

ORP Project Managers Meeting  
January 22, 2013  
2440 Stevens Ctr.  
Richland, Washington  
Meeting Minutes Transmittal

1219945

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S. E. Killoy	WRPS	H6-14
R. J. Skwarek	WRPS	H3-28
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R. E. Piippo	MSA	H7-28

ADMINISTRATIVE RECORD – Heather Childers: H6-08

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

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CK  
Chris Kemp, DOE-ORP

Date: 3-26-13

Wahed Abdul  
Wahed Abdul, DOE-ORP

Date: 3/26/13

Jason Young  
Jason Young, DOE-ORP

Date: 3/29/13

Jeff Bruggeman  
Jeff Bruggeman, DOE-ORP

Date: 3/26/13

J. Lynn  
J. Lynn, Project Manager,  
Washington State Department of Ecology

Date: 3/26/13

J. D. McDonald  
J. D. McDonald, Project Manager,  
Washington State Department of Ecology

Date: 3-26-13

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Purpose: ORP Project Managers Meeting

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## **1.0 Administrative Items**

Recent Items Entered/To Be Entered into the TPA Administrative Record - ORP noted that there were several documents listed to be entered into the AR. ORP stated that TPA Change Notice No. 2012-09 for the TY Tank Farm interim surface barrier monitoring plan was signed by Ecology and ORP and will be entered into the Administrative Record (AR). The revisions to the monitoring plan were associated with the frequency for taking data in the TY Tank Farm. ORP provided copies today of several documents that will be entered into the AR, including Change Notice No. 2012-09; a TPA agreement for retrieval completion sampling that was signed by Ecology and ORP; a TPA project managers agreement to categorize a hose-in-hose transfer line management plan as a TPA Agreement Primary Document (signed today by Ecology and ORP).

ORP stated that last week Ecology requested additional information via email regarding information Ecology received from the Defense Nuclear Facilities Safety Board (DNFSB). ORP responded to two of the three Ecology questions via email, and ORP provided a copy of the emails today. ORP stated that the first question was about gas generation in the salt cake tanks, and it is an issue that ORP has been reviewing in the sludge tanks as well. ORP has scheduled a meeting with Ecology tomorrow (1-23-13) for further discussion on the topic. ORP stated that the second question is related to the Differing Professional Opinion (DPO) on the dome cut for tank C-105, and ORP's email response to Ecology stands. Regarding question No. 3 from the 12-21-12 report, ORP responded that the power loss did not impact the 242-A Evaporator, which had a separate feed, but it caused a loss of primary ventilation in the double-shell tanks in 200 East and 200 West. ORP is meeting with the senior engineer for the 242-A Evaporator tomorrow (1-23-13), and will provide a response to Ecology via email by 1-24-13.

## **2.0 Agreements, Issues, Actions**

ORP provided an updated agreements, issues and actions list.

Action No. 12-12-03 - Ecology to set up an internal briefing meeting.

Action No. 12-12-02 - ORP provided a copy today of general definitions for milestones "at risk" and "to be missed." The document was signed by ORP and will be entered into the AR, closing this action.

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Action No. 12-12-01 - Ecology received a response to questions regarding Tc-99, uranium and iodine-129, and is now awaiting the December 2012 sampling results. Ecology noted that there are also laboratory issues, which are being worked.

Action No. 12-10-05 - ORP is in the process of scheduling a meeting to discuss the September 2009 report "External Technical Review for Evaluation of System Level Modeling and Simulation Tools in Support of Hanford Site Liquid Waste Process."

Action No. 12-10-04 - ORP stated that it is waiting for the retrieval data report (RDR) sample from the C-107 retrieval. Ecology indicated that the action is not an RDR issue, but is associated with the findings at the end of second retrieval. ORP responded that the sample at the end of second retrieval would probably be an RDR sample. ORP and Ecology agreed that further discussion is needed, and ORP will schedule a meeting. This action was left open.

Action No. 12-10-03 - ORP stated that the meeting was held on 1-8-13, and meeting minutes are being finalized for signature and will be entered into the AR.

Action No. 12-10-02 - ORP stated that during the 1-8-13 meeting, Ecology indicated the questions associated with this milestone need discussion.

Action No. 12-10-01 - ORP has not scheduled the meeting.

Action No. 12-09-02 - No status has been provided regarding a follow-up communications meeting.

### **3.0 Review of the ORP Summary**

#### **Tank Farms**

System Plan - ORP noted that the summaries today will be presented in a different order. ORP reported that there were no updates to the system plan, and that no scenarios have been identified for System Plan 6A.

#### Acquisition of New Facilities; M-90-00; M-47-00:

ORP stated that there had been issues with the status of milestones M-090-11 and M-047-06, and those issues were resolved and two new milestones were created. Milestone M-090-13 was created to submit Critical Decision 1 (CD-1) by the end of FY14. The CD-1 package consists of a

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conceptual design report and several supporting documents for the Interim Hanford Storage project. When the CD-1 package is submitted, a change package will be submitted to set a milestone for submitting the next phase of the project, CD-2, and to lock in a baseline. The milestone date will be negotiated for submittal of CD-2, which will be the preliminary design for the Interim Hanford Storage project. ORP noted that milestone M-047-07 was created for the Secondary Liquid Waste Treatment to submit CD-1 by the end of FY14. ORP expressed appreciation to Ecology's participation in creating the milestones.

Supplemental Treatment and Part B Permit Applications; M-62-00, -20, -30, -45:

ORP reported that milestone M-062-40ZZ is on schedule, although there have been discussions between ORP and Ecology about moving 40ZZ and the subsequent milestones that follow it to the right to make the best use of the available funding for FY13. ORP indicated that no change packages have been submitted to Ecology regarding the above-referenced milestones.

M-045-91, SST Integrity Assurance:

ORP noted that a draft change package has been submitted to Ecology to adjust the dates on several target milestone dates and two milestones that are to be missed. ORP is continuing to work on the structural analysis, sidewall coring analysis of the C-107 dome plug rebar, and the leak cause and location work.

Ecology referred to discussion about the leak cause during a recent meeting, and requested that ORP evaluate whether or not the inhibited sulfuric acid used to sluice A-105 could be a potential cause for the corrosion on the dry wells in A Farm. Ecology noted that tank A-105 had been discussed, and that a third groundwater well is being decommissioned in A Farm. ORP asked if Ecology's question was captured in the meeting minutes. Ecology responded that the use of inhibited sulfuric acid was not in the defined scope for evaluating the corrosion of groundwater wells, and it was not captured in the minutes. DOE-RL asked if Ecology was referring to dry wells or monitoring wells. Ecology clarified the reference was to monitoring wells, and that just recently corrosion in a third well had been identified. DOE-RL confirmed that three groundwater wells have corroded in the last 20 years. DOE-RL added that it was not aware of an evaluation of sulfuric acid, but it has been documented that the chlorides tend to attack the stainless steel rather rapidly. Ecology stated that the question was brought up because generally a lot of surfactants are now used as the corrosion inhibitors when inhibited sulfuric acid is used, but when tanks were

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sluiced during the '60s, the surfactants were not used. DOE-RL responded that a report is being developed regarding the well corrosion, and it will be provided to Ecology when it is completed. Ecology will send an email to ORP to document the request to evaluate the use of inhibited sulfuric acid as a potential cause for corrosion.

Ecology asked when the representative from Stoller will join the group that is evaluating the leaks in TX Farm. ORP responded that the contract is not finalized, and estimated it would be two weeks before the contract is in place. Ecology noted that a site visit of TX-104 is being conducted later today, and expressed concern about the Stoller representative not being present for the TX discussions. ORP stated that some of the discussions may need to be repeated after the contract is in place.

242-A Evaporator Status - ORP reported that WRPS submitted the draft Plan of Action (POA) for the readiness activity for the upcoming 242-A Evaporator campaigns. WRPS has notified ORP that the evaporator campaigns are on schedule to begin in July 2013 and be completed by the end of September 2013. ORP is reviewing the draft POA and has sent WRPS about 50 comments. After WRPS responds to ORP's comments, a meeting will be held to determine whether the POA is adequate. ORP will then begin writing its POA concurrently in an effort to conduct readiness assessment activities in parallel with WRPS. ORP noted that weekly meetings are held with WRPS to discuss the evaporator campaign activities, and the readiness assessment should be initiated at the end of April 2013.

Ecology asked if all the systems have been checked. ORP responded that WRPS is in the process of checking the systems, and a documented safety analysis (DSA) for the evaporator was just submitted to ORP. The DSA is approximately 1,000 pages due to the number of changes that have occurred. ORP stated that the DSA is an important component to the readiness activities, and an effort will be made to meet WRPS's request for a quick turnaround on its review and comment on the DSA. ORP noted that there will be additional hardware upgrades and hydrogen monitoring controls implemented through the DSA. ORP added that an operational acceptance test (OAT) will be performed on some of the systems prior to initiating the readiness assessment.

In Tank Characterization and Summary - There was no update provided today. Ecology asked if there are two off-riser sampling systems (ORSS) used for sampling tanks C-104 and C-109. ORP responded that the equipment is available that is needed to support the sampling schedule.

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Tank Operations Contract (TOC) Overview - ORP reported that as of November 30, 2012, WRPS was up to 5.7 million hours without a lost time workday injury, and 79 days without a recordable case. The overall contract-to-date schedule performance index (SPI) and cost performance index (CPI) were doing well at a 1.00 and a 1.05 respectively. Cost and schedule performance for base operations, retrievals, and waste feed delivery were at or near 1.00. ORP noted that the cause for the negative cost variance reported under supplemental treatment was incorrect and needed to be corrected. Ecology referred to the favorable cost variance under base operations that was due to fewer corrective maintenance actions, and asked if there were fewer corrective maintenance actions necessary or the actions were not completed. ORP indicated that the corrective actions were not completed, but would verify the answer. Ecology referred to supplemental treatment and asked if there is any funding for the wiped film evaporator (WFE). ORP initially responded that there were technical issues with the WFE and it was placed on hold. (Note: An email was sent following today's meeting clarifying that the WFE has been shelved due to budget constraints, not technical issues.)

Single-Shell Tank Corrective Action; M-45, -50, -60:

M-045-20 - ORP reported that this milestone was met to submit the interim measure investigation work plan to Ecology by the end of December 2012. Ecology provided a signed copy of the comment review sheet for the work plan today for submittal to the AR. ORP will incorporate Ecology's comments and then submit a revised work plan as Rev. 0.

M-045-22-T01/T02/T03 - ORP stated that a change package is in review for these three target milestones. The target milestones are associated with the work plan under M-045-20. ORP noted that no comments on the change package were received. ORP will provide a signed version of the change package to Ecology, and the process will be started to change the target milestone dates.

M-045-61/M-045-62 - ORP noted that these two milestones remain at risk. ORP added that there is no update regarding available funding for the Performance Assessment (PA), which is required to move these milestones from at risk to on schedule. If the funding is received to start the PA work by March 2013, the milestones will go back on schedule. Otherwise the status of the milestones could change to to be missed.

TPA-SST Retrieval and Closure Program:

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Significant Planned Activities in the Next Six Months - ORP stated that it will be working on the completion certification documentation for the three tanks that were completed last year. ORP considers the activities associated with the completion documentation are working towards meeting M-045-86. ORP noted that there is some sampling that remains to be done. Ecology asked about the status of the C-108 RDR. ORP responded that sections of the report have been drafted. Efforts are under way to get Stoller back out in the field to log five of the dry wells due to questions about the potential for a leak to have occurred during the modified sluicing of C-108. Dry well 300801 is of particular concern, which will be relogged along with several other dry wells. The work package for relogging is being prepared, and the plan is to get in the field in the February to March 2013 time frame. The relogging results will then be incorporated into the RDR. ORP stated that the lab has completed the retrieval analysis. The best basis inventory (BBI) update, based on the analytical results, is being prepared. Ecology asked when the RDR will be submitted for review. ORP responded that the current target is late May, early June 2013.

Tank Waste Retrieval Work Plan (TWRWP) Status - ORP stated that the TWRWP table (also located in the Consent Decree report) has been updated. For consistency, there are no changes regarding what the second technology is. The C-110 TWRWP is in Ecology review. ORP noted that the second and third technologies for C-110 have been updated in the table to be consistent with the TWRWP that was submitted to Ecology for review. Ecology indicated that its review of the C-110 TWRWP is nearing completion. Ecology asked if the C-112 TWRWP has been updated to reflect the changes from the workshop and submitted to Ecology for review. ORP responded that it has not been updated yet. A baseline change request (BCR) for C-111 and C-112, which will incorporate the results of the workshop, is in review. A presoak or a preconditioning using the caustic will be done at C-111 and C-112. The schedule and the cost related to doing the construction needed are because neither tank is set up to just do a caustic strike. ORP stated that a discussion with Ecology regarding the schedules for C-111 and C-112 should take place in the near term. Ecology noted that the timing issue is important, and ORP needs to ensure that the TWRWPs are done ahead of time.

CD-SST Retrieval and Closure:

Significant Past Accomplishments - ORP provided a current update on C-101, stating that retrieval is at 40 percent complete. Work has slowed somewhat due to efforts in removing the crust. Modified sluicing has been applied to the crust, and high pressure water has not been used yet. An effort is under way this week with a 40,000 gallon supernate soak in C-101, and then some

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recirculating will be done. The pump is down to the lowest setting, and the curve in the bottom of the tank is visible. ORP noted that the second technology can be implemented as well. Ecology asked where ORP considers C-101 to be with reference to its theoretical curve for modified sluicing. ORP responded that normally if retrieval gets below the curve, it doesn't make sense to continue with the current technique and that another technique should be applied. ORP noted that it doesn't consider C-101 to be at that point, and that isn't necessarily why a supernate soak is being applied. ORP stated that it is using lessons learned from past heel retrieval and is using some of those techniques for a more efficient retrieval. ORP added that it is not declaring C-101 to be in heel retrieval at this time.

ORP stated that operations in C-107 have been on hold while the AN-106 pump is being replaced due to issues with leaking. The hydraulic motor oil was drained from the pump, which is still in AN-106. There is currently an outage in AN Farms for other purposes, and the pump will not be removed this week. ORP noted that the pump is long-length equipment, and weather issues, especially with the wind, present a challenge in removing the pump. The replacement pump has been tested and is ready to be installed. Repairs to the end effector on C-107 are being done during the down time. The high pressure water nozzle was plugged, and testing is under way to determine if the replacement was successful. ORP stated that completion of C-107 is now estimated for February 25, 2013. ORP stated that activities at C-102 won't be started until activities at C-101 are finished, since both tanks have the same receiver tank. All systems in C-102 are intact and ready to start up as soon as C-101 is completed.

ORP reported that testing on the Mobile Arm Retrieval System (MARS) vacuum has been completed, and the design is now considered to be a deployable design. The concerns regarding the filter plugging and erosion issues in the waste accumulator tank have been resolved. ORP noted that there will be an opportunity to observe the MARS vacuum with operator testing using water, not simulant, before the MARS is deployed in the tank.

Significant Planned Activities in the Next Six Months - The completion certifications for C-104, C-108 and C-109 are being prepared for submittal to Ecology. Ecology has reviewed and commented on a draft completion certification for C-104, and following ORP's comment incorporation it will be submitted as Rev. 0.

Issues - ORP stated that resolution of the dome cut activities remain in the Differing Professional Opinion (DPO), and the schedule for dome cuts can't be determined until the DPO process is

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completed. ORP is evaluating alternatives to dome cutting techniques and other retrieval methods in an effort to keep C-105 on schedule. Ecology asked if there is a date that retrieval needs to start in C-105 to finish by the September 2014 date. ORP responded that currently there isn't a drop dead date, and it is revising the schedule to more accurately reflect what the plan is. The original schedule had a PQ shift, but employees have been hired to go X, Y, Z, which is 24 hours a day and should increase the efficiency of retrieval. ORP added that there are other assumptions to resolve in the schedule. ORP stated that it funded through WRPS some technology development for a rotary core drill that doesn't use abrasives. ORP added that the drill has been used for large cuts and appears to be successful for the type of cut needed, but mockup testing would need to be done. ORP noted that there is no plan to bring the tool onsite and put it into use.

ORP stated that a briefing from the contractor is expected by the end of January 2013 regarding what alternatives are available on a parallel path to resolving the DPO so that one of the technologies can become available and then move forward. ORP noted that because tank C-105 is an assumed leaker, a dry retrieval method is the method of choice, and other sluicing methods are not being evaluated. Ecology asked when the revised schedule for C-105 would be available. ORP indicated that in about two weeks the schedule would be available.

ORP noted that a meeting is scheduled tomorrow with Ecology to discuss the issue regarding the sludge height and gas generation in the sludge. ORP has also responded via email to an Ecology email regarding the issue.

### **Waste Treatment Plant**

ORP reported that all three of the milestones due in December 2012 were completed. The 37-foot structural steel was completed early and previously noted in the Consent Decree (CD) report. The Analytical Laboratory (LAB) substantially complete and the Steam Plant substantially complete milestones were completed in December 2012. ORP noted that there were inadvertent issues in terms of communication with Ecology during the process for finalizing the substantially complete milestones, and there were discussions with Ecology to clarify that the milestone completion is from an ORP perspective and not Ecology. ORP stands ready to share whatever information Ecology needs go forward with its independent review of milestone completion. Ecology stated that the current plan is to meet with ORP during the first week of February 2013 to plan the meeting for review of the LAB substantially complete package and issue the final approval of the

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milestone. ORP indicated that a meeting would be scheduled about two weeks after the LAB meeting to repeat the process for the Steam Plant substantially complete milestone. Ecology requested an action for ORP to contact Ecology the first week of February 2013 and provide a status for reviewing the LAB and Steam Plant substantially complete milestones.

ORP stated that the effort continues to maintain a stable craft work force. ORP cautioned against using the earned value management system (EVMS) as useful information since the whole project baseline has not been finalized. ORP added that the information for Low Activity Waste (LAW), LAB and Balance of Facilities (BOF) is useful information to track day-to-day from an overall project perspective; however, the two-year work plan for Pretreatment (PT) and High Level Waste (HLW) is not that meaningful.

Significant Planned Actions in the Next Six Months - ORP stated that the bulk of activities in LAB, LAW and BOF (LBL) will move forward with construction. PT and HLW continue to operate at a much reduced level, with civil construction activities in HLW, mostly concrete and rebar. The technical issues in PT will continue to be worked, and the funds expended are related to the full-scale testing or technical issue resolution. Work activities in PT in terms of production, engineering and construction are basically on hold. ORP reported that since thresholds were set in August, in terms of the amount of work and the expectations for work in PT and HLW, the contractor has been directed to define those activities it proposes to continue, primarily in HLW. The contractor submitted its proposal, which is essentially limited to ongoing work with rebar, concrete and supporting hangers, etc., and not systems that are considered at risk.

Ecology asked about the design work and potential for permitting to gear up in the next six months for LAW and HLW. ORP responded that LBL activities are proceeding per the schedule. There are no expectations for PT other than technical issue resolution, and HLW will be fairly limited. ORP noted that more detail would be provided during the specific PT and HLW presentations. Ecology asked when the hydrogen generation rate (HGR) calculations will be available. ORP responded that the PT and HLW status could provide more detail.

### **Pretreatment (PT) Facility**

ORP stated that the key activity is the resolution of technical issues. Construction continues with the 14-foot large scale mixing test platform for the large scale testing, and the 14-foot vessel has been procured. A draft is being developed to determine the goals for full-scale test objectives.

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Ecology asked if the entire plan for the 14-foot testing is moving forward despite the S-1 team's pursuit of technical resolution. ORP stated that regardless of the purpose of the S-1 team, the testing of the vessels would need to be done. Ecology asked when a reasonable schedule of events would be available for the full-scale testing. ORP responded that BNI is to submit a detailed schedule for a number of activities by March 2013, and activities could proceed in May 2013. In response to Ecology's questions about more detailed schedule events, ORP stated that aspects of the testing are being developed, but the details of the strategy for full-scale testing are not available. ORP indicated it can share with Ecology what is known about current plans. Ecology requested a link to the corrosion test scoping document, which ORP agreed to provide.

