697	\$5,957	\$5,155	0.89	1.16
Dec 2013	\$3,943	\$2,750	\$2,350	0.70	1.17	\$10,640	\$8,707	\$7,505	0.82	1.16
Jan 2014	\$2,705	\$1,875	\$1,788	0.69	1.05	\$13,345	\$10,582	\$9,293	0.79	1.14
Feb 2014	\$3,783	\$2,130	\$2,126	0.56	1.00	\$17,128	\$12,712	\$11,419	0.74	1.11
Mar 2014	\$3,718	\$2,080	\$2,751	0.56	0.76	\$20,846	\$14,792	\$14,170	0.71	1.04
Apr 2014	\$2,642	\$1,382	\$2,552	0.52	0.54	\$23,488	\$16,174	\$16,722	0.69	0.97
May 2014	\$5,592	\$3,040	\$3,274	0.54	0.93	\$29,080	\$19,214	\$19,996	0.66	0.96
Jun 2014	\$2,330	\$2,291	\$2,375	0.98	0.96	\$31,410	\$21,505	\$22,371	0.68	0.96
Jul 2014	\$1,234									
Aug 2014	\$1,351									
Sep 2014	\$1,381									
PTD	\$268,449	\$254,588	\$274,874	0.95	0.93					

Waste Treatment Plant Project - (LBL) Percent Complete Status  
Through June 2014

(Dollars - Millions)	Overall Facility Percent Complete		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
Facilities	1,236.4	869.6	70%	325.9	267.7	82%	263.2	233.4	89%	464.1	354.9	76%
Low-Activity Waste Analytical Lab	339.2	254.6	75%	73.1	60.8	83%	55.9	48.2	86%	139.5	127.5	92%
Balance of Facilities	561.6	347.0	62%	95.9	80.5	84%	74.5	53.7	72%	225.0	183.9	82%
<b>Total LBL</b>	<b>2,137.2</b>	<b>1,471.2</b>	<b>69%</b>	<b>494.9</b>	<b>409.1</b>	<b>83%</b>	<b>393.7</b>	<b>335.3</b>	<b>85%</b>	<b>827.6</b>	<b>666.3</b>	<b>81%</b>
<b>PT/HLW/SS Percent Complete Status Frozen as of September 2012 (due to project rebaselining efforts)</b>												
High-Level Waste Pretreatment	1,478.6	922.1	62%	364.4	325.2	89%	433.9	349.4	81%	561.1	243.2	43%
Shared Services	2,517.3	1,410.5	56%	761.7	645.8	85%	679.9	380.4	56%	890.0	378.6	43%
Total HLW/PT/SS	4,728.9	3,632.6	77%	1,047.0	977.9	93%	451.7	395.0	87%	1,436.5	1,143.0	80%
Undistributed Budget	8,722.8	5,965.2	68%	2,173.1	1,948.9	90%	1,565.5	1,124.8	72%	2,887.8	1,764.8	61%
<b>Total WTP</b>	<b>10,860.0</b>	<b>7,436.4</b>	<b>68%</b>	<b>2,658.0</b>	<b>2,358.0</b>	<b>88%</b>	<b>1,959.2</b>	<b>1,460.1</b>	<b>75%</b>	<b>3,715.2</b>	<b>2,431.1</b>	<b>65%</b>

Source: Preliminary WTP Contract Performance Report - Format 1, Data for June 2014

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

Tri-Party Agreement Quarterly Milestone Review

B-21-14

<u>Name</u>	<u>Organization</u>
Kathy Knay	Knay Court Reporting
Rob Piro	MSA/TBA
James Lynch	DOE-ORP
Kathy Higgins	DOE-ORP
Chris King	DOE-ORP
Mike Berna	Ecology
Steve Pfaff	DOE-ORP
Shelby Ginal	ODOE
Cheryl Whalen	Ecology
John Price	Ecology
Rod Cobos	EPA
Jan McDonau	ECY
DeBrisha Smith	ORP
JV Borghese	CHPRC
Michael Cline	DOE-RL
Brian Chastanau	DOE-RL



## Meeting Notes

### **Annual Meeting Between the U.S. Department of Energy, Office of River Protection (ORP) and the State of Washington, Department of Ecology (Ecology) to Discuss Interim Measures Completed in Fiscal Year 2014 and Planned for Fiscal Year 2015**

Date: July 22, 2014

Location: Ecology Building, room 3B

Purpose: Fulfill Hanford Federal Facility and Consent Order commitment M-045-56, "to meet yearly... for the establishment of additional Agreement interim measures."