Ecology asked about the schedule for the large scale integrated testing (LSIT). ORP stated that the pathway for the LSIT is not being pursued, but the testing aspects of the LSIT that are considered valuable are being carried forward in parallel with the 14-foot platform facility.

ORP noted that the final report was issued in December 2012 for the Process Vessel Vent (PVV) entrainment coefficient testing. Ecology noted that it had not seen a copy and requested that ORP send the report. ORP agreed to send a copy to Ecology, noting that a draft report had been sent previously.

ORP stated that it has accepted BNI's action plan for resolution of the corrosion/erosion issue and incorporation of the probabilistic assessment for the corrosion/erosion Differing Professional Opinion (DPO) into the test scoping document. BNI has hired a subcontractor with a number of experts in the area of probabilistic evaluation of corrosion/erosion in vessels. ORP noted that it is recognized that even with all the material research, an absolute 100 percent guarantee can never be given due to the uncertainty with all of the waste. ORP stated that that was the reason for recommending a probabilistic evaluation in terms of how long a vessel will last.

Ecology asked if ORP will use the probabilistic evaluations as the final step before characterizing the tests and moving forward. ORP responded that should be the process for moving forward. Ecology asked when ORP would have that information. ORP indicated that at this point it is unknown, and it is part of the plan that BNI is to submit by March 2013. ORP added that BNI will have completed a lot of planning material by summer 2013, but it is unknown when the probabilistic evaluation testing will take place. Ecology requested an update in the March 2013 time frame. ORP agreed to the request for holding a more detailed discussion about the pieces coming together into a more definable schedule of specific activities. ORP added that a detailed

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schedule won't be available in March, but the teams are gearing up with the goal to complete the test and formalize a path forward on the major technical issues this calendar year. ORP noted that a pathway has not been defined to obtain the resources necessary to achieve these activities, but the funds will be made available due to the activities being the highest priority. ORP added that there will be a certain amount of new data that will be required that represents the type of waste and type of applications, and just applying the existing information will not be sufficient to solve the issues.

ORP stated that the other activity associated with corrosion/erosion issue is the evaluation of redundancy of the systems and the vessels in the black cells. The evaluation is to determine whether a vessel or a pipe can be bypassed if it fails during its lifetime in the black cell. Ecology noted that there are a variety of activities that are occurring, and if an evaluation reveals that a component cannot operate in the original configuration, that a fairly robust set of contingencies or work-arounds will need to be developed and implemented. ORP agreed, adding that design changes would need to be done, and that nothing is off the table in terms of the solution.

Ecology asked if part of the general planning is to start marshaling the various ancillary vessel equipment in anticipation of testing, or to wait until the S-1 team provides the specific boundaries for testing. Ecology noted that procurement of the piping, systems, design, and piping and isometric drawings (P&ID) is an involved process. ORP stated that until the S-1 team provides a fundamental strategy for resolving the technical issue, procurements will not be done, other items that are considered a high probability of being used.

ORP addressed Ecology's question regarding the hydrogen in piping in ancillary vessels (HPAV) HGR calculations being done before verification and validation (V&V) of the software. BNI's calculation has been completed, and the process of validating the software is under way and should be completed by early February 2013. Ecology asked if the calculations will be rerun to prove them. ORP responded they would be rerun if there is a problem with the validation of the software, although no problems are anticipated with the validation. ORP explained that the calculations are done on an Excel spread sheet with a number of different formulas that the Excel software calculates. ORP stated that the S-1 team believes that the HGR calculations are very conservative, and the team has requested that BNI review of some of the calculations to determine whether some of the conservatism can be removed. ORP noted that the S-1 team's request is a recent activity, and there is no understanding yet of the order of magnitude of conservatism. BNI has not started its review yet.

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Significant Planned Actions in the Next Six Months - ORP reported that the path forward for vessel mixing will be determined by an independent review team. The team will review the potential for criticality in the vessel, and that team is separate from ORP and BNI. ORP stated that the decision process for the vessel structural modifications is due to buckling issues. Ecology noted that it is waiting to receive information on the buckling issue.

ORP summarized that the timing for when the S-1 teams will have answers to the technical issues and what the impacts to the plant will be are not clear at this point. ORP stated that the primary impact will be to PT, and a strategy to execute the technical issue resolution needs to be in place before a prediction can be made about any impacts, including construction, schedules, and permitting, etc.

### **High Level Waste**

ORP noted that construction work is very limited, due to the ongoing technical issue resolution. ORP stated the Energy Secretary's letter regarding moving forward with full construction is directed to a significant amount of engineering backlog has been identified as low risk, and not unrestricted full construction. ORP indicated that the work could progress depending on available resources. ORP referred to the December 19, 2012 letter, which defines what state of realignment is expected before proceeding into full construction. Oregon Department of Energy (ODOE) asked when the Energy Secretary is leaving the position. ORP responded that there has been no official announcement regarding the Secretary's departure, and ORP is working to ensure the set of teams and the objectives for technical issue resolution and implementation continue moving forward. ORP stated that the final objective is to define what needs to be done to allow the plant to proceed, and that the decisions are final, defensible and satisfactory to all parties. ORP added that in three years' time, if an entity comes back to contest whether an issue has been adequately dealt with, a response can be provided with the history, the decision points, and the agreement of the stakeholders. ORP noted that if there is a fundamental change or new information is received, then that will be dealt with, but not as another cycling through and getting a different set of expertise to come to the same kinds of conclusions.

ORP reported on the HEPA filter issue. BNI is preparing to issue a request for proposal (RFP) by the end of January 2013, and then awarding the contract in the March/April 2013 time frame to get the prototype design and fabrication for HEPA filter. The fabrication will be done once the positive results from testing are completed. The RFP is for different material, including paper or

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metal, to be tested. ORP noted that there could be multiple selections, depending on the location of the filter in the plant. The goal is to achieve a broad, long-term mission capability. ORP noted that all the filter material being considered is existing filter media, and the design will still be an axial filter that will have different capabilities. Ecology asked where the filter testing will be done. ORP responded that Mississippi State University will probably conduct the testing, although the RFP asks if the vendor has testing capability. ORP stated that the key action for the vendor is to demonstrate an alternative design that will meet the plant requirements. Ecology asked if it would make sense to design the filter to the more highly contaminated C5 level and use them elsewhere. ORP responded that that is a possibility, but it would depend on the procurement cost. ODOE noted that a C5-designed filter used in a lower contaminated area could possibly handle the load for a longer period of time. ORP acknowledged that could be a consideration. ORP added that if the filter is more robust, there could also be advantages with regard to accident scenarios and seismic events. ODOE asked about the timeline for testing and procuring the HEPA filters. ORP responded that the plan is to have the prototype fabrication completed by this fall, and the initial testing done by the end of the calendar year 2013.

ORP provided an update on the issue regarding the weld deficiencies on RLD vessel 8 (RLD-8), which is onsite under the vendor purview. BNI is working with the vendor to develop a detailed execution plan for repairing the undercut and undersize welds. At the same time, a technical review is under way to determine whether the vessel has other technical issues, and based on that review a decision will be made whether it is worthwhile to do the modifications or get a different vessel. RLD-7 is still on hold at the vendor, and the issue with monitoring of the welding temperature requirement has not been resolved. Ecology asked if the fabrication is almost complete on RLD-7. ORP responded that it is almost complete. Ecology asked when a decision would be made on RLD-7 and RLD-8. ORP indicated that a decision is expected in March 2013.

ORP noted that a walk-down on HDH vessel 2/4 was conducted with Ecology, and a discussion and presentation was provided. ORP believes that all of Ecology's questions have been answered.

Action No. 12-10-05 - Ecology stated that ORP is providing a briefing tomorrow on the RVP program.

Action No. 12-10-04 - Ecology stated that the updated G2 run has not been provided. ORP will follow up on the action.

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**Low Activity Waste Facility (LAW)**

Significant Past Accomplishments - ORP stated that the procurement for the melter refractory was completed. ORP noted that Ecology was onsite recently, and provided Ecology photos today of the inside of a melter. ORP reported that the HEPA housings have been received and are being stored onsite at the MPF facility, completing a significant planned action.

Significant Planned Actions in the Next Six Months - ORP stated that all of the actions are on schedule to be completed. Ecology asked for an update on the melter assembly building. ORP responded that there is no melter assembly building in the project baseline, and that currently the LAW melters are being assembled in the open bay. If a melter needs to be assembled in HLW, a temporary cover will be placed and the conditions necessary for assembly will be established. Ecology noted that elimination of the melter assembly building is a change in the project baseline, and expressed concern about the ability to gain experience with using a melter assembly building and moving the melter into place. ORP acknowledged that at one point the melter assembly building was within the scope of the line item project, and options for building a temporary structure were considered for the first LAW melters. The change was made when it was discovered there was enough physical room in the open melter bay to allow assembly.

ORP noted that the melter assembly area was walked through when Ecology was onsite. ORP indicated that in the future the Department could choose to install a permanent assembly facility, and it would be a lifecycle decision that would have to be made. Ecology requested the documents pertaining to removing the scope of the melter assembly building from the baseline. ORP indicated that the documentation would be provided. ORP noted that the decision to remove the scope of the melter building was that it was not a critical part to perform the key performance parameters (KPP) in the mission functions; i.e., startup and commissioning. ORP added that the scope of the contract can be achieved through the temporary building.

**Balance of Facilities (BOF)**

ORP reported that the key accomplishment was completion of the construction of the steam plant. ORP conducted a walk-down of the facility on December 27, 2012 to verify completion. The milestone due date was December 31, 2012. ORP stated that during the final completion phase, issues were discovered with some original design and were corrected. Flaws with the support for

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pipng around the condensate pumps were noted, and new equipment, fittings and supports were brought in to make adjustments. An addition was made to the fire protection system.

ORP stated that progression with the turnover and startup of some of the facilities continue. Work continues with Building 87 and its electrical systems and turning it over on an individual basis. The next stage will be Building 91. Planning is under way to determine the best path forward for testing of key facilities. The goal is to set up a path forward for align turnover to the startup organization and component level testing.

#### **Analytical Laboratory (LAB)**

ORP reported that the milestone for substantially complete was met for the LAB. The due date was December 31, 2012. The current focus is to switch to LAB construction completion. The milestone is on schedule for completion by June 2014, with some float to the schedule.

A key focus in LAB is weld repairs to the RLD vessels. A QA evaluation was conducted as part of the substantially complete milestone, and the documentation supporting key components was reviewed. Issues were identified with the documentation for the RLD vessel welds, which led to follow-on reviews of other components in the LAB. Those reviews of components did not uncover any issues. Ecology asked if ORP has a sense of assurance that the rework and rewelding necessary on the RLD vessels will not compromise the integrity of the metallurgy. ORP responded that vessel 164 will need to be retested hydrostatically and restamped. There is a potential that vessel 165 may need rework, and vessel 163 has no invalidation of the testing to date. ORP noted its action to meet with Ecology the first week in February 2013 to review the LAB substantially complete milestone for approval, and set up a follow-on meeting for the steam plant substantially complete milestone. ORP also requested a walk-down of the steam plant with Ecology.

Ecology inquired about the status of the cathodic protection of the underground lines. ORP responded that a review of Bechtel's suggested path forward is being evaluated. ORP stated its intent to discuss the cathodic protection of underground lines with Ecology in early February 2013.

#### **4.0 Key Documents List**

An updated ORP key documents list was provided.

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**5.0 Upcoming Meetings**

- The ORP TPA Quarterly Dry Run is scheduled for February 19, 2013 from 9:00 am to 11:30 am in ORP room 1600.
- The ORP TPA February Quarterly/IAMIT meeting is scheduled for February 21, 2013 from 8:30-11:30 am in Ecology room 3A/B.

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**Attachment A: Agenda, AR List, Agreement, Issues and Actions**

**(5 pages including this cover sheet)**

**ORP TPA January Project Managers' Monthly Meeting**  
**Tuesday, January 22, 2013**  
**2440 Stevens Center Richland, Washington**  
**Room 1200, 9:00AM-11:30AM**

**AGENDA**

**1.0 Administrative Items**

**Recent Items Entered/To Be Entered into the TPA Administrative Record** (see <http://www5.hanford.gov/arpir/?content=advancedSearch> - search EDMC File Number)

<b>Item Description</b>	<b>TPA/CD Topic Milestone Tie</b>	<b>TPA Admin Record – EDMC File Number</b>
December 2012 ORP CD Monthly Report	All	1218394
December 2012 ORP TPA Monthly Report	All	1218395
ORP Response to Ecology Request for revised ARRA IQRPE assessments, letter 12-TF-0055	Requested by Ecology in an ORP TPA PMM	1218403
TPA Project Managers' Agreement to close M-045-58	M-045-58	1218415
ORP TPA November 15, 2012 Quarterly Meeting Minutes	All	1218480
ORP TPA December 2012 Project Managers Monthly Meeting (Tank Farms Only), held 12/20/12	Tank Farms Milestones	1218746
TPA Change Notice 2012-09, Update of RPP-PLAN-36705, 241-TY Tank Farm Interim Surface Barrier Monitoring Plan, Revision 1, final approval date on 01/08/13, to be entered in 01/22/13 PMM	M-045-20	In process

**2.0 Agreements, Issues, Actions (review before and after ORP Project Summary Presentations)**

**3.0 Review of the ORP Project Summary**

**4.0 Key Documents List**

**Upcoming Meetings**

- The ORP TPA Dry-Run for the February 2013 Quarterly Meeting is scheduled for February 19, 2013 from 9:00-11:30AM in ORP Room 1200.
- The ORP TPA February Quarterly / IAMIT Meeting is scheduled for February 21, 2013 from 8:30-11:30AM in Ecology Room 3A/B.

**ORP/Ecology TPA and CD Agreements, Issues, and Actions for January 2013**

**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 Inner Tank Leak: A team comprised of experts from ORP, ECY, WDOH, and WRPS are evaluating a range of potential cumulative impacts (DST space/water balance, 242-A Evaporator, Waste Feed Delivery to WTP, risk readiness/contingency, etc.) with follow-on topic meetings to be held with close involvement of ORP and ECY Senior Management as information becomes available for evaluation.

**Tank Farms Actions:**

#	Date Initiated	Action Description	Action Status	Actionee(s)	Date Closed
12-12-03	12/20/12	ORP will complete the updates for the comments provided on the draft SST Integrity TPA change package and meet with Ecology.	<b>Open.</b>	Jeremy Johnson	
12-12-02	12/20/12	ORP will provide general definitions for milestone statuses of "At Risk" and "To Be Missed" and work to reflect details for these statuses in the Issues section of the monthly Report.	<b>Open.</b>	Jim Lynch	
12-12-01	12/20/12	Ecology has questions about Tc-99, Uranium, and Iodine-129 increased groundwater contamination trending in WMA C wells.	<b>Open.</b>	Chris Kemp	

**ORP/Ecology TPA and CD Agreements, Issues, and Actions for January 2013**

#	Date Initiated	Action Description	Action Status	Actionee(s)	Date Closed
12-10-05	10/23/12	ORP will review the September 2009 Report, External Technical Review for Evaluation of System Level Modeling and Simulation Tools in Support of Hanford Site Liquid Waste Process for recommendations and determine if those recommendations have been implemented. A follow-up meeting will then be established with Ecology to discuss.	<b>Open.</b> ORP is currently reviewing this document.	DaBrisha Smith	
12-10-04	10/16/12	Ecology would like to discuss C-107 and considerations for Tc-99 concerns with tank residuals and technology selection.	<b>Open.</b>	Chris Kemp	
12-10-03	10/10/12	Per M-045-56 annual meeting: Set meeting on Interim Measures Inspection and Maintenance, to address inspection scope, criteria, and results of past inspections.	<b>Open.</b> This meeting is scheduled for 01/08/13.	Susan Eberlein	
12-10-02	10/10/12	Per M-045-56 annual meeting: Set meeting with site water purveyor to address leak detection and testing in active water lines.	<b>Open.</b> Ecology will send any questions for the water purveyor to ORP.	Michelle Hendrickson / Joe Caggiano	
12-10-01	10/10/12	Per M-045-56 annual meeting: Set meeting on interim surface barrier surveillance and maintenance actions and status.	<b>Open.</b>	Susan Eberlein	

**ORP/Ecology TPA and CD Agreements, Issues, and Actions for January 2013**

#	Date Initiated	Action Description	Action Status	Actionee(s)	Date Closed
12-09-02	09/25/12	ECY PMs would like to set up a meeting with ORP PMs to define the purpose and scope of the PMM meetings (roles, responsibilities, objectives).	<b>Open.</b> This was discussed at the ORP/ECY Communications meeting held on 10/16/12 and a break-out team held a follow-up meeting on to outline expectations, discuss the process, available tools (agreements, issues, action items list), and develop improvements. This meeting was held on 11/13/12 and ECY will review these results and provide for discussion at the follow-up overall ORP/ECY Communications Improvements meeting.	Jeff Lyon	

**WTP Actions:**

#	Date Initiated	Action Description	Action Status	Actionee(s)	Date Closed
12-10-05	10/23/12	ORP will provide briefings on the RVP Program; the Vessel Cooling Coil, and HSS Bolt issues.	<b>Open.</b> ORP plans to provide these briefings in November 2012	Wahed Abdul	
12-10-04	10/23/12	ORP will determine the status of the updated G2 Run and provide to ECY.	<b>Open.</b>	Wahed Abdul	

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**Attachment B: List of Attendees**

**(3 pages including this coversheet)**

**Sign In Sheet**  
**ORP TPA PMM Meeting**  
**January 22, 2013**

NAME	ORG	PHONE
Felix Miera	WRPS	376-2034
Kathy Knox	Knox Court Reporting	946-5535
James Lynch	DOE-ORP	376-4170
QUB PIPPO	MSA TPA	373-3285
Jeremy Johnson	ORP	376-1866
Mike Barnes	Ecology	372-7927
Joni Grimbelf	DOE-ORP	376-6202
Kathy Higgins	ORP	376-3658
Shawny Simon	ORP	(SA) 240-0161
Jan McDonald	Ec	372-7988
Ron Koll	ORP	376-4131
Steve Pfaff	ORP	376-2188
Dabir Singh Simha	ORP	376-4306
Susan Eberlein	WRPS	372-1689
Tom Mischko (for J. A. Luke)	WRPS	376-8622
Chris Harrington	ORP	376-1239
ELIN TRENCHARD	ORP	373-4016
RD Hildebrand	DOE	373-9626
Reed Kaldor	MSA	372-1992
Jim Abbeimer	Ec	372-7982
Maria Skoniew	Ec	372-7981
Nancy Dziembla	Ecology	372-7928



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**Attachment C: Presentation Materials**

**ORP TPA Project Summary  
(19 pages)**

**And**

**ORP Consent Decree Project Summary  
(22 pages)**

**And**

**Working ORP Key Documents List  
(2 pages)**

**(44 pages including this coversheet)**

FINAL

Office of River Protection

Tri-Party Agreement

Monthly Summary Report

January 2013



Office of River Protection  
Tri-Party Agreement Milestone Review  
January 2013

<b>Page</b>	<b>Topic</b>	<b>Leads</b>
1	Administrative Items / Milestone Status	James Lynch / Dan McDonald / Jeff Lyon
2	Single-Shell Tank Corrective Action; M-45, -50, -60	Chris Kemp / Jeff Lyon
4	Single-Shell Retrieval and Closure Program TPA Milestones Status; M-45-00 series, - Tank in Appendix H Status - Tank Retrievals with Individual Milestones	Chris Kemp / Jeff Lyon
5	Tank Waste Retrieval Work Plan Status	Chris Kemp / Jeff Lyon
6	Tank in Appendix H Status Tank Retrievals with Individual Milestones	Chris Kemp / Jeff Lyon
7	242-A Evaporator Status	Ron Koll / Jeff Lyon
8	SST Integrity Assurance; M-45-91	Jeremy Johnson/ Michelle Hendrickson
9	In Tank Characterization and Summary	Billie Mauss / Michael Barnes
11	Tank Operations Contract (TOC) Overview	Dan Knight / Jeff Lyon
16	Acquisition of New Facilities; M-90-00; M-47-00	Janet Diediker / Jeff Lyon / Dan McDonald
17	Supplemental Treatment and Part B Permit Applications; M-62-00, -20, -30, -45	Steve Pfaff / Jeff Lyon / Dan McDonald
18	System Plan; M-62-40	Dabrisha Smith / Jeff Lyon / Dan McDonald
19	WTP Overall TPA Summary and Milestone Status; M-62-01	Delmar Noyes / Dan McDonald

<b>Milestone</b>	<b>Title</b>	<b>Due Date</b>	<b>Completion Date</b>	<b>Status</b>
<b>Fiscal Year 2012</b>				
M-062-40B	Submit System Plan	10/31/2011	10/21/2011	Completed
M-062-49	Sub. Report to ECY Demonstrating WTP Design Meets Vit. Criteria	10/31/2011	10/27/2011	Completed
M-045-91B	DOE Submit a Sampling and Analysis Plan to Ecology	12/30/2011	9/20/2011	Completed
M-045-92F	Meet Yearly on Performance of Barrier	12/31/2011	11/30/2011	Completed
M-045-91G-T02	Provide AOR Final Doc. for SSTs on 750,000 Gallon Tanks	1/31/2012	11/18/2011	Completed
M-062-01X	Submit Semi-Annual Project Compliance Report	1/31/2012	1/27/2012	Completed
M-045-91D	Submit Analytical Test Plan for Cores Removed from C-107 Plug	3/31/2012	6/27/2011	Completed
M-045-91G-T06	Provide Report of the Visual Inspection of 12 SSTs M-045-91G-T05	3/31/2012	03/12/2012	Completed
M-045-92M	Barrier 2 Design/Monitoring Submittal to Ecology	6/30/2012	5/19/2011	Completed
M-047-06	Comp. Neg's of No More Than 2 Interim Milestones	6/30/2012	11/19/2012	Completed
M-062-01Y	Submit Semi-Annual Project Compliance Report	7/31/2012	7/27/2012	Completed
M-045-56H	Meet Yearly to Discuss Interim Measures	7/31/2012	6/21/2012	Completed
<b>Fiscal Year 2013</b>				
M-045-20	Submit Interim Measures Investigation Work Plan and TPA Chg Pckgs for M-045-22 Target Dates	12/31/2012	12/06/2012	Completed
M-090-11	Comp. Neg's No More Than 2 Canister Storage Fac. Const. Int. M/S	12/31/2012	11/19/2012	Completed
M-062-01Z	Submit Semi-Annual Project Compliance Report	1/31/2013		On Schedule
M-045-91F-T01	Provide Report of the Liquid Leak Rate Assessments	1/31/2013		To Be Missed
M-045-21	Submit Sampling and Analysis Plan for 241-TX Tank Farm	3/31/2013		On Schedule
M-045-91D-T01	Provide Report on the Concrete Dome Samples from Tank C-107 Plug	5/31/2013		On Schedule
M-045-91F-T03	Provide Report on Testing for Ionic Conductivity of SSTs	5/31/2013	05/02/2012	Completed
M-045-91F-T02	Provide Report of Liner Failures for SSTs	7/31/2013		To Be Missed
M-045-91F-T04	Provide Report on 100-Series SSTs as having Leaked in RPP-32681	7/31/2013		To Be Missed
M-045-91E	Provide SST Farms Dome Deflection Surveys Every Two Years	9/30/2013		On Schedule
M-045-91G-T03	Provide AOR Final Doc. for SSTs on 1,000,000 Gallon Tanks	9/30/2013		To Be Missed

Milestone	Title	Due Date	Completion Date	Status
<b>Fiscal Year 2014</b>				
M-045-91G-T04	Provide AOR Final Doc. for SSTs on 55,000 Gallon Tanks	10/31/2013		To Be Missed
M-062-40C	Select a Minimum of Three Scenario's for the System Plan	10/31/2013		On Schedule
M-045-91F	Provide Summary Conclusions Report on Leak Integrity	12/31/2013		To Be Missed
M-045-91G	Provide Summary Conclusions Report of AOR for SSTs	04/30/2014		To Be Missed
M-045-56J	Ecology And DOE Agree, At A Minimum, To Meet Yearly (By July)	07/31/2014		On Schedule
M-045-91B-T01	Provide Ecology report on the Concrete Core from TankA-106 or alt	09/30/2014		On Schedule
M-047-07	CD-1 for Secondary Liquid Waste Treatment and CR for CD-2 to Ecology	09/30/2014		On Schedule
M-090-13	CD-1 for Interim Hanford Storage Project and CR for CD-2 to ECY	09/30/2014		On Schedule

## WBS 5.2 Retrieve and Close Single Shell Tanks

**M-045-20, Submit Interim Measure Investigation Work Plan to Ecology, Due: 12/31/12, Status: Completed on 12/06/12.** ORP will submit to Ecology for review and approval an interim measures investigation work plan for to vadose zone characterization at 241-TX Farm and 241-U Farm, and soil desiccation/contaminant removal proof-of-principal test at 241-SX Farm. The work plan will also be submitted with a TPA Change Package to establish milestone due date for M-045-22 and target dates for submittal of three secondary documents, see M-045-22-T01, -T02, and -T03. Added per TPA change package M-45-12-04. ORP submitted this work plan and a draft TPA change package for dates for M-045-22 and its targets on 12/06/12 via letter 12-TF-0054. Ecology responded via 12-NWP-190 authorizing ORP to begin field work while Ecology completed their review of the Work Plan.

**M-045-21, Submit for Review and Approval a Sampling and Analysis Plan to Ecology for Soil Samples for 241-TX Tank Farm Investigation, Due: 03/31/2013, Status: On Schedule.** Added per TPA change package M-45-12-04.

**M-045-22, Review M-045-22-T03 Report and Determine Path Forward, Due: TBD based on M-045-20 TPA Change Package Submittal, 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 remaining work in Milestone M-045-92 should be modified. Added per TPA change package M-45-12-04. ORP submitted a draft TPA change package for dates for M-045-22 and its targets on 12/06/12 via letter 12-TF-0054.

**M-045-22-T01, Submit Results of Vadose Zone Characterization of 241-TX to Ecology,** Due: TBD based on M-045-20 TPA Change Package Submittal, Status: On Schedule.

**M-045-22-T02, Submit Results of Vadose Zone Characterization of 241-U to Ecology,** Due: TBD based on M-045-20 TPA Change Package Submittal, Status: On Schedule.

**M-045-22-T03, Submit SX Soil Desiccation/Contaminate Removal Tech Results to Ecology,** Due: TBD based on M-045-20 TPA Change Package Submittal, Status: On Schedule.

**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 WMAS (pending the CMS report, milestone M-45-58, and implementation of other interim corrective measures),** Due: TBD, Status: On Schedule

**M-045-61, Submit to Ecology for review and approval as an Agreement primary document a Phase 2 RFI/CMS Report for WMA C,** Due: 12/31/2014, Status: At Risk. 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: 06/30/2015, Status: At Risk. Please see Issues.

**M-045-92, DOE and Ecology will establish selection criteria for installation of additional interim barriers at additional WMAs (beyond the T-106 and TY barriers),** Due: 09/30/2017, Status: On Schedule. This milestone date has been modified according to M-45-12-04 and the decision to move forward with construction/design of additional barriers dependent on discussions per M-045-22.

**M-045-92N, Construct Barriers 1 and 2 in 241-SX Farm** Due: 10/31/15, Status: On Schedule. The decision to move forward with construction/design of additional barriers is dependent on discussions per M-045-22.

**M-045-92O, Submit a Final Design and Monitoring Plan for Interim Barrier 3** Due: 06/30/15, 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:**

- Provided the interim measures investigation Work Plan for M-045-20 and draft TPA change package for M-045-22 and its targets via ORP letter 12-TF-0054 on 12/06/12.
- Automated data collection system for T-Farm interim barrier monitoring continues gathering data.
- Automated data collection system for TY Interim Barrier monitoring continues gathering data.
- Verification and validation was completed for the laboratory analysis of direct push soil samples previously obtained in C farm
- Ground penetrating radar was performed in C farm near the C-200s to support direct push work.

- Ground penetrating radar was performed in U farm, TX farm, and south of SX farm to support interim measures investigation described in the M-045-20 work plan.

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

- Revise the TY Interim Surface Barrier Monitoring Plan, per approved TPA Change Notice 2012-09.
- Provide the Sample Analysis Plan for 241-TX Farm for M-045-21.
- Initiate direct push field work south of SX farm under the M-045-20 work plan.
- Initiate direct push field work in TX farm under the M-045-20 work plan.
- Initiate electrical resistivity field work in U farm under the M-045-20 work plan.
- Perform direct push/electrical resistivity field work near the C-200 tanks per the WMA C Phase 2 RFI/CMS Work Plan.

## SST Retrieval and Closure Program

**M-045-82, Submit complete permit mod requests for Tiers 1, 2, & 3 of the SST, Due: 9/30/2015 Status: At Risk. Please see Issues.**

**M-045-84, Complete negotiations of TPA interim MS for closure of second WMA, Due: 1/31/2017, Status: On Schedule**

**M-045-83, Complete the closure of WMA C, Due: 6/30/2019, Status: On Schedule**

**M-045-85, Complete negotiations of TPA interim MS for closure of remaining WMAs, Due: 1/31/2022, Status: On Schedule**

**M-045-70, Complete waste retrieval from all remaining SSTs, Due: 12/31/2040, Status: On Schedule**

**M-045-00, Complete Closure of all Single Shell Tank Farms, Due: 1/31/2043, Status: On Schedule**

**M-045-86, Submit retrieval data report to Ecology for 19 tanks retrieved, Due: TBD (12 months after retrieval certification), Status: On Schedule**

**Significant Past Accomplishments:**

- Completed post-retrieval sampling, analysis and reporting of results for tank C-108 in support of the M-045-86 retrieval data report.
- See discussions above and related discussions in Consent Decree report.

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

- See discussions above and related discussions in Consent Decree report.

**Issues:**

The WMA-C performance assessment is not funded currently in fiscal year 2013. ORP needs to restart the WMA-C performance assessment by March 31, 2013 or milestone M-45-82 will be missed, and will require that other existing data be utilized for M-45-61 and M-45-62 to keep their existing milestone dates. ORP is working to identify funding to restart the WMA-C performance assessment on or before March 31, 2013.

**Tank Waste Retrieval Work Plan (TWRWP) Status**

Tank	TWRWP	Expected Revisions	Retrieval Technology	Second Technology	Third Technology
C-101	RPP-22520, Rev. 7	Complete	MRS (per 10/7/10 agreement, to be Modified Sluicing)	High-Pressure Water with ERSS	-
C-102	RPP-22393, Rev. 6A	In Process	Modified Sluicing	High-Pressure Water with ERSS	-
C-104	RPP-22393, Rev. 6A	Complete	Modified Sluicing	Chemical Dissolution	-
C-105	RPP-22520, Rev. 7	Complete	MARS-V	MARS-High Pressure Water	-
C-107	RPP-22393, Rev. 6A	Complete	MARS-S	MARS-High Pressure Water	-
C-108	RPP-22393, Rev. 6A	Complete	Modified Sluicing	Chemical Dissolution	-
C-109	RPP-21895, Rev. 5	Complete	Modified Sluicing	Chemical Dissolution	-
C-110	RPP-33116, Rev. 2	In process	Modified Sluicing	Mechanical Waste Conditioning	High Pressure Water
C-111	RPP-37739, Rev. 1	In process	Modified Sluicing	None	-
C-112	RPP-22393, Rev. 6A	In process	Modified Sluicing	Chemical Dissolution	-

**Significant Accomplishments**

None.

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

Work with Ecology on updates to TWRWPs RPP-22393, RPP-33116, RPP-22520 and RPP-37739 for tanks C-105, C-110, C-111, and C-112.

**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 Six Months:**

Continue U.S. Nuclear Regulatory Commission (NRC) review of the C-106 exception request. A Request for Additional Information (RAI) 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 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: 9/30/22 Status: On schedule. Change package M-45-11-04 replaced tank S-102 with tank A-103 and changed to milestone completion date for M-045-15 to 09/30/2022.

**M-045-15A, Embedded Milestone, Submit a Retrieval Data Report Pursuant to Agreement Appendix I**, Due: 9/30/22, Status: On schedule. Updated with tank A-103 and due date of 9/30/22 per M-45-11-04 Change Package.

**M-045-15D, Embedded Milestone, if appropriate, DOE will request an exception to waste retrieval criteria pursuant to Agreement Appendix H**, Due: 9/30/22, Status: On Schedule. Updated with A-103 tank and due date of 9/30/22 per M-45-11-04 Change Package.

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

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

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

None

### **Tank 241-S-112**

**M-045-13, Interim Completion of Tank S-112 SST Waste Retrieval and Closure Demonstration Project**, Due: TBD (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: TBD 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.

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

None

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

### 242-A Campaign strategy:

The 242-A Campaign Strategy for FY2010 through FY2015 depicted below has been updated based on ORP-11242, River Protection Project Plan, Revision 6, and ongoing schedule integration efforts.

Fiscal Year	Campaign No.	Feed Source	Slurry Tank	Comments
FY10	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.
FY10	10-02	AW-106	AW-106	
FY11	NA	NA	NA	No campaign conducted in FY11 due to ongoing 242-A and Tank Farm facility life extension and ARRA funded upgrades.
FY12	NA	NA	NA	No campaign conducted in FY12 due to ongoing 242-A and Tank Farm facility upgrades and revision to the 242-A Documented Safety Analysis (DSA).
FY13	13-01	AP-107	AP-107	Estimated start July 2013. May require two (2) passes to achieve waste volume reduction.
FY13	13-02-	AW-106	AW-106	Estimated start September 2013.
FY14	14-01	AN-106 AZ-102 AW-106	AP-107	Estimated start March 2014. Two (2) passes required.
FY15	15-01	AY-101 AZ-102	AP-107	Estimated start March 2015. Three (3) passes required.
FY15	15-02	AY-101	AP-107	Estimated start August 2015. Four (4) passes required.

## SST Integrity Assurance

**M-045-91F-T01, Provide to Ecology as a HFFACO secondary document a report evaluating the applicability to Hanford SSTs of the liquid leak rate assessments of sludge and salt-cake from the Savannah River Site, Due: 1/31/2013, Status: To Be Missed.** TPA change package M-45-12-01, moving M-45-91F-T01 and G-T03 out one year was signed by ORP and Ecology on 01/23/12. A change package is being discussed with Ecology.

**M-045-91D-T01, Provide Ecology a report containing the results and interpretation of testing, and analysis performed on the concrete dome samples obtained from the Tank C-107 plug, Due: 5/31/2013, Status: On schedule.**

**M-045-91F-T03, Provide to Ecology, as a HFFACO secondary document a report assessing the feasibility of testing for ionic conductivity between the inside and outside of SSTs, Due: 5/31/2013, Status: Complete 05/02/2012. (ORP letter 12-TF-0009)**

**M-045-91F-T02, Provide to Ecology as a HFFACO 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: 7/31/2013, Status: To Be Missed.** A change package is being discussed with Ecology.

**M-045-91F-T04, provide to Ecology, as a HFFACO secondary document, a report on the 100-series single-shell tanks which have been or will be identified as having leaked in RPP-32681, Rev 0, Due: 7/31/2013, Status: To Be Missed.** A change package is being discussed with Ecology.

**M-045-91G-T03, Provide to Ecology the Structural Analyses of Record final documentation for SSTs for 1,000,000 gallon tanks (A, AX and SX Farms), Due: 9/30/2013, Status: To Be Missed.** TPA change package M-45-12-01, moving M-45-91F-T01 and G-T03 out one year was signed by ORP and Ecology on 1/23/2012. A change package is being discussed with Ecology.

**M-045-91E, Provide to Ecology a compilation of the Single-Shell Tank farms dome deflection surveys every two years, beginning 9/30/2013, Due: 9/30/2013, 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: 10/31/2013, Status: To Be Missed.** A change package is being discussed with Ecology.

**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 -T04, Due: 12/31/2013, Status: To Be Missed.** A change package is being discussed with Ecology.

**M-045-91G, Provide a Summary Conclusions Report of Structural Analysis of Record (AOR) for SSTs, Due: 4/30/2014, Status: To Be Missed.** A change package is being discussed with Ecology.

**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 alternate tank, Due: 9/30/2014, 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 milestones to date, Due: 7/31/2015, Status: On schedule.**

**M-045-91I, Provide to Ecology an 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: 9/30/2018, Status: On schedule.**

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

- Work has resumed in the areas of SST structural analysis, sidewall coring, analysis of rebar from C-107, and SST leak cause and location analysis.

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

- Continue discussions with Ecology regarding "To Be Missed" target dates and interim milestone impacts.
- Complete analysis of rebar from C-107 and complete M-045-91D-T01.

#### **Issues:**

- FY2012 and FY2013 funding constraints have impacted M-045-91 scheduled work. ORP is meeting with Ecology to discuss impacts on individual milestones and targets dates for FY2013 and beyond and working a path forward per the TPA Section 12.0 Change Process.

## **In Tank Characterization and Summary**

For the period from December 1 – December 31, 2012:

#### **Accomplishments:**

- Completed RPP-PLAN-53917, Rev. 0, *Sampling and Analysis Plan for Tank 241-C-102 Stack Chemical Emissions During Retrieval.*
- Completed RPP-PLAN-53006, Rev. 2, *Tank 241-AW-106 Grab Sampling and Analysis Plan in Support of Evaporator Campaign for Fiscal year 2013.*
- Completed RPP-53641, Rev. 0, *Data Quality Objectives for SR/TRU Precipitation Process Phase I Tests.*

- Completed grab sampling of Tank 241-AW-106 on December 17, 2012 in support of the evaporator campaign for Fiscal Year 2013.
- Completed grab sampling of AY102A Leak Detector Pit on December 11, 2012 in support of the compatibility program.
- RPP-RPT-54701, Rev. 0, *Final Report for Tank 241-AY-102 Annulus*, was released on December 10, 2012.
- RPP-RPT-53842, Rev. 0, *Final Report for Tank 241-AN-101 Liquid Grab Samples Taken After the Completion of C-104 Hard Heel Retrieval in support of Corrosion Mitigation* was released on December 3, 2012.

**Planned Action within the next Six Months:**

- Tank Sampling
  - Tank 241-C-104 Off Riser Sampling System (ORSS) sampling for closure is currently scheduled for January 2013.
  - Tank 241-AY-102A Annulus leak detection pit is scheduled for January 2013.
  - Tank 241-SY-102 grab sampling for chemistry control is currently scheduled for January 2013.
  - Tank 241-AN-101 grab sampling for chemistry control is currently scheduled for January 2013.
  - Tank 241-C-109 ORSS sampling for closure is currently scheduled for March 2013.
  - Tank 241-AN-102 grab sampling for chemistry control is currently scheduled for April 2013.
- BBI Updates: The following tanks have been identified for updates in FY13 Quarter 1. The BBI updates will be released in January 2013.

▪ 241-AN-101	▪ 241-AW-106
▪ 241-AN-106	▪ 241-AZ-102
▪ 241-AP-101	▪ 241-C-107
▪ 241-AP-102	▪ 241-C-104
▪ 241-AP-105	▪ 241-C-109
- Data Quality Objectives (DQO)
  - A DQO on a Solubility Model is due to be released in January 2013.

**Issues:**

None.