Attendees: Jeff Lyon, Ecology; Jared Mathey, Ecology; Joe Caggiano, Ecology; Mike Barnes, Ecology; Jim Alzheimer, Ecology; Doug Hildebrand, ORP; Jeremy Johnson, ORP; Cole Snider, ORP; Dan Parker, Washington River Protection Solutions (WRPS); Dan Glaser, WRPS; Susan Eberlein, WRPS

#### **Actions Completed in FY2014:**

The following activities were discussed briefly:

- Interim measures work plan activities at SX Farm:
  - The SX pore water extraction test was completed per the approved work plan (RPP-PLAN-53080)
  - Results of the test were documented in RPP-RPT-56596, and transmitted to Ecology on May 15, 2014 (14-TF-0054)
  - The report included lessons learned and recommendations for future testing of the technology
- Interim measures work plan activities at U Farm:
  - The U Farm electrical resistivity characterization was completed per the approved work plan (RPP-PLAN-53080)
  - Results of the characterization were documented in RPP-RPT-56430, and transmitted to Ecology on February 20, 2014 (14-TF-0015)
  - Incorporation of the new results with historic data was presented to Ecology in a technical meeting on July 16, 2014
- Interim measures work plan activities at TX Farm:
  - The TX Farm direct push logging and sampling was completed per the approved work plan (RPP-PLAN-53080)
  - Analytical results have been provided to Ecology as they have been completed
  - The technical report on all results is being developed and will be provided to Ecology prior to September 30, 2014

- Jeremy Johnson asked why U and TX farm had been selected for characterization. In response, it was noted that other farms had previously been characterized for potential placement of interim barriers, and U and TX were next in the priority list.
- Jeff Lyon asked why A and AX farms were not being considered in this meeting. In response, it was noted that characterization is occurring in A and AX in preparation for retrieval and the development of a performance assessment. However, performing interim measures at A and AX is unlikely because of the retrieval actions that are starting.
- A field deployment test of a prototype beta detection probe had been planned for FY2014, but was not completed. An effort is underway to perform the field test in FY2015.

#### **Discussion of Possible Actions for FY2015**

- Response to reported tank intrusions, with focus on Tank T-111
  - Jeremy Johnson noted that planning is underway to begin removal of liquids from tank T-111 using a portable ventilation system. The intention is to install the ventilation system and operate it in FY2015, evaluate the results, and use the results of this activity to plan future actions for other tanks.
  - In response to questions, Jeremy noted that the goal of the activity will be to remove free liquids in T-111, the performance will be monitored, and a plan is being developed that will include performance expectations. If the portable ventilation system does not perform as expected, an alternative approach has not yet been defined.
  - Jared Mathey noted that T-111 head space vapor sampling has occurred, and the results are needed to define the permitting process associated with the ventilation system.
  - It was proposed that a plan and schedule for system installation and operation could be provided to Ecology for their review by October.
  - Jeff Lyon indicated that Ecology would like to see the unit installed and operating by January of 2015. Jeremy Johnson noted that installation is expected before then, but operation will depend on the permitting requirements and other factors that have not been finalized.
  - Jim Alzheimer asked about the methods for monitoring the effectiveness of the ventilation system for removing liquid. Jeremy stated that the detailed plans are still being developed.
  - Jeff Lyon stated that Ecology would like an opportunity to provide input on the operating and evaluation plan.
  - It was agreed that an action from this meeting would be to provide the plan to Ecology for their review in October. In addition, a meeting may be scheduled before then to discuss the content of the plan with Ecology.

- Field deployment of a prototype beta probe
  - Field test of a beta probe prototype had been planned for FY 2014, but was deferred due to funding limitations.
  - Funding has been requested to perform the beta probe field test in FY2015, but the outcome of the request is not yet known.
  - During characterization of TX farm in 2014, one soil sampling location was identified with technetium concentrations that might provide an appropriate test location for a beta probe. Other locations in other farms have been identified during past sampling campaigns.
  - A list of potential sites for deployment will be developed and prioritized in terms of technical suitability, ease of access, and other factors.
  - A deployment plan will be developed, anticipating the possibility of funding.
  - It was agreed that an action from this meeting would be to provide the proposed deployment plan, including prioritized locations.
  
- It was agreed to defer additional discussions of interim measures pending completion of Consent Decree negotiations, currently anticipated for September. A follow-on meeting will be scheduled in the October 2014 time frame to continue discussions of future interim measures.

**Actions Proposed for FY2015:**

1. Provide a plan and schedule for the installation, operation, and evaluation of the T-111 ventilation system. Due October 31, 2014 (Jeremy Johnson)
2. Provide a document summarizing potential deployment locations for a field test of a beta probe, and describing the deployment plan. Include a proposed schedule. Due December 31, 2014 (Doug Hildebrand/Susan Eberlein)

**Other Actions:**

- Schedule a meeting in the October time frame to continue discussions of future interim measure (Susan Eberlein)

Concurrence:

R. D. Hildebrand 8-6-2014

R. D. Hildebrand, DOE      Date

J. J. Lyon 8-19-14

J. J. Lyon, Ecology      Date