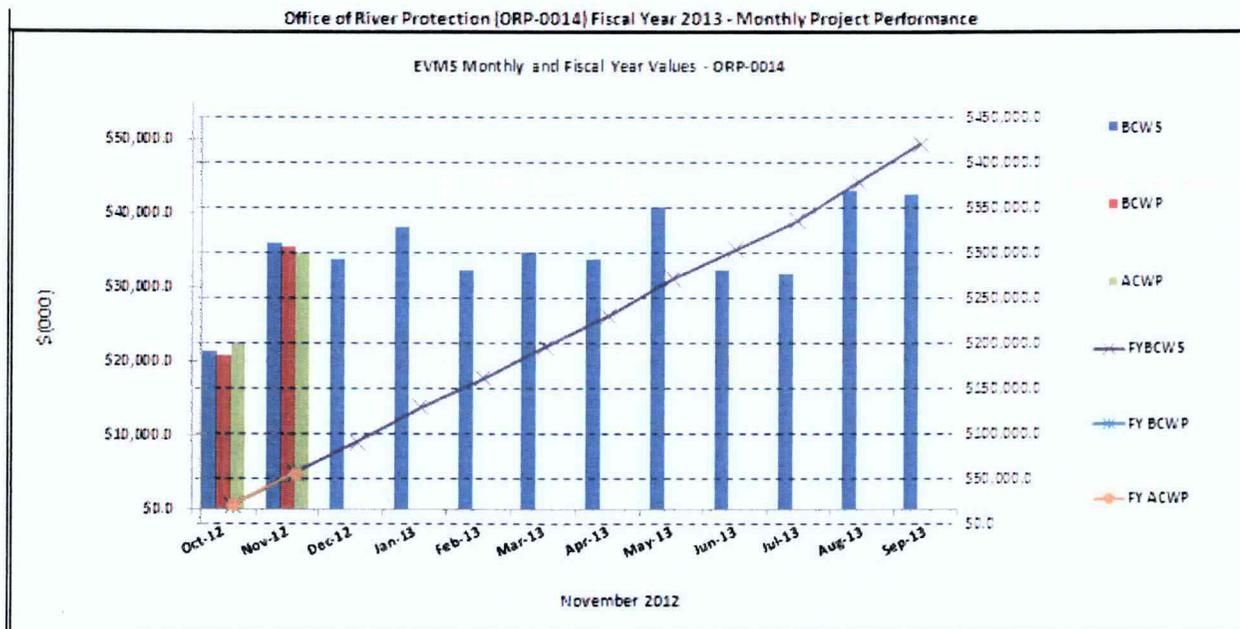
## TANK OPERATIONS CONTRACT (TOC) OVERVIEW

### Project Performance

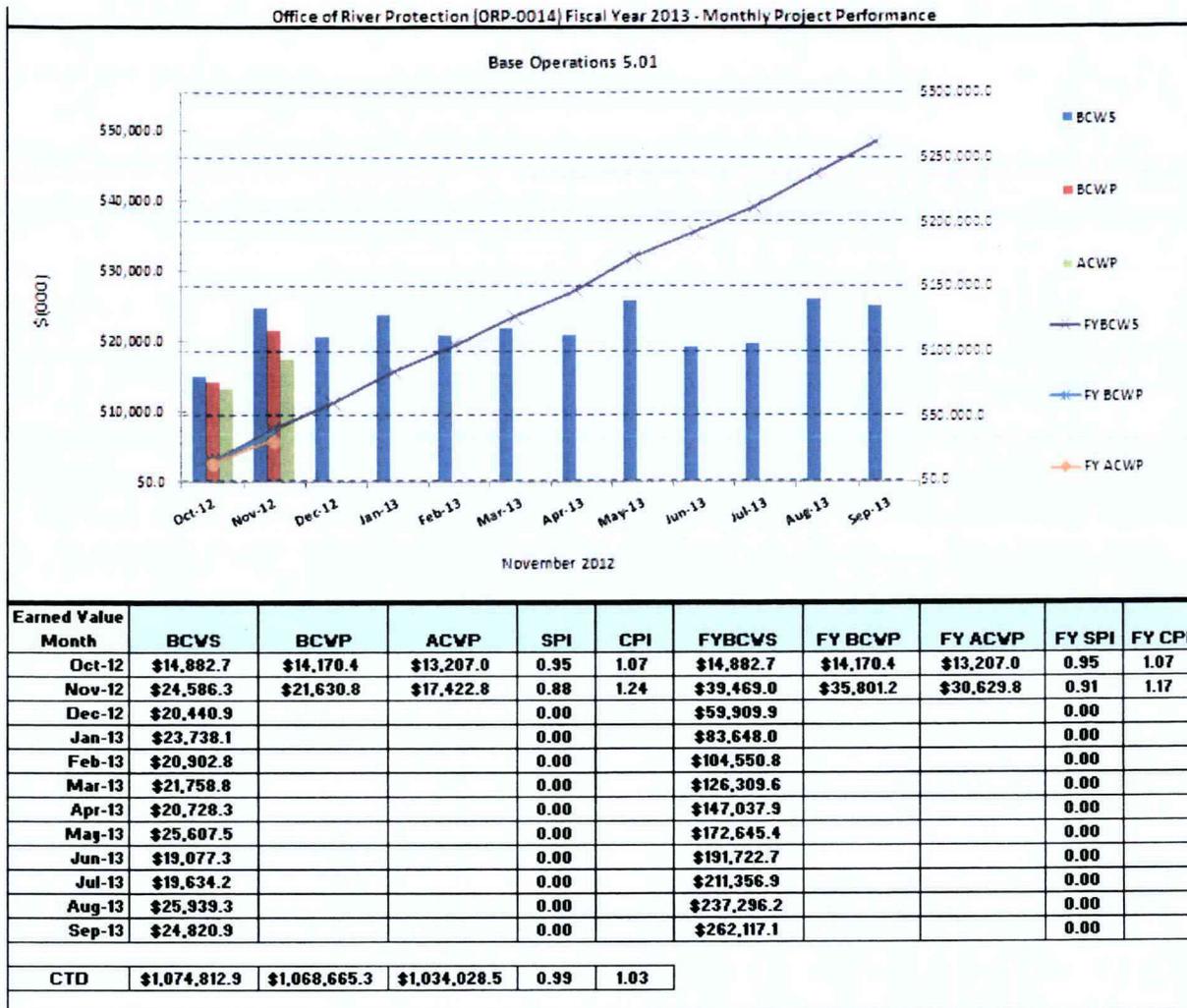
The earned value performance reporting reflects the format, Work Breakdown Structure (WBS) reporting levels, and variance thresholds as agreed to with the Tank Farms Operations Contractor (TOC) for monthly performance reporting. The earned value analysis is not intended to be a measurement of performance against existing Tri-Party Agreement Milestones.

As of November 30, 2012, Washington River Protection Solutions LLC (WRPS) worked 5,771,038 hours (599 days) without a Lost Time Workday Injury and 745,048 hours (79 days) without a Recordable case. There were no Days Away, Restricted, or Transferred (DART) or Recordable cases in November.

BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
35,319.2	34,775.1	(591.6)	544.1	0.98	1.02			
56,230.9	57,158.0	(1,030.4)	(927.1)	0.98	0.98	426,190.8	406,434.4	19,756.4
1,655,107.1	1,582,303.7	(6,254.3)	72,803.4	1.00	1.05	7,003,583.2	6,917,340.4	86,242.8



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FYBCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct-12	\$21,350.5	\$20,911.7	\$22,382.9	0.98	0.93	\$21,350.5	\$20,911.7	\$22,382.9	0.98	0.93
Nov-12	\$35,910.8	\$35,319.2	\$34,775.1	0.98	1.02	\$57,261.3	\$56,230.9	\$57,158.0	0.98	0.98
Dec-12	\$33,795.4			0.00		\$91,056.7			0.00	
Jan-13	\$38,179.6			0.00		\$129,236.3			0.00	
Feb-13	\$32,248.7			0.00		\$161,485.0			0.00	
Mar-13	\$34,599.7			0.00		\$196,084.7			0.00	
Apr-13	\$33,773.8			0.00		\$229,858.5			0.00	
May-13	\$40,892.1			0.00		\$270,750.6			0.00	
Jun-13	\$32,288.5			0.00		\$303,039.1			0.00	
Jul-13	\$31,800.4			0.00		\$334,839.5			0.00	
Aug-13	\$42,997.4			0.00		\$377,836.9			0.00	
Sep-13	\$42,434.3			0.00		\$420,271.2			0.00	
<b>CTD</b>	<b>\$1,661,361.4</b>	<b>\$1,655,107.1</b>	<b>\$1,582,303.7</b>	<b>1.00</b>	<b>1.05</b>					



**Base Operations**

**Schedule Variance (\$2,955.5K):**

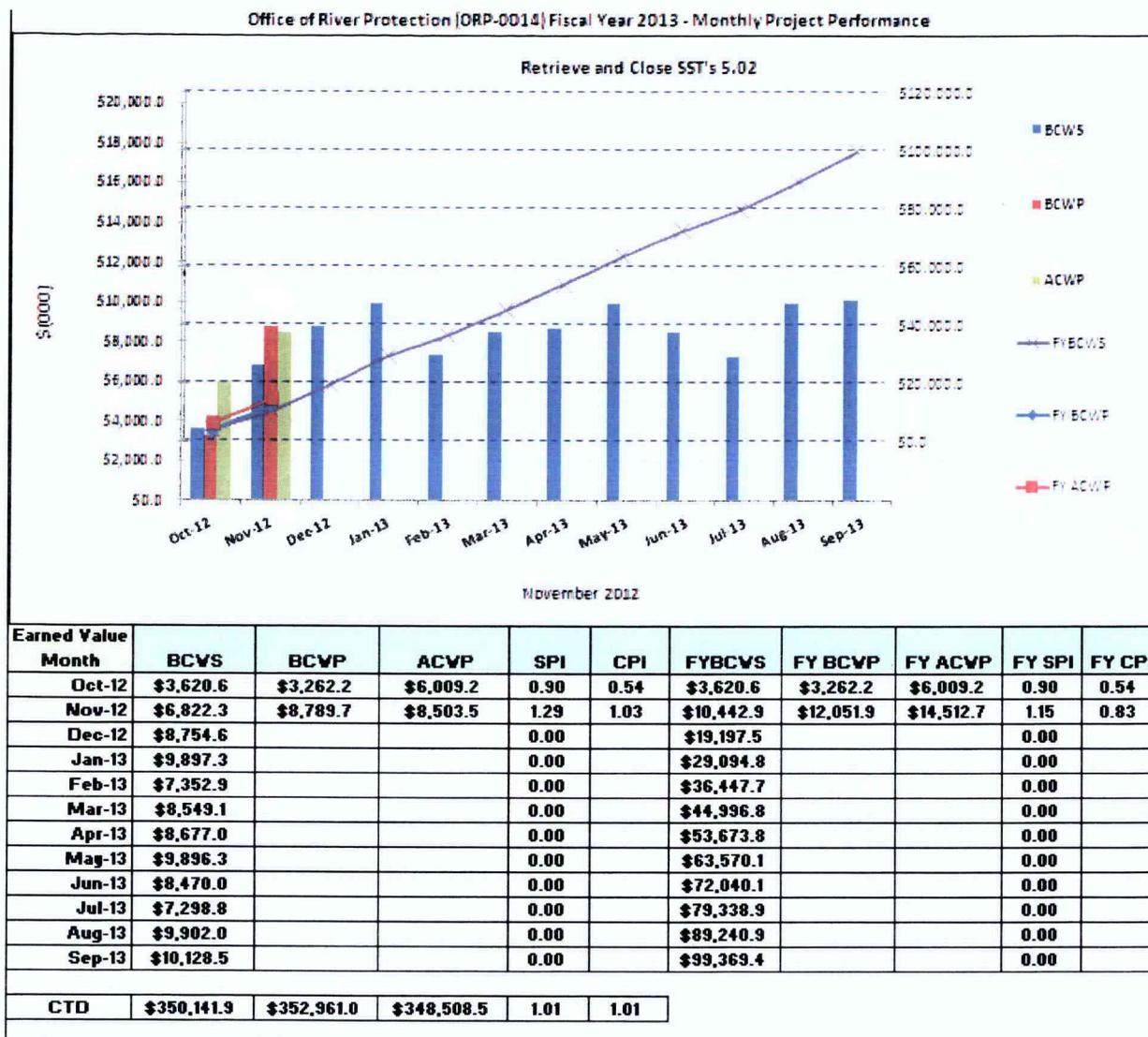
The unfavorable schedule variance is primarily due to:

- DST Infrastructure Upgrades, the CM unfavorable SV is due to delays to the release of the design media, delayed installation of enclosures, thermocouples, and electrical components in the DST pits.
- Additional ground scans required for underground electrical components to support excavation of risers necessary to the SY-102 annulus inspections.

**Cost Variance \$1,500.0K:**

The favorable cost variance is primarily due to:

- Central Engineering using less subcontract support.
- Base Ops Process & Control Systems using fewer resources for freeze protection and evaporator DSA activities.
- Base Operations Farms S/SX/SY/T/TX/TY/U due to fewer corrective maintenance activities performed during the month.
- Industrial Hygiene Program due to implementing the new sampling model reducing the number of samples required.



**Retrieval and Close Single-Shell Tanks**

**Cost Variance \$1,967K:**

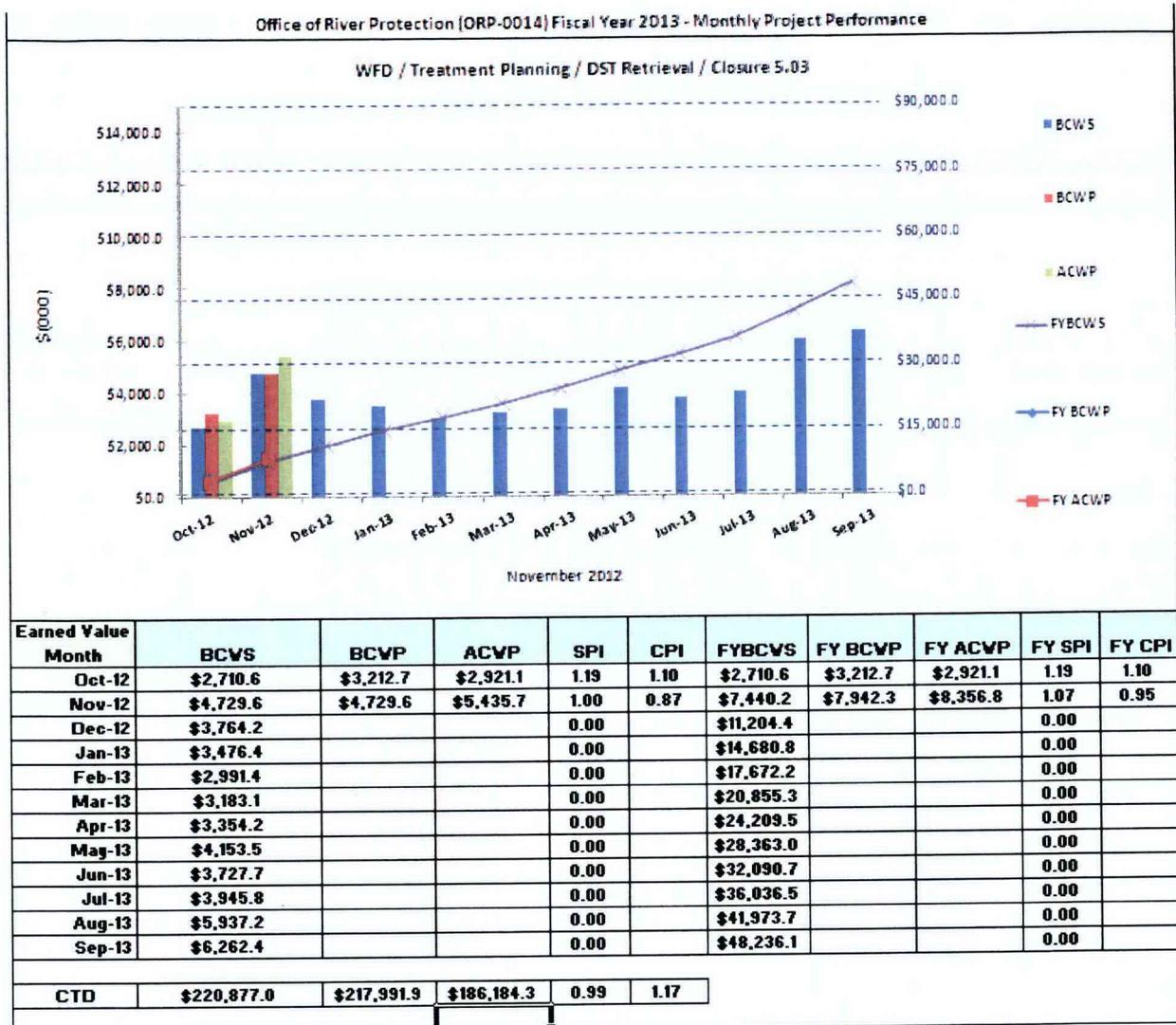
The favorable cost variance is primarily due to:

- DOE-ORP and Ecology conducting a workshop to select the hard heel retrieval strategy for C-112 Retrieval, which negated the need for sampling.
- C-Farm Retrieval Maintenance due to the schedule recovery of the AN-101 pump and waste decant.

**Schedule Variance \$286K:**

The favorable schedule variance is primarily due to:

- DOE-ORP and Ecology conducting a workshop to select the hard heel retrieval strategy for C-112 Retrieval, which negated the need for sampling.



**Waste Feed Delivery/Treatment/DST Retrieval Closure**

Schedule Variance \$440K:

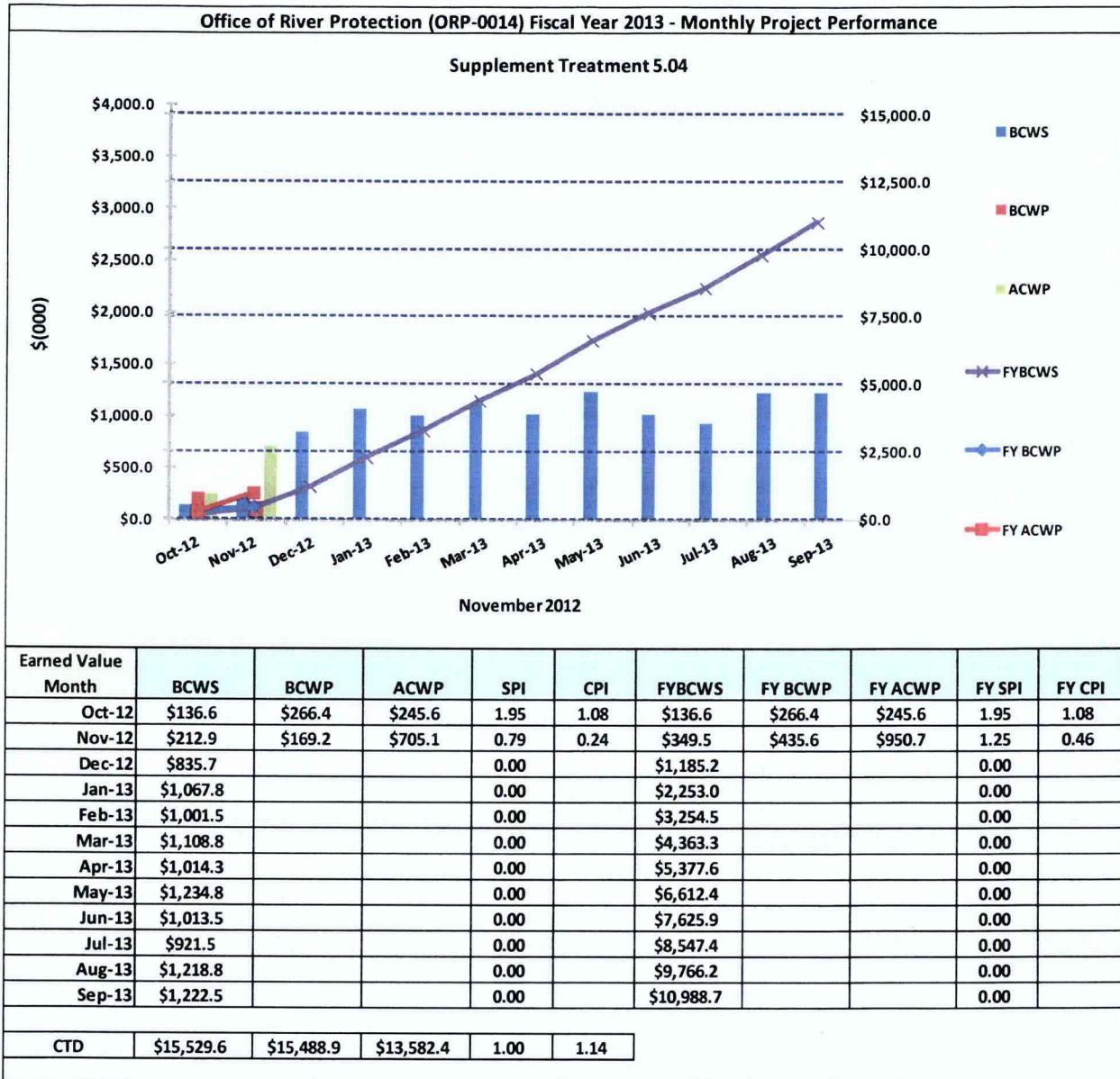
The favorable schedule variance is primarily due to:

- WFD System Performance schedule recovery in SSMD scaled performance testing.

Cost Variance (\$706.2K):

The unfavorable cost variance is primarily due to:

- WFD System Performance additional labor costs associated with the full scale transfer pump limits of performance testing and project support.



**Supplemental Treatment**

Schedule Variance \$43.6K:

- None

Cost Variance (\$535.9K):

- Immobilization – Maturation due to reduce scope that is pending deletion. C-112 Retrieval conducting a workshop with DOE-ORP and Ecology to select the hard heel retrieval strategy, which negated the need for sampling.

## Acquisition of New Facilities

**M-090-11, Complete the Negotiation of No More Than Two Canister Storage Facility Construction Interim Milestones**, Due: 12/31/12, Status: Completed on 11/19/12. TPA Change Control Form M-90-12-02, signed by ORP and Ecology on 11/19/12, created new interim milestone, M-090-13, 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-090-13, Submit CD-1 for Interim Hanford Storage Project and TPA Change Request for CD-2 to Ecology**, Due: 09/30/14, Status: On Schedule.

**M-090-00, Acquire/modify facilities for storage of IHLW**, Due: 12/31/2019, Status: On Schedule

**M-047-06, Complete negotiation of no more than two interim milestones governing work necessary to support completion of M-047-00**, Due: 06/30/12, Status: Completed on 11/19/12 (note this was initially Missed). Change Control Form M-47- 12-02, that creates a new interim milestone, M-047-07, 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-047-07, Submit CD-1 for Secondary Liquid Waste Treatment and CR for CD-2 to Ecology**, Due 09/30/14, Status: On Schedule.

**M-047-00, Complete Work Necessary to provide facilities for management of secondary waste from the WTP**, Due: 12/31/2022, Status: On Schedule

### Significant Past Accomplishments:

On November 15, 2012, Ecology and ORP met and agreed on wording that met the requirements of both M-047-06 and M-090-11. On November 19, 2012, Ecology and ORP signed TPA Change Control Forms M-47-12-02 and M-90-12-02 establishing M-047-07 and M-090-13, respectively. ORP letter 12-ECD-0225 notified Ecology of completion of milestones M-047-06 and M-090-11.

### Significant Planned Actions in the Next Six 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 2nd LAW, Due: 10/31/2014, Status: On Schedule.**

**M-062-45ZZ, Negotiate a one-time supplemental treatment selection, Due: 4/30/2015, 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: 4/30/2015, Status: On Schedule.**

**M-062-31-T01, Complete final design and submit RCRA Part B permit mod request, Due: 4/30/2016, Status: On schedule**

**M-062-32-T01, Start construction of supplemental vitrification treatment facility and/or WTP enhancements, Due: 4/30/2018, Status: On schedule**

**M-062-33-T01, Complete construction of supplemental vitrification treatment facility and/or WTP enhancements, Due: 4/30/2021, Status: On schedule**

**M-062-45XX, No later than 12/31/2021, 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: 12/31/2021, Status: On Schedule**

**M-062-34-T01, Complete hot commissioning of supplemental vitrification treatment facility and/or WTP enhancements, Due: 12/30/2022, Status: On schedule**

**M-062-21, Annually, submit data that demonstrates operation of the WTP, Due: 2/28/2023, Status: On Schedule**

**M-062-00, Complete Pretreatment Processing and Vitrification of HLW and LAW Tank Wastes, Due: 12/31/2047, Status: On Schedule**

### Significant Past Accomplishments:

None

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

None

### Issues:

None

## System Plan

**M-062-40B, Submit a system plan describing the disposition of all tank waste managed by ORP, Due: 10/31/2011, Status: Completed 10/24/2011 via DOE-ORP/ECY joint signature letter 11-TPD-087.**

**M-062-40C, Select a minimum of three scenarios that will be analyzed in the system plan, Due: 10/31/2013, Status: On Schedule**

**M-062-40D, Submit a system plan describing the disposition of all tank waste managed by ORP, Due: 10/31/2014, 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: 4/30/2015, Status: On Schedule**

### Significant Past Accomplishments:

DOE/ORP submitted the River Protection Project System Plan, Revision 6, with a joint Ecology signature to EPA on October 24, 2011.

During the May 2012 ORP/Ecology TPA Quarterly Meeting, it was stated that five proposed/draft scenarios/cases were submitted to Washington River Protection Solutions LLC (WRPS) for System Plan 6 Addendum (SP6A). No verbal or written direction has been provided to WRPS to begin simulation/modeling of the proposed/draft scenarios.

Since then, various circumstances have occurred, in which the five proposed/draft scenarios are no longer considered scenarios. No new scenarios have been proposed for SP6A. System Plan 7 is still on schedule to begin in the May-August 2013 time frame.

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

ORP and WRPS plan to meet with Ecology in January 2013 to discuss the issues with System Planning tools document, "External Technical Review for Evaluation of System Level Modeling and Simulation Tools in Support of Hanford Site Liquid Waste Process." Please see issues below.

### Issues:

In the October 23, 2012 TPA Project Managers meeting Dan Mc Donald, Ecology, informed ORP that system plan development for FY 14 could not move forward until ORP had read and responded to the comments in the headquarters document, "External Technical Review for Evaluation of System Level Modeling and Simulation Tools in Support of Hanford Site Liquid Waste Process." Ecology has asked for a meeting with ORP and WRPS as soon as they had read the document and are able to brief on where they think they are going with comment response development.

**WASTE TREATMENT AND IMMOBILIZATION PLANT (WTP) PROJECT**

<b>Number</b>	<b>Title</b>	<b>Due Date</b>	<b>Status</b>
M-062-01Z	Submit Semi-Annual TPA Project Compliance Report	01/31/2013	On Schedule

**\*SEE THE JANUARY 2013 ORP CONSENT DECREE 08-5085-FVS  
MONTHLY SUMMARY REPORT FOR WTP FACILITY-SPECIFIC  
INFORMATION**



FINAL

Office of River Protection  
Consent Decree 08-5085-FVS

Monthly Summary Report

January 2013

Office of River Protection  
 Consent Decree 08-5085-FVS  
 Monthly Summary Report  
 January 2013

<b>Page</b>	<b>Topic</b>	<b>Leads</b>
3	Statistics / Status	James Lynch / Dan McDonald / Jeff Lyon
5	SST Retrieval and Closure – D-00B-01, -02, -03, -04	Chris Kemp / Jeff Lyon
6	Tank Waste Retrieval Work Plan (TWRWP) Status – Consent Decree Appendix C	Chris Kemp / Jeff Lyon
7	SST Retrieval Monthly and Fiscal Year EVMS Data	Dan Knight / Jeff Lyon
8	WTP - Immobilization Plant Project – D-00A-06, D-00A-17, D-00A-01	Delmar Noyes / Dan McDonald
10	WTP Pretreatment (PT) Facility – D-00A-18, -19, -13, -14, -15, 16	Wahed Abdul / Dan McDonald
13	High-Level Waste (HLW) Facility – D-00A-20, -21, 02, 03	Wahed Abdul / Dan McDonald
16	Low-Activity Waste (LAW) Facility – D-00A-07, -08, -09	Jeff Bruggeman / Dan McDonald
18	Balance of Facilities (BOF) – D-00A-12	Jason Young / Dan McDonald
20	Analytical Laboratory (LAB) – D-00A-005	

<b>Milestone</b>	<b>Title</b>	<b>Due Date</b>	<b>Completion Date</b>	<b>Status</b>
<b>Fiscal Year 2012</b>				
D-00C-02L	Submit to Ecology and Oregon Monthly Summary Reports	10/31/11	10/25/11	Completed
D-00C-02M	Submit to Ecology and Oregon Monthly Summary Reports	11/30/11	11/21/11	Completed
D-00C-02N	Submit to Ecology and Oregon Monthly Summary Reports	12/31/11	12/27/11	Completed
D-00C-02O	Submit to Ecology and Oregon Monthly Summary Reports	01/31/12	01/25/12	Completed
D-00C-01D	Submit to Ecology and Oregon Semi-Annual Report Documenting Progress During Previous 6 Month Period	01/31/12	01/27/12	Completed
D-00C-02P	Submit to Ecology and Oregon Monthly Summary Reports	02/29/12	02/22/12	Completed
D-00C-02Q	Submit to Ecology and Oregon Monthly Summary Reports	03/31/12	03/31/12	Completed
D-00C-02R	Submit to Ecology and Oregon Monthly Summary Reports	04/30/12	04/26/12	Completed
D-00C-02S	Submit to Ecology and Oregon Monthly Summary Reports	05/31/12	05/29/12	Completed
D-00C-02T	Submit to Ecology and Oregon Monthly Summary Reports	06/30/12	06/29/12	Completed
D-00C-02U	Submit to Ecology and Oregon Monthly Summary Reports	07/31/12	07/26/12	Completed
D-00C-01E	Submit to Ecology and Oregon Semi-Annual Report Documenting Progress During Previous 6 Month Period	07/31/12	07/27/12	Completed
D-00C-02V	Submit to Ecology and Oregon Monthly Summary Reports	08/31/12	08/22/12	Completed
D-00C-02W	Submit to Ecology and Oregon Monthly Summary Reports	09/30/12	09/29/12	Completed
<b>Fiscal Year 2013</b>				
D-00C-02X	Submit to Ecology & State of Oregon Monthly Summary Report	10/31/2012	10/31/2012	Completed
D-00C-02Y	Submit to Ecology & State of Oregon Monthly Summary Report	11/30/2012	11/20/2012	Completed
D-00C-02Z	Submit to Ecology & State of Oregon Monthly Summary Report	12/31/2012	12/26/2012	Completed
D-00C-02AA	Submit to Ecology & State of Oregon Monthly Summary Report	01/31/2013		On-going
**D-00C-02AB	Submit to Ecology & State of Oregon Monthly Summary Report	02/28/2013		On-going
** Future Monthly Reports will be added as necessary to maintain a two-months ahead activity.				

Milestone	Title	Due Date	Completion Date	Status
<b>Fiscal Year 2013 Continued</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 EL. 37' in HLW Fac.	12/31/2012	10/24/2012	Completed
D-00C-01F	Submit to Ecology & State of Oregon Semi-Annual Report	01/31/2013		On-going
D-00C-01G	Submit to Ecology & State of Oregon Semi-Annual Report	07/31/2013		On-going
D-006-00-A1	Provide State of Oregon Notice of Meetings	09/25/2013		On-going
<b>Fiscal Year 2014</b>				
D-006-00-A	Meet Approx. Every 3 Years to Review Requirements of CD	10/25/2013		On-going
D-00B-01	Complete Retrieval of Tank Waste from 10 SSTs IN WMA-C	09/30/2014		On-going
D-00B-02	Advise Ecology of the 9 SSTs Waste Will be Retrieved by 2022	09/30/2014	08/22/2011	Completed

## Reports

**D-00C-01 series, Submit to Ecology & State of Oregon Semi-Annual Report, Due: Semi-Annually – January 31<sup>st</sup> and July 31<sup>st</sup> of each year. Status: On-going**

**D-00C-02 series, Submit to Ecology & State of Oregon Monthly Summary Report Documenting Progress During Previous Month, Due: End of Each Month, Status: On-going**

**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, Due: 9/25/2013, Status: On-going**

**D-006-00-A, Meet Approximately Every Three Years After Entry of Decree to review requirements of the Consent Decree, Due: 10/25/2013, Status: On-going**

## SST Retrieval Program

**D-00B-01, Complete Retrieval of Tank Wastes from 10 Remaining SSTs in WMA-C, Due: 9/30/2014, Status: On-going**

**D-00B-01A thru J, Submit Tank Retrieval Complete Certification, Due: TBD**

Pursuant to the requirement in Section IV-B-5 of the Consent Decree (CD), DOE must submit to Ecology a written certification that DOE has completed retrieval of a tank in accordance with the requirements of Appendix "C", Part 1, of the CD.

**D-00B-02, Advise Ecology of the 9 SSTs from which Waste Will Be Retrieved by 2022, Due: 9/30/2014, Status: Completed on 08/24/2011.**

**D-00B-03, Initiate Startup of Retrieval in At Least 5 of 9 SSTs in D-00B-02, Due: 12/31/2017, Status: On-going**

**D-00B-04, Complete Retrieval of Tank Wastes from the 9 SSTs in D-00B-02, Due: 9/30/2022, Status: On-going**

**D-00B-04A thru I, Submit Tank Retrieval Complete Certification, Due: TBD**

### Significant Past Accomplishments:

1. Completed start up of the modified sluicing system in C-101 using ERSS.
2. Continued field activities associated with repair of the C-107 high pressure spray water nozzle leak.
3. Continued training for the Fold-Track at the Cold Test Facility for future use at C-110 SST.

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

1. Continued field activities for replacement of failed pump for AN-106.
2. Begin start-up of the modified sluicing system in C-102.
3. Complete installation of the MARS-V in C-105.
4. Complete C-107 hard heel retrieval.
5. Submit retrieval certificates of completion for C-104, C-108, and C-109 to Ecology.
6. Begin start-up of hard heel retrieval in C-110 using the Fold-Track.

### Issues:

1. DOE-ORP has delayed dome cut activities using the water/abrasive cutting technique for tank C-105 and has experienced delays to the planned schedule while resolution of an issue through the Differing Professional Opinion process DOE O 442.2 is completed. DOE-ORP and its Contractor are evaluating the schedule impacts and possible mitigation actions for alternative cutting techniques.

2. DOE-ORP and its Contractor are reviewing whether the amount of sludge being stored in the tanks causes additional hazards due to gas generation and the potential that gas could be released within the headspace of the tank safely. While this issue is under review, controls have been put in place to limit the amount of sludge being added to the DSTs during C Farm retrieval. The Contractor is conducting analysis of the best way to release the limitations on retrieval and provide safe storage for sludge in the DSTs.

### Tank Waste Retrieval Work Plan (TWRWP) Status

Tank	TWRWP	Expected Revisions	Retrieval Technology	Second Technology	Third Technology
C-101	RPP-22520, Rev. 7	Complete	MRS (per 10/7/10 agreement, to be Modified Sluicing)	High-Pressure Water with ERSS	-
C-102	RPP-22393, Rev. 6A	In Process	Modified Sluicing	High-Pressure Water with ERSS	-
C-104	RPP-22393, Rev. 6A	Complete	Modified Sluicing	Chemical Dissolution	-
C-105	RPP-22520, Rev. 7	Complete	MARS-V	MARS-High Pressure Water	-
C-107	RPP-22393, Rev. 6A	Complete	MARS-S	MARS-High Pressure Water	-
C-108	RPP-22393, Rev. 6A	Complete	Modified Sluicing	Chemical Dissolution	-
C-109	RPP-21895, Rev. 5	Complete	Modified Sluicing	Chemical Dissolution	-
C-110	RPP-33116, Rev. 2	In process	Modified Sluicing	Mechanical Waste Conditioning	High Pressure Water
C-111	RPP-37739, Rev. 1	In process	Modified Sluicing	None	-
C-112	RPP-22393, Rev. 6A	In process	Modified Sluicing	Chemical Dissolution	-

#### Significant Accomplishments

None.

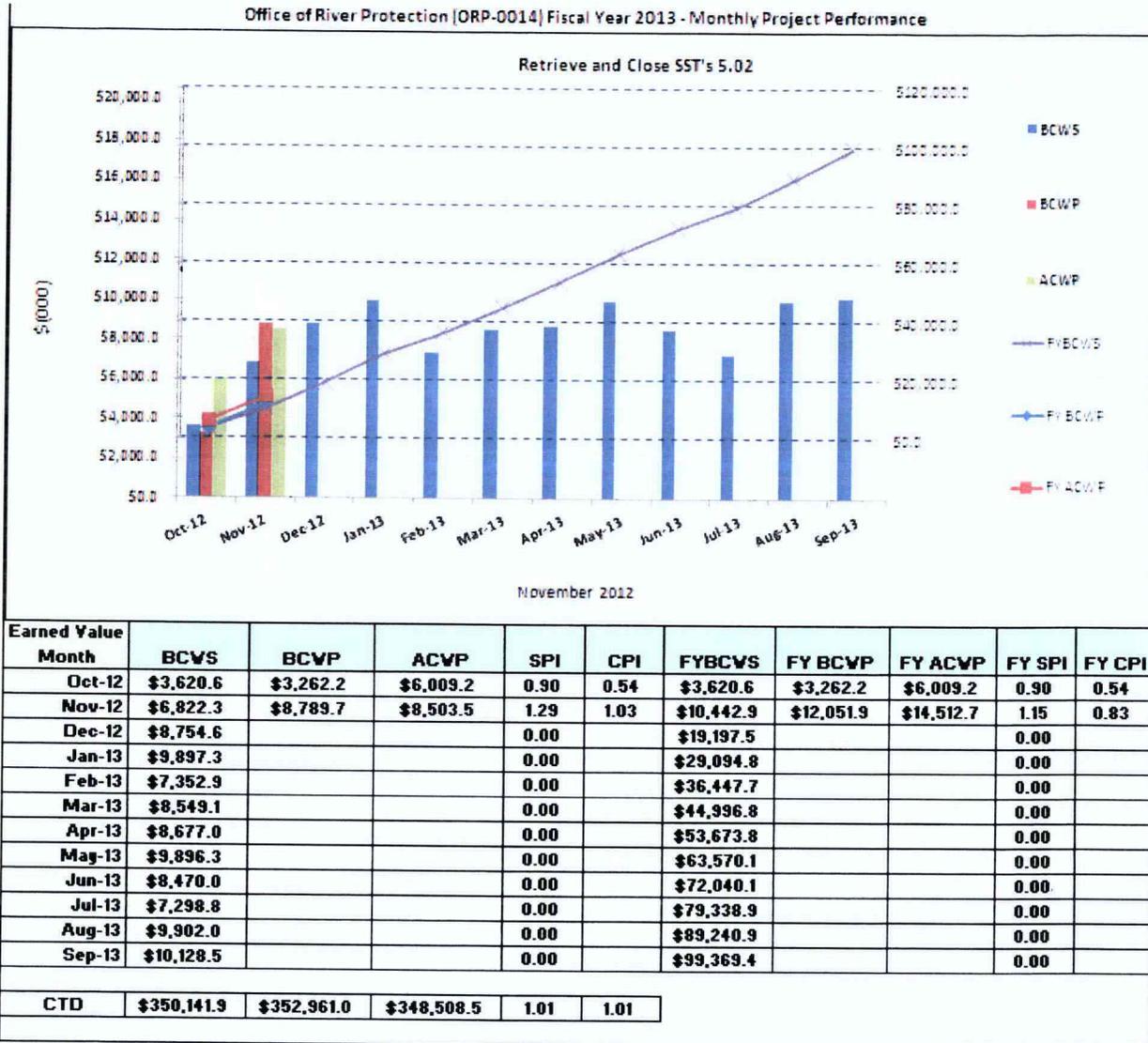
#### Significant Planned Activities in the Next 6 Months:

Work with Ecology on updates to TWRWPs RPP-22393, RPP-33116, RPP-22520 and RPP-37739 for tanks C-105, C-110, C-111, and C-112.

#### Issues:

None.

### SST Retrieval Monthly and Fiscal Year EVMS Data



**Retrieval and Close Single-Shell Tanks**

Cost Variance \$1,967K:

The favorable cost variance is primarily due to:

- DOE-ORP and Ecology conducting a workshop to select the hard heel retrieval strategy for C-112 Retrieval, which negated the need for sampling.
- C-Farm Retrieval Maintenance due to the schedule recovery of the AN-101 pump and waste decant.

Schedule Variance \$286K:

The favorable schedule variance is primarily due to:

- DOE-ORP and Ecology conducting a workshop to select the hard heel retrieval strategy for C-112 Retrieval, which negated the need for sampling.

## Waste Treatment and Immobilization Plant (WTP) Project

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

The WTP Project currently employs approximately 2445 Full-Time Equivalent (FTE) contractor (Bechtel National, Inc. [BNI]) and subcontractor personnel, including 538 craft, 348 non-manual, and 103 subcontractor personnel FTEs working at the WTP construction site (all facilities). As of November 2012, the project was 62 percent complete overall, design and engineering was 84 percent complete, procurement was 66 percent complete, construction was 59 percent complete, and startup and commissioning was 14 percent complete. In October 2012, the Baseline Change Proposal that implemented the LBL re-plan was incorporated into the project baseline resulting in increases/decreases to the LBL facility budgets, which correspondingly increased/decreased the facility/function to-date percent complete values.

The cumulative-to-date WTP Project schedule variance in November 2012 was a positive \$26 M. The cumulative-to-date WTP Project cost variance was a negative \$23.6 M. The positive schedule variance was due to the LBL re-baseline; the negative cost variance was primarily related to slowdown of activities in engineering design and construction.

The following is the status of project matters through the end of November:

### Significant Past Accomplishments:

- Issued the final report on the PVV entrainment coefficient testing (PT)
- DOE completed review of the Consent Decree Milestone (D-00A-21) submitted by Bechtel on October 24, 2012 and determined that Consent Decree Milestone (D-00A-21) "Complete Construction of Structural Steel to 37' in HLW Facility" is complete (HLW)
- Issued 12 off-gas isometric drawings for the LAW Secondary Offgas/Vessel Vent Process (LVP) system (LAW)
- Completed construction of the steam plant (BOF)
- Consent Decree Milestone (A-05) "LAB Construction Substantially Complete" completed (LAB)

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

- Complete the HPAV HGR rate calculations (PT)
- Award contract(s) for prototype design/fabrication for HEPA filter redesign (HLW)
- Complete installation of melter power supplies (LAW)
- Complete installation of Auto Sampling (ASX system) (LAW)
- Complete construction of the WTP Cooling Tower (BOF)
- Complete construction of WTP Chiller Compressor Plant (BOF)
- Completion of the high purity gas system installation(LAB)

**Issues:**

- Technical issues relevant to the PTF and HLW facilities include, among others, pulse jet mixers, corrosion/erosion in piping and vessels, hydrogen accumulation, and waste feed issues.
- Various issues may have potential impacts on the HLW schedule. This includes risks that the project has already realized and the plans for addressing the remaining risks in HLW.

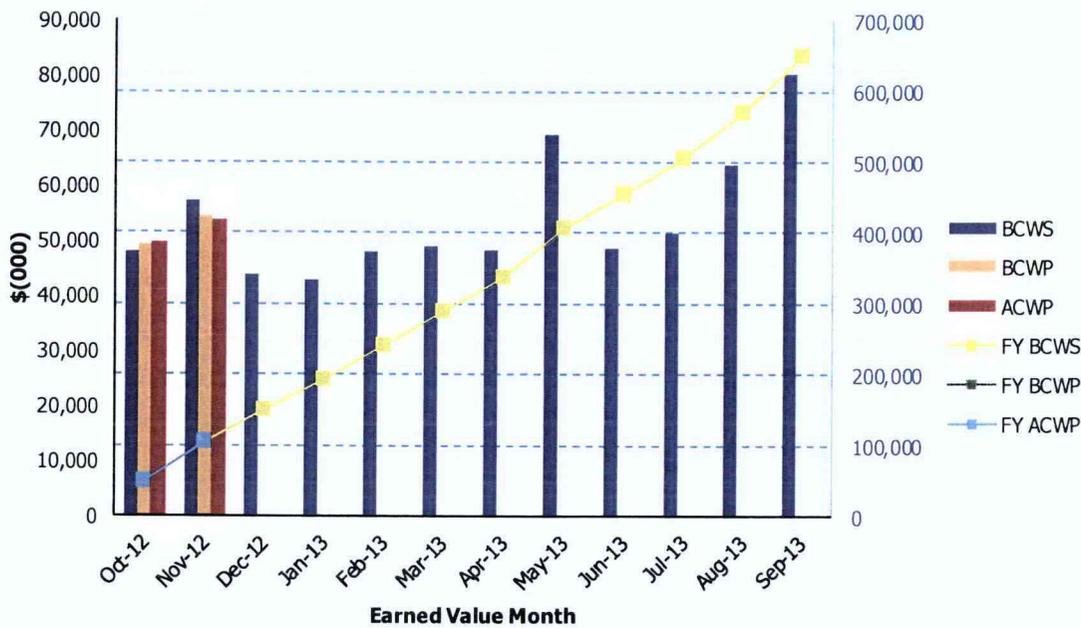
**EXC-01a: Fiscal Year Cost and Schedule Report**

Data Set: FY 2013 Earned Value Data

Data as of: November 2012

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

EVMS Monthly and Fiscal Year Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2012	\$47,840	\$49,300	\$49,742	1.03	0.99	\$47,840	\$49,300	\$49,742	1.03	0.99
Nov 2012	\$57,411	\$54,398	\$53,916	0.95	1.01	\$105,251	\$103,698	\$103,658	0.99	1.00
Dec 2012	\$43,993					\$149,244				
Jan 2013	\$42,828					\$192,072				
Feb 2013	\$47,838					\$239,910				
Mar 2013	\$48,918					\$288,828				
Apr 2013	\$48,297					\$337,125				
May 2013	\$69,312					\$406,437				
Jun 2013	\$48,818					\$455,255				
Jul 2013	\$51,392					\$506,647				
Aug 2013	\$63,898					\$570,545				
Sep 2013	\$80,281					\$650,826				
PTD	\$7,245,860	\$7,248,565	\$7,314,715	1.00	0.99					

**PRETREATMENT (PT) FACILITY**

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

The Pretreatment (PT) Facility will separate radioactive tank waste into High Level Waste (HLW) and Low-Activity Waste (LAW) fractions and transfer each waste type to the respective vitrification facility for immobilization. As of November 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. Additional work-scope is required to resolve outstanding technical issues, which will impact the engineering design percent complete status. Because construction, procurement, and production engineering is on hold, there is no change in the percent complete status since then.

**Significant Past Accomplishments:**

Key activities in PT are resolution of technical issues.

The S-1 Review Team established Technical Teams to address specific technical issues; these teams consist of members from the contractor, DOE, Ecology, and outside experts. BNI has aligned its Technical Review Teams with the S-1 teams to ensure all issues are coordinated.

Construction progress on the 14-foot large scale mixing test platform continues as part of preparations for overall large scale testing. Engineering studies are being performed to determine full-scale test objectives, vessel selections, and instrument functions to support the testing.

The final report on the PVV entrainment coefficient testing was issued in December 2012. The Hazard Analysis report for this system is being prepared.

As part of the action plan for resolution of the erosion/corrosion issue, a corrosion test scoping document was issued in December 2012 to address the material selection issue. DOE concurs with BNI's plan for incorporation of probabilistic assessment for Erosion/Corrosion Differing Professional Opinion. Evaluations are ongoing to understand the available redundancy in case of

some failures in the black cells. At the same time, available technology is being reviewed to support in-service inspection.

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

- Complete the HPAV HGR rate calculations
- Determine a path forward on vessel mixing
- Independent review of potential for Criticality in Vessels
- Review of Flammable Gas Generation, Retention, and Release from sediments in vessels
- Decision process for Vessel Structural Modifications

**Issues:**

\* Technical issues relevant to the PTF and HLW facilities include, among others, pulse jet mixers, corrosion/erosion in piping and vessels, hydrogen accumulation, and waste feed issues.

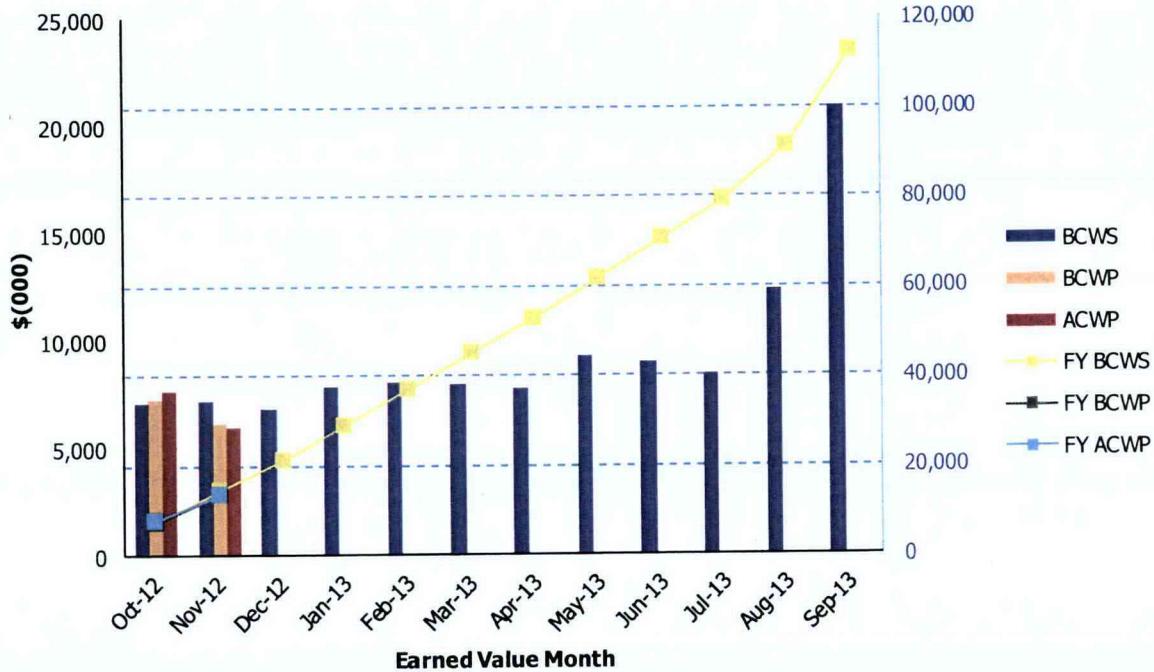
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2013 Earned Value Data

Data as of: November 2012

**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 2012	\$7,077	\$7,269	\$7,660	1.03	0.95	\$7,077	\$7,269	\$7,660	1.03	0.95
Nov 2012	\$7,200	\$6,130	\$5,974	0.85	1.03	\$14,277	\$13,399	\$13,634	0.94	0.98
Dec 2012	\$6,813					\$21,090				
Jan 2013	\$7,828					\$28,918				
Feb 2013	\$8,023					\$36,941				
Mar 2013	\$7,948					\$44,889				
Apr 2013	\$7,707					\$52,596				
May 2013	\$9,246					\$61,842				
Jun 2013	\$8,933					\$70,775				
Jul 2013	\$8,400					\$79,175				
Aug 2013	\$12,325					\$91,500				
Sep 2013	\$20,839					\$112,339				

PTD \$1,424,744 \$1,423,866 \$1,424,101 1.00 1.00

**HIGH-LEVEL WASTE (HLW) FACILITY**

<b>Number</b>	<b>Title</b>	<b>Due Date</b>	<b>Status</b>
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	On-going* (see issues below)
D-00A-03	Start HLW Facility Cold Commissioning	6/30/2018	On-going* (see issues below)
D-00A-04	HLW Facility Hot Commissioning Complete	12/31/2019	On-going* (see issues below)

The High Level Waste (HLW) Facility will receive the separated high-level waste concentrate from the Pretreatment (PT) Facility. This concentrate will be blended with glass formers and 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 prior to shipment to interim storage. As of November 2012, the HLW Facility is 62 percent complete overall, with engineering design 89 percent complete, procurement 81 percent complete, construction 43 percent complete, and startup and commissioning is 4 percent complete. Because construction, procurement, and production engineering has significantly slowed down, there is minimal change in the percent complete status since then.

**Significant Past Accomplishments:**

DOE completed review of the Consent Decree Milestone (D-00A-21) submitted by Bechtel on October 24, 2012 and determined that Consent Decree Milestone (D-00A-21) "Complete Construction of Structural Steel to 37' in HLW Facility" is complete.

Key ongoing Construction activities are: limited placement of walls and slabs at 37' elevation; installation of structure steel at 58' elevation; installation of cable tray supports and HVAC ducts at 14' elevation.

Key ongoing Engineering and ENS activities are: support construction, procurement, Reliability Validation Process (RVP) towards resolution of level 1 findings, and Preliminary Documented Safety Analysis (PDSA) update.

The S-1 Review Team established Technical Teams to address specific technical issues, consisting of members from the contractor, DOE, Ecology, and outside experts. BNI has aligned its Technical Review Teams with the S-1 teams to ensure all issues are coordinated.

To resolve the HEPA filter issue, Bechtel has submitted a schedule to procure a redesigned filter that will meet plant operating conditions. Bechtel is working with potential vendors to evaluate interest in producing prototype filters. Bechtel is working on filter specifications. Once the vendors are selected, the redesigned filters will be tested and the best option selected; the winning design will then go through qualifying testing for use in WTP.

Bechtel is working towards correcting the weld deficiencies on Plant Wash and Drain Vessel (RLD-VSL-08). Based on discussion with DOE, BNI has issued direction to the vendor to make the vessel compliant with the purchase order requirements for undercut and weld size. Bottom head weld on Acidic Waste Vessel (RLD-VSL-07) has been put on hold to evaluate an issue of heat impact on the seam weld.

BNI had kicked off RVP in August with significant number of staff participating on interdisciplinary teams. RVP is a large management self-assessment being conducted on systems the LAB Facility and three foundational processes (engineering-procurement interface, Design Verification and Requirements Flow-down), that included several HLW systems as well. Federal staffs are overseeing the process. RVP Wave 1 was about 70% completed and the recommendations and findings that have been discovered were recorded as issues by BNI. BNI is in the process of initiating review and analysis of the issues identified to develop path forward for resolutions.

DOE, BNI, and Ecology met and did a walk-through dealing with replacement of HDH-VSL-2/4 cooling coils to support the Permit Change Notice submitted to Ecology.

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

- Award contract(s) for prototype design/fabrication for HEPA filter redesign
- Complete RVP reviews
- Complete the first of the two Authorization Basis Amendment Requests (ABARs) to support Preliminary Documented Safety Analysis (PDSA) upgrade – focus of the first ABAR is to incorporate changes in the facility and control descriptions
- Finish all concrete slabs at the 37' level

**Issues:**

\* Various issues may have potential impacts on the HLW schedule. This includes risks that the project has already realized and the plans for addressing the remaining risks in the HLW.

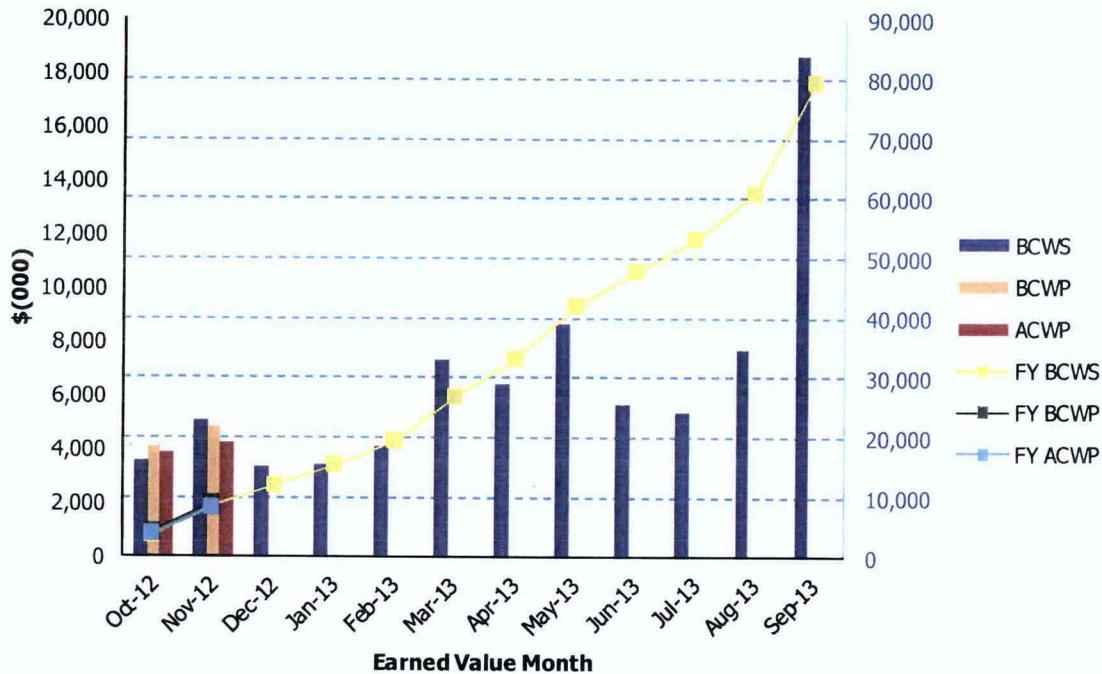
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2013 Earned Value Data

Data as of: November 2012

**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 2012	\$3,545	\$4,105	\$3,895	1.16	1.05	\$3,545	\$4,105	\$3,895	1.16	1.05
Nov 2012	\$5,079	\$4,852	\$4,256	0.96	1.14	\$8,624	\$8,957	\$8,151	1.04	1.10
Dec 2012	\$3,350					\$11,974				
Jan 2013	\$3,388					\$15,362				
Feb 2013	\$4,069					\$19,431				
Mar 2013	\$7,292					\$26,723				
Apr 2013	\$6,451					\$33,174				
May 2013	\$8,700					\$41,874				
Jun 2013	\$5,688					\$47,562				
Jul 2013	\$5,378					\$52,940				
Aug 2013	\$7,657					\$60,597				
Sep 2013	\$18,609					\$79,206				
PTD	\$930,757	\$931,086	\$930,284	1.00	1.00					

**LOW-ACTIVITY WASTE (LAW) FACILITY**

<b>Number</b>	<b>Title</b>	<b>Due Date</b>	<b>Status</b>
D-00A-07	LAW Facility Construction Substantially Complete	12/31/2014	On-going
D-00A-08	Start LAW Facility Cold Commissioning	12/31/2018	On-going
D-00A-09	LAW Facility Hot Commissioning Complete	12/31/2019	On-going

The Low-Activity Waste (LAW) Facility will vitrify LAW from the Pretreatment (PT) Facility. Waste 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 that are anticipated to be disposed on the Hanford Site in the Integrated Disposal Facility. As of November 2012, the LAW Facility is 61 percent complete overall, with engineering design 76 percent complete, procurement 83 percent complete, construction 60 percent complete, and startup and commissioning is 4 percent complete.

**Significant Past Accomplishments:**

- Issued 12 off-gas isometric drawings for the LAW Secondary Offgas/Vessel Vent Process (LVP) system
- Completed the Civil, Structural & Architectural (CSA) story drift calculations at the +48 elevation
- Issued 45 instrument datasheets
- Completed placement of the melter condenser elevated slab
- Completed installation of the anchor plates to support the Thermal Catalytic Oxidizer (TCO) at the +48 elevation
- Completed the procurement of the melter refractory
- Completed the installation of the cooling panels for Melter #1

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

- Complete installation melter power supplies
- Complete installation of Auto Sampling (ASX) system
- Begin installation of Melter #1 Refractory
- Receive HEPA Pre-heaters for LVP system
- Receive HEPA Housings for LVP system
- Receive TCO for LVP system

**Issues:**

No major issues at this time.

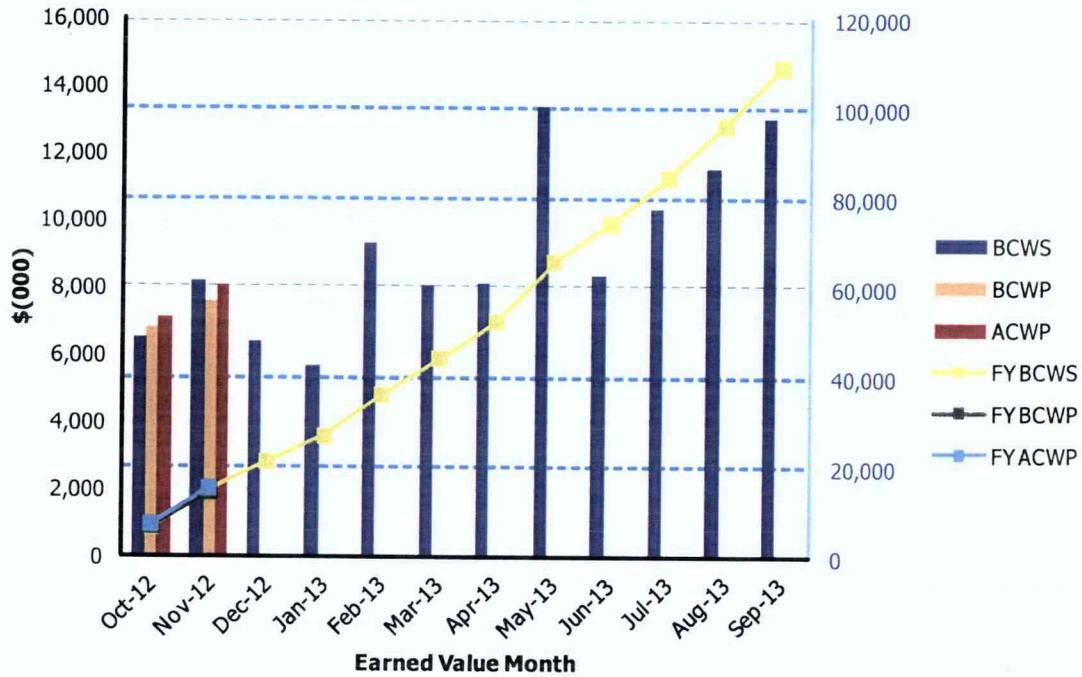
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2013 Earned Value Data

Data as of: November 2012

**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 2012	\$6,536	\$6,787	\$7,142	1.04	0.95	\$6,536	\$6,787	\$7,142	1.04	0.95
Nov 2012	\$8,212	\$7,602	\$8,071	0.93	0.94	\$14,748	\$14,389	\$15,213	0.98	0.95
Dec 2012	\$6,418					\$21,166				
Jan 2013	\$5,684					\$26,850				
Feb 2013	\$9,307					\$36,157				
Mar 2013	\$8,089					\$44,246				
Apr 2013	\$8,151					\$52,397				
May 2013	\$13,419					\$65,816				
Jun 2013	\$8,357					\$74,173				
Jul 2013	\$10,335					\$84,508				
Aug 2013	\$11,564					\$96,072				
Sep 2013	\$13,020					\$109,092				
PTD	\$708,459	\$711,377	\$763,759	1.00	0.93					

**BALANCE OF FACILITIES (BOF)**

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

The Balance of Facilities (BOF) provides services and utilities to support operation of the main production facilities – PT, HLW, LAW, and LAB. As of November 2012, the BOF is 53 percent complete overall, with engineering design 76 percent complete, procurement 65 percent complete, construction 70 percent complete, and startup and commissioning is 8 percent complete.

**Significant Past Accomplishments:**

Activities within BOF to support facility completion, and turnover to the startup organization are on-going. Each facility will be evaluated to verify the adequacy of design and readiness for operation. The first stage of this validation will occur as part of the turnover from construction to the startup organization for component level testing.

The WTP contractor conducted and continues to conduct bi-weekly meetings to support facility completion. These meetings focus on schedule reviews, punch list development for the remaining construction activities, and startup and operations activities. The fire detection and low voltage electrical systems for building 87 have been turned over to startup and startup testing has started on these systems.

**Recent accomplishments for the BOF team are:**

- Completed construction of the steam plant
- Issued the preliminary general arrangement drawings for the electrical turbine generator (ETG) facility
- Completed the cathodic protection coupon test station design
- Continued punch list work-off in the Chiller Compressor Plant (CCP)

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

- Complete construction of the WTP Cooling Tower
- Complete construction of the BOF switchgear building
- Complete Construction of the WTP Chiller Compressor Plant
- Complete the component and functional testing of the low and medium voltage (LVE/MVE) and fire detection (FDE) systems in the switchgear building (bldg 87).
- Energization of the site electrical distribution system.

**Issues:**

- A concern has been raised about the effectiveness of the design for the cathodic protection system. BNI is designing and installing test stations to improve the understanding of the effectiveness of the system.

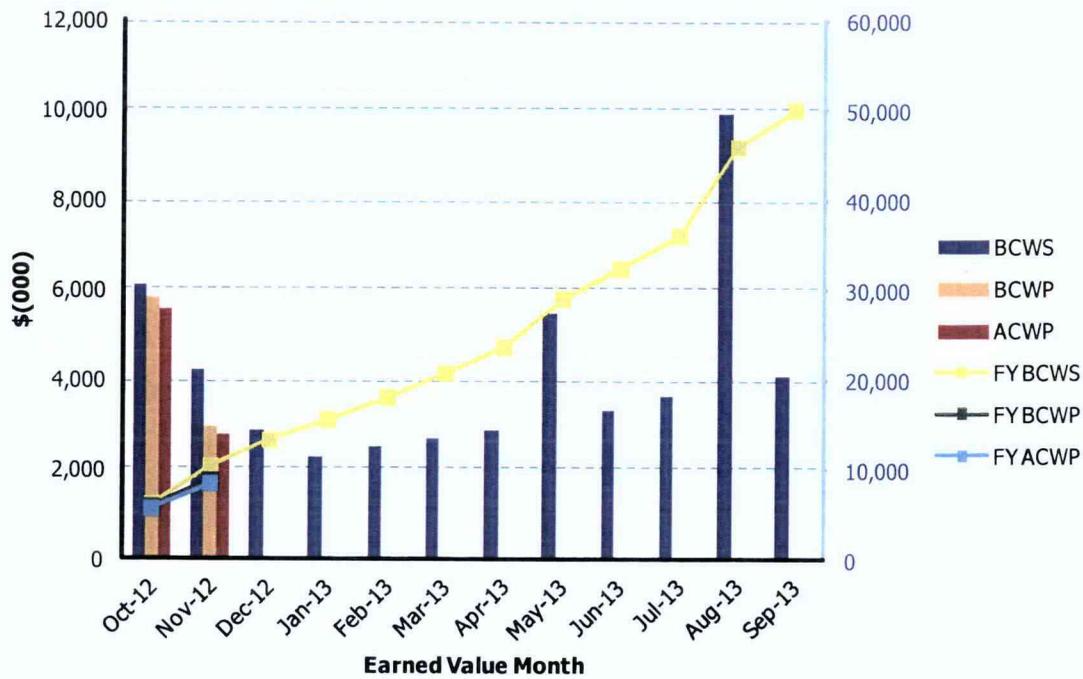
**EXC-01a: Fiscal Year Cost and Schedule Report**

Data Set: FY 2013 Earned Value Data

Data as of: November 2012

**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 2012	\$6,106	\$5,820	\$5,580	0.95	1.04	\$6,106	\$5,820	\$5,580	0.95	1.04
Nov 2012	\$4,226	\$2,955	\$2,775	0.70	1.06	\$10,332	\$8,775	\$8,355	0.85	1.05
Dec 2012	\$2,877					\$13,209				
Jan 2013	\$2,276					\$15,485				
Feb 2013	\$2,521					\$18,006				
Mar 2013	\$2,670					\$20,676				
Apr 2013	\$2,875					\$23,551				
May 2013	\$5,462					\$29,013				
Jun 2013	\$3,316					\$32,329				
Jul 2013	\$3,637					\$35,966				
Aug 2013	\$9,908					\$45,874				
Sep 2013	\$4,092					\$49,966				

PTD    \$286,079    \$284,360    \$282,287    0.99    1.01

**ANALYTICAL LABORATORY**

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

The Analytical Laboratory (LAB) will support WTP operations by analyzing feed, vitrified waste, and effluent streams. As of November 2012, the LAB is 65 percent complete overall, with engineering design 73 percent complete, procurement 81 percent complete, construction 77 percent complete, and startup and commissioning is 21 percent complete.

**Significant Past Accomplishments:**

Following completion of the interim milestone “LAB Construction Substantially Complete”, efforts are focused on construction completion in June 2014. Work continues on weld repair for the Radioactive Liquid Waste Disposal System (RLD) vessels and installation of Hot Cell commodities.

**Recent accomplishments for the LAB team are:**

- Consent Decree Milestone (A-05) “LAB Construction Substantially Complete” completed
- Completed installation of fire protection piping and hangers
- Completed installation of the major instrumentation panels, cabinets, racks and cubicles
- Completed LAB facility Reliability Validation Process (RVP) assessment

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

- Completion of the high purity gas system installation
- Completion and closeout of the HVAC subcontract
- Complete repairs to RLD vessels

**Issues:**

- RLD Vessel 164 welds require significant rework

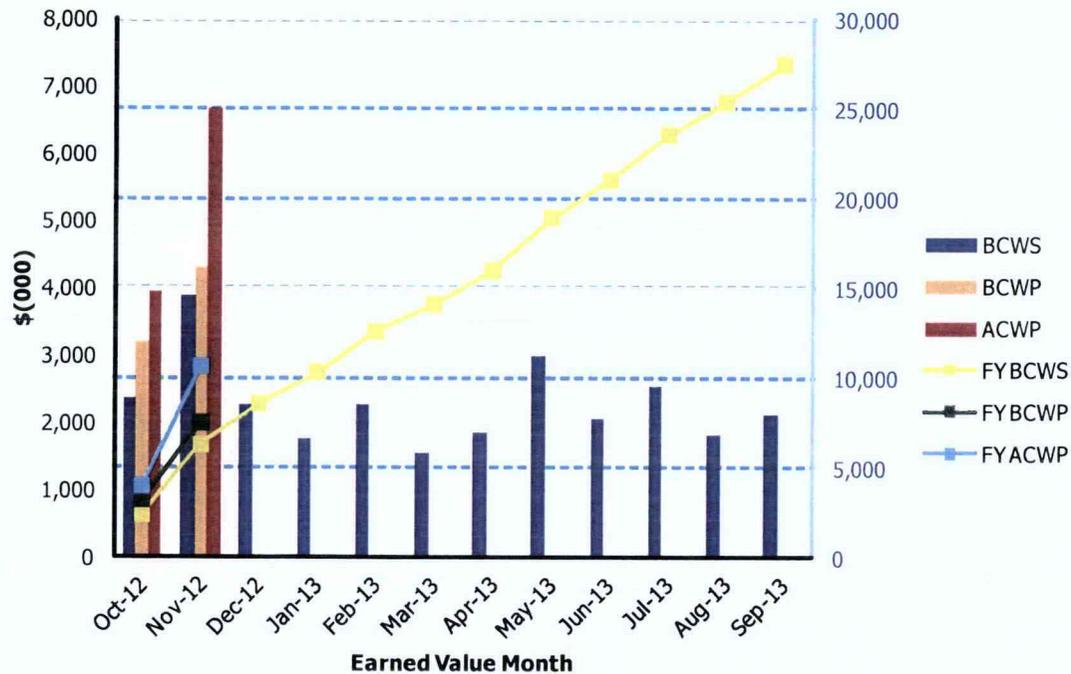
### EXC-01a: Fiscal Year Cost and Schedule Report

Data Set: FY 2013 Earned Value Data

Data as of: November 2012

**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 2012	\$2,370	\$3,183	\$3,952	1.34	0.81	\$2,370	\$3,183	\$3,952	1.34	0.81
Nov 2012	\$3,896	\$4,303	\$6,675	1.10	0.64	\$6,266	\$7,486	\$10,627	1.19	0.70
Dec 2012	\$2,281					\$8,547				
Jan 2013	\$1,751					\$10,298				
Feb 2013	\$2,264					\$12,562				
Mar 2013	\$1,541					\$14,103				
Apr 2013	\$1,835					\$15,938				
May 2013	\$2,998					\$18,936				
Jun 2013	\$2,067					\$21,003				
Jul 2013	\$2,542					\$23,545				
Aug 2013	\$1,809					\$25,354				
Sep 2013	\$2,111					\$27,465				
PTD	\$212,192	\$214,557	\$233,983	1.01	0.92					

Waste Treatment Plant Project - Percent Complete Status Through November 2012															
(Dollars - Millions)	Overall Facility Percent Complete Unallocated Dollars			Design/Engineering Unallocated Dollars			Procurement Unallocated Dollars			Construction Unallocated Dollars			Startup & Plant Operations Unallocated Dollars		
	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete
Facilities															
Low-Activity Waste	1,172.4	711.4	61%	291.3	220.8	76%	259.7	215.9	83%	444.8	267.1	60%	176.6	7.3	4%
Analytical Lab	328.2	214.6	65%	69.2	56.2	81%	56.2	45.6	81%	134.4	104.0	77%	68.5	14.4	21%
Balance of Facilities	536.9	284.4	53%	89.4	67.9	76%	71.6	46.8	65%	223.3	156.9	70%	152.7	12.8	8%
High-Level Waste	1,118.0	931.1	83%	383.9	328.6	86%	420.7	350.5	83%	308.8	247.6	80%	4.6	4.4	96%
Pretreatment	1,627.9	1,423.9	87%	818.5	656.6	80%	415.6	382.2	92%	385.6	379.3	98%	8.3	5.7	70%
Shared Services	4,179.9	3,683.3	88%	1,039.9	987.6	95%	569.2	503.5	88%	1,318.2	1,181.1	90%	207.4	137.1	66%
Total WTP w/o UB	8,963.3	7,248.6	81%	2,692.2	2,317.8	86%	1,792.9	1,544.4	86%	2,815.0	2,335.9	83%	618.0	181.7	29%
Undistributed Budget	1,982.9	n/a	n/a	n/a	n/a	n/a									
Total WTP	10,946.2	7,248.6	66%	2,692.2	2,317.8	86%	1,792.9	1,544.4	86%	2,815.0	2,335.9	83%	618.0	181.7	29%

Source: Preliminary WTP Contract Performance Report - Format 1, Data for October 2012

Note: Starting with the June 2009 report, facility Construction percent complete values decreased significantly, and a couple of Design/Engineering facility percent complete values went down as well. The decrease in values was tied to Phase I of BNI's elimination of WBS 1.08, Plant Wide EPCC; scope from WBS 1.08 was moved to facilities as appropriate or to WBS 1.90, Shared Services. This resulted in an increase in the facility construction budgets, which has correspondingly reduced the to-date percent complete values. In July 2010 the allocation of 1.90 to the facilities was removed to show true facility percent complete. This report does not show the LOE budgets that are not associated with a specific EPCC function, these include, Finance, Project Management, etc, but are included in the total Overall Facility Percent Complete for Shared Services. In September 2012, the LBL Replan was incorporated into the project baseline resulting in increases/decreases to the LBL facility budgets, which correspondingly increased/decreased the facility/function to-date percent complete values. In October 2012, the PTHLW/SS Interim Work Plan was incorporated into the project baseline resulting in decreases to the PTHLW/SS facility budgets, which correspondingly increased the facility/function to-date percent complete values, this was due to a work scope shift from the Distributed budget to UB.

**WORKING ORP Key Documents List  
For January 2013**

Milestone Title	Milestone Tie	Document	TPA Milestone Due Date (if applicable) <sup>1</sup>	ORP Delivery to Regulators Date <sup>2</sup>	Anticipated Regulatory Review Completion Date <sup>3</sup>	Final Completion Date <sup>4</sup>	DOE-ORP Lead	Contractor Lead	Ecology Lead	Comments/Issues
M-45-91 Interim Milestones and Target Dates for SST Integrity (continued)	M-045-91B-T01	Provide Ecology report on the Concrete Core from TankA-106 or alt	09/30/14	09/30/14			J. Johnson	R. Gregory	J. Lyon	
	M-045-91H	Submit Change Pckg (if necessary) to est. Additional Milestones	07/31/15	07/31/15			J. Johnson	R. Gregory	J. Lyon	
	M-045-91I	Provide IQRPE Certification of SSTs Structural Integrity	09/30/18	09/30/18			J. Johnson	R. Gregory	J. Lyon	
Prior to beginning construction and at least one year before construction is to be complete, DOE will submit to Ecology a final design and monitoring plan for each interim barrier.	M-045-92O	Future Barrier Design 3	06/30/15	06/30/15			C. Kemp	S. Eberlein	J. Lyon	• ORP/ECY TPA Change Package M-45-12-04 modified this to a due date of 06/30/15 dependent on discussions per M-045-22.
	M-045-92P	Future Barrier Design 4	06/30/16	06/30/16			C. Kemp	S. Eberlein	J. Lyon	• ORP/ECY TPA Change Package M-45-12-04 modified this to a due date of 06/30/16 dependent on discussions per M-045-22.
Waste Supplemental Treatment Report	M-062-40ZZ	Submit One Time Tank Waste Supplemental Treatment Tech. Report	10/31/14	10/31/14			S. Pfaff	C. Burrows	D. McDonald	
Complete final design and submit RCRA Part B Permit Modification Request	M-062-31-T01	RCRA Part B Permit Modification--Final Design	04/30/16	04/30/16			S. Pfaff		D. McDonald	

Topic Areas	Document	ORP Delivery to Regulators Date <sup>1</sup>	Anticipated Regulatory Review Completion Date <sup>2</sup>	Final Completion Date <sup>3</sup>	DOE-ORP Lead	Contractor Lead	Regulator Lead	Comments/Issues
PERMIT DOCUMENTS	Tier 1 Framework Closure Plan Update	09/30/15			C. Kemp	S. Eberlein	J. Lyon	
	Tier 2 WMA C Closure Plan	06/30/13			C. Kemp	S. Eberlein	J. Lyon	
	All Remaining Closure Plans for WMA C	09/30/15			C. Kemp	S. Eberlein	J. Lyon	
	WMA C Closure Conceptual Design	TBD			C. Kemp	S. Eberlein	J. Lyon	
	Tier 3 Closure Plans for Tanks Already Received	TBD			C. Kemp	S. Eberlein	J. Lyon	• Due 180-day post EIS
	Tier 3 Closure Plans for Additional Tanks	09/30/15			C. Kemp	S. Eberlein	J. Lyon	• Several Dates in out years
	WMA C Closure Design	TBD			C. Kemp	S. Eberlein	J. Lyon	• Final dates not yet determined; provides basis for the Tier 2 Closure Plan
	Supplemental Treatment Technology Notice of Construction	TBD			L. Huffman	F. Miera	J. Lyon	
	Submit Part B Permit Application for Selected Supplemental Treatment Technology	TBD			L. Huffman	F. Miera	J. Lyon	
	Wiped Film Evaporator Notice of Construction	TBD			L. Huffman	F. Miera	J. Lyon	
	Submit Wiped Film Evaporator Class 3 Permit Modification or Part B Permit Application	TBD			L. Huffman	F. Miera	J. Lyon	
MISCELLANEOUS DOCUMENTS	IDF Performance Assessment (ORP/WRPS has support role to RL/CHPRC)	TBD			T. Fletcher	F. Miera	J. Lyon	
	Submit Categorical TOC HIA	TBD				F. Miera	J. Lyon	
	Quarterly Hose-In-Hose Transfer Lines (HIHTL) Reports	Ongoing Quarterly			J. Johnson		J. Lyon	

<sup>1</sup> Note: "ORP Delivery to Regulators Dates" are those dates that support future milestones, are submittal dates for permitting activities, or miscellaneous submittals that support ORP actions and represent the dates when ORP submits documents to the regulators.

<sup>2</sup> Note: The "Anticipated Regulatory Review Completion Date" is generated based on TPA Milestone Agreements and TPA Section 9.0 documentation requirements for primary documents. This date will be changed and noted in "Comments/Issues" if extension of review is requested. If the document is a secondary document or for information only, the "Anticipated Regulatory Review Completion Date" may be listed as "N/A" for not applicable.

<sup>3</sup> Note: "Final Completion Date" is entered after the document is reviewed, comments are incorporated, and any disputes are resolved. Any comment resolution issues or disputes will be noted under "Comments/Issues."

**Bold red = DOE submittal within the next 90 days**   **Bold green = document is under initial ECY Regulatory Review**   **Bold black = document under comment/review response or other actions**   **Bold blue = document is completed**

**WORKING ORP Key Documents List  
For January 2013**

Milestone Title	Milestone Tie	Document	TPA Milestone Due Date (if applicable) <sup>1</sup>	ORP Delivery to Regulators Date <sup>2</sup>	Anticipated Regulatory Review Completion Date <sup>3</sup>	Final Completion Date <sup>4</sup>	DOE-ORP Lead	Contractor Lead	Ecology Lead	Comments/Issues
Submit Interim Measures Investigation Work Plan and TPA Chg Pckgs for M-045-22 Target Dates	M-045-20	Interim measures investigation "other" work plan for to vadose zone characterization at 241-TX Farm and 241-U Farm, and soil desiccation/contaminant removal proof-of-principal test at 241-SX Farm	12/31/12	12/06/12			C. Kemp	S. Eberlein	J. Lyon	<ul style="list-style-type: none"> <li>Created via Change Package M-45-12-04 on 06/21/12</li> <li>Work Plan provided to ECY on 12/06/12 via ORP letter 12-TF-0054.</li> <li>ORP received ECY letter 12-NWP-190 to initiate field work and that comments would be received within 45 days.</li> </ul>
<b>Submit for Review and Approval a Sampling and Analysis Plan to Ecology for Soil Samples for 241-TX Tank Farm Investigation</b>	<b>M-045-21</b>	<b>Sampling and Analysis Plan for Soil Samples for 241-TX Tank Farm Investigation</b>	<b>03/31/13</b>							<ul style="list-style-type: none"> <li><b>Created via Change Package M-45-12-04 on 06/21/12</b></li> </ul>
Submit to Ecology for Review and Approval as an Agreement Primary Document, a Phase 2 RCRA Facility Investigation/Corrective Measure Study Report for WMA C	Supports M-045-61	WMA C PA Initial Model Run Data Package		TBD			C. Kemp	S. Eberlein	J. Lyon	<ul style="list-style-type: none"> <li>Feeds input for M-045-61 and all Closure Plans</li> </ul>
		WMA C PA Initial Document		TBD			C. Kemp	S. Eberlein	J. Lyon	<ul style="list-style-type: none"> <li>Feeds input for M-045-61 and all Closure Plans</li> </ul>
		WMA C Characterization Summary 2013		09/30/13			C. Kemp	S. Eberlein	J. Lyon	<ul style="list-style-type: none"> <li>Feeds input for M-045-61 and all Closure Plans</li> </ul>
	M-045-61	Phase 2 RFI/CMS Report for WMA C	12/31/14	12/31/14			C. Kemp	S. Eberlein	J. Lyon	
Submit to Ecology for Review and Approval as an Agreement Primary Document, a Phase 2 Corrective Measures Implementation Work Plan for WMA C.	M-045-62	Phase 2 Corrective Measures Implementation Work Plan for WMA C	06/30/15	06/30/15			C. Kemp	S. Eberlein	J. Lyon	
M-45-91 Interim Milestones and Target Dates for SST Integrity Implementing the Expert Panel's Recommendations	<b>M-045-91F-T01</b>	<b>Provide Report of the Liquid Leak Rate Assessments</b>	<b>01/31/13</b>	<b>01/31/13</b>			<b>J. Johnson</b>	<b>R. Gregory</b>	<b>J. Lyon</b>	<ul style="list-style-type: none"> <li><b>Moved to 01/31/13 per M-45-12-01 TPA Chg Pckg.</b></li> <li><b>Reported as To Be Missed in October 2012 TPA PMM Mtg, this and other To Be Missed milestones are incorporated into a TPA Chg Pckg which is being discussed by ORP and ECY.</b></li> </ul>
	M-045-91D-T01	Provide Report on the Concrete Dome Samples from Tank C-107 Plug	05/31/13	05/31/13			J. Johnson	R. Gregory	J. Lyon	
	M-045-91F-T02	Provide Report of Liner Failures for SSTs	07/31/13	07/31/13			J. Johnson	R. Gregory	J. Lyon	<ul style="list-style-type: none"> <li>Reported as To Be Missed in October 2012 TPA PMM Mtg</li> </ul>
	M-045-91F-T04	Provide Report on 100-Series SSTs as having Leaked in RPP-32681	07/31/13	07/31/13			J. Johnson	R. Gregory	J. Lyon	<ul style="list-style-type: none"> <li>Reported as To Be Missed in October 2012 TPA PMM Mtg</li> </ul>
	M-045-91G-T03	Provide AOR Final Doc. for SSTs on 1,000,000 Gallon Tanks	09/31/13	09/31/13			J. Johnson	R. Gregory	J. Lyon	<ul style="list-style-type: none"> <li>Moved to 09/31/13 per M-45-12-01 TPA Chg Pckg.</li> </ul>
	M-045-91E	Provide SST Farms Dome Deflection Surveys Every Two Years	09/30/13	09/30/13			J. Johnson	R. Gregory	J. Lyon	
	M-045-91G-T04	Provide AOR Final Doc. for SSTs on 55,000 Gallon Tanks	10/31/13	10/31/13			J. Johnson	R. Gregory	J. Lyon	<ul style="list-style-type: none"> <li>Reported as To Be Missed in October 2012 TPA PMM Mtg</li> </ul>
	M-045-91F	Provide Summary Conclusions Report on Leak Integrity	12/31/13	12/31/13			J. Johnson	R. Gregory	J. Lyon	<ul style="list-style-type: none"> <li>Reported as To Be Missed in October 2012 TPA PMM Mtg</li> </ul>
	M-045-91G	Provide Summary Conclusions Report of AOR for SSTs	04/30/14	04/30/14			J. Johnson	R. Gregory	J. Lyon	<ul style="list-style-type: none"> <li>Reported as To Be Missed in October 2012 TPA PMM Mtg</li> </ul>

<sup>1</sup> "TPA Milestone Due Dates" are the direct regulatory drivers for completion of milestones.

<sup>2</sup> "ORP Delivery to Regulators Dates" are those dates that support future milestones, are submittal dates for permitting activities, or miscellaneous submittals that support ORP actions and represent the dates when ORP submits documents to the regulators. ORP Delivery to Regulators Dates may be earlier than TPA Milestone Due Dates if work is completed ahead of schedule.

<sup>3</sup> The "Anticipated Regulatory Review Completion Date" is generated based on TPA Milestone Agreements and TPA Section 9.0 documentation requirements for primary documents. This date will be changed and noted in "Comments/Issues" if extension of review is requested. If the document is a secondary document or for information only, the "Anticipated Regulatory Review Completion Date" may be listed as "N/A" for not applicable.

<sup>4</sup> "Final Completion Date" is entered after the document is reviewed, comments are incorporated, and any disputes are resolved. Any comment resolution issues or disputes will be noted under "Comments/Issues."

**Bold red = DOE submittal within the next 90 days**   **Bold green = document is under initial ECY Regulatory Review**   **Bold black = document under comment/review response or other actions**   **Bold blue = document is completed**

ORP Project Managers Meeting  
January 22, 2013  
2440 Stevens Ctr.  
Richland, Washington  
**Meeting Minutes Transmittal**

**Attachment D: Information Submitted to AR during PMM  
(16 pages including this coversheet)**

**Office of River Protection, State of Washington Department of Ecology  
 Tank Waste Retrieval Work Plan/Functions and Requirements Change Notice  
 (Per Hanford Federal Facility Agreement and Consent Order Section 9.3)**

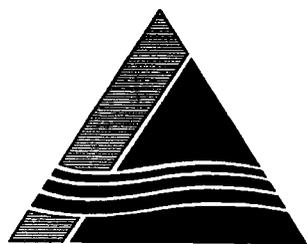
<b>1. Document Title and Number:</b> Update of RPP-PLAN-36705, "241 – TY Tank Farm Interim Surface Barrier Monitoring Plan, Revision 1"		
<b>2. Minor Field Change:</b> (Section 12.4 HFFACO Action Plan) <input type="checkbox"/> <b>Yes:</b> (WRPS Signature Only – Attach signed form to Primary Document for record purposes)  <input checked="" type="checkbox"/> <b>No:</b> Proceed to Box 3	<b>3. Document Issue Date:</b>  8-13-09  <b>4. Document Modification Notice Date:</b> 09/24/12	<b>5. Notice Number:</b> 2012-09
<b>6.</b> Do proposed changes require schedule changes? (Would this extend completion of retrieval beyond 12 months from date of initiation?)  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>7.</b> Do proposed changes include specific additions, deletions, or modification to scope and/or requirements which affect the overall intent of the plan?  <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>8. (Check only one box)</b> <input type="checkbox"/> <b>Significant Modification</b> (Check if the answer to question in <u>either</u> section 6 or 7 is "yes". Significant modifications require revision of the primary document.) <input checked="" type="checkbox"/> <b>Minor Modification</b> <input checked="" type="checkbox"/> Requires modification of the document <input checked="" type="checkbox"/> Can be accomplished with Modification Notice.
<b>9. Description and Justification of Change:</b> The proposed change modifies an approved work plan/document and will be processed in accordance with the Tri-Party Agreement Action Plan, section 9.0 Documentation and Records, and not chapter 12, Changes to the Agreement. Section 4.1, pages 13 and 14: text and table 2 are revised to include updated monitoring and data downloading frequencies.  Section 4.2, page 16: text is revised to include updated data downloading frequency. Editorial corrections and updates to references are included throughout the document.  Based on the evaluation of monitoring data to date from the T and TY farm interim surface barriers, Ecology and ORP agreed to revise the plan to include the following activity frequencies: A) daily recording of data by automatic data loggers, B) quarterly downloading of recorded data and C) semi-annual neutron moisture measurements of dry wells. During the revision process, DOE is taking the opportunity to correct editorial errors in the document.  <b>Change Description:</b> Updates the frequency with which data is electronically recorded and downloaded, and updates the frequency of manual neutron probe measurements.		
<b>10. Impact of Change:</b>  Updates the frequency with which data is electronically recorded and downloaded, and updates the frequency of manual neutron probe measurements. Impacts TY farm only.		
<b>11. Additional Requirements and/or Provisions</b>		

**Office of River Protection, State of Washington Department of Ecology  
 Tank Waste Retrieval Work Plan/Functions and Requirements Change Notice  
 (Per Hanford Federal Facility Agreement and Consent Order Section 9.3)**

<u>Approvals</u>		
Washington River Protection Solutions, LLC.	Office of River Protection	State of Wash. Dept. of Ecology <i>[Signature]</i>
<input type="checkbox"/> Provisional Approval <sup>2</sup> Date	<input type="checkbox"/> Provisional Approval <sup>2</sup> Date	<input type="checkbox"/> Provisional Approval <sup>2</sup> Date
<input checked="" type="checkbox"/> Final Approval Date <i>9/26/12</i> <i>[Signature]</i>	<input checked="" type="checkbox"/> Final Approval <sup>CTP</sup> Date <i>[Signature]</i>	<input type="checkbox"/> Final Approval Date <i>12/8/13</i>

**Notes**

- 1 - For use by Ecology to identify any additional information needed to make a decision regarding the request for modifications. In addition, Ecology will identify actions, if any, regarding the modification request that DOE may take pending Ecology's final decision
- 2 - Provisional approval allows DOE and it's contractors to take specific actions identified in section 11, prior to final approval of this modification.



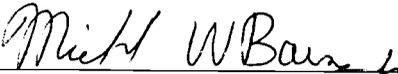
## Tri-Party Agreement

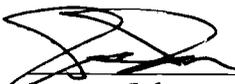
### **Tri-Party Agreement Project Manager Agreement to Categorize RPP-12711, *Temporary Waste Transfer Line Management Program Plan* (a.k.a. *Hose-In-Hose-Transfer-Line-Management Plan*) as a Tri-Party Agreement Primary Document**

RPP-12711 describes a program for managing temporary transfer lines used to convey waste throughout their life cycle in accordance with applicable environmental regulations. Although this document previously has not been formally categorized as a Hanford Federal Facility Agreement and Consent Order (aka the Tri-Party Agreement or TPA) primary document, the document has been managed in a manner similar to a TPA primary document (e.g., original document and subsequent changes have been reviewed and approved by the Washington State Department of Ecology [Ecology]).

This agreement formally recognizes that RPP-12711 will become a TPA primary document, as defined in Chapter 9.0, Section 9.2.1 of the TPA Action Plan, upon submittal by the Department of Energy Office River Protection (ORP) to Ecology of Revision 7 of RPP-12711. However, Table A-1, "In-Pit Leak Detection Methods and Limitations," and Table A-2, "Transfer Line and Pit Hold-up/Estimated Time for Leak Detection," and any revisions to those tables, may be incorporated into the plan by ORP at any time and will not undergo the Section 9.3 review process or require prior Ecology approval.

ORP plans to submit Revision 7 of RPP-12711 to Ecology for review using the process outlined in Section 9.3 of the TPA Action Plan. When RPP-12711 Revision 7 is reviewed and approved by the Parties, a TPA Change Control Form will be prepared adding RPP-12711 to Table 9-1, "Primary Documents," in Section 9.0, Documentation and Records, of the TPA Action Plan.

 Date 1-22-13  
Jeff Lyon, Tank Farms PM  
Nuclear Waste Program  
Department of Ecology  
State of Washington

 Date 1/22/13  
Jeremy Johnson, Tank Farms PM  
Tank Farms Project  
Office of River Protection  
Department of Energy

## Lynch, James J

---

**From:** Grindstaff, Joanne F  
**Sent:** Thursday, January 17, 2013 4:08 PM  
**To:** Lyon, Jeffery; Johnson, Jeremy M; Kemp, Christopher J  
**Cc:** Wold, Kristi (Washington State Department of Ecology); Uziemblo, Nancy H; Whalen, Cheryl (ECY); Lynch, James J; Barnes, Michael (ECY); Hendrickson, Michelle (Washington State Department of Ecology); Koll, Ronald J; Mattlin, Ellen M  
**Subject:** RE: Perhaps at the TPA meeting

Jeff:

Here is a response to the first two issues, I'll let Ron Koll or Ellen speak to the evaporator. I will be at the PMM on Tuesday and can address these too but from hearing you weren't attending Tuesday's meeting I thought I'd give you this response we can also put on the record on Tuesday... see in red below.

Joni

**From:** Lyon, Jeffery (ECY) [<mailto:JLYO461@ecy.wa.gov>]  
**Sent:** Tuesday, January 15, 2013 12:02 PM  
**To:** Johnson, Jeremy M; Kemp, Christopher J  
**Cc:** Wold, Kristi (Washington State Department of Ecology); Uziemblo, Nancy H; Whalen, Cheryl (ECY); Lynch, James J; Barnes, Michael (ECY); Hendrickson, Michelle (Washington State Department of Ecology); Grindstaff, Joanne F; Koll, Ronald J  
**Subject:** Perhaps at the TPA meeting

We recently received DNSFB information regarding Base Operations; 3 points I would appreciate additional information on:

1. For 12/7/2012 report – “In the long term, the contractor plans to reevaluate gas retention and release mechanisms in more detail.” What is the plan? The referenced report discusses the issues seen with gas generation in salt cake tanks. However, the Contractor has been evaluating gas generation issues in sludge tanks such as the DST receiver tanks in AN Farm being used for C Farm retrievals. We have set limits on how much sludge we can retrieve from C Farm to the DSTs for the near term while the Contractor develops ways to continue retrieval safely throughout the end of the C Farm campaign. If you would like to discuss this in more detail, I can meet with you when you are available next week. Just let me know...
2. And from the 12/14/0212 report – has the DPO opinion been appealed or challenged? Yes. The Final DPO report was issued on January 4, 2013 and notification of intent to appeal was provided to the DPO Manager (at DOE-HQ) on January 9, 2013. Following the DPO order (DOE O 442.2) the concerned party must meet with the DPO manager within 15 days of the final report and then the party can file an appeal report within 35 days of the issuance of the final report. The DPO team has 45 days following the submittal of the appeal report to review and provide a final decision that is made by the Under Secretary. This decision is final at which point the project can determine a path forward. DOE-ORP is currently looking at other alternatives for C-105 retrieval.
3. For 12/21/2012 report – “The power loss did not impact the 242-A Evaporator which has a separate feed, but it caused a loss of primary ventilation in the Double-Shell Tanks (DSTs) in both the 200 East and 200 West Areas.” In light of the gas issues noted in the 12/7/2012 report, why does the pole fire cause shutdown of the DST ventilation system? Do you have emergency power as a backup? If so why was there a shutdown of the ventilation system, and if not why is this not a safety concern?
- 4.

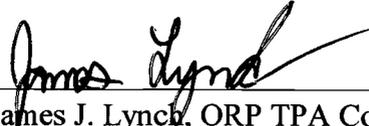


**Tri-Party Agreement (TPA) General Definitions for Declaring a TPA Milestone or Target Date as “At Risk” and “To Be Missed”**

**At Risk** – High probability the scheduled date will be missed.

**To Be Missed** – Milestone will not be completed as scheduled.

The Office of River Protection TPA Monthly Summary Report, which is provided monthly to the Washington Department of Ecology and other TPA stakeholders, contains a section under each milestone topic called “Issues.” Further details about why a TPA target date or milestone are declared as “At Risk” or “To Be Missed” will be found in these “Issues” sections, and the TPA Project Managers will discuss these verbally during TPA Project Manager Monthly Meetings and Quarterly Meetings as well.

  
\_\_\_\_\_  
James J. Lynch, ORP TPA Coordinator  
Environmental Compliance Division  
Office of River Protection  
Department of Energy

Date 01/22/13



**Tri-Party Agreement Project Manager (PM) Agreement for Single-Shell Tank (SST)  
Retrievals Completion Final Sampling**

The Washington State Department of Ecology (Ecology) and the U.S. Department of Energy Office of River Protection (ORP) have discussed Retrieval Data Report Sampling for SST retrieval on both January 10<sup>th</sup> and January 17<sup>th</sup>, 2013. On January 10<sup>th</sup> Ecology and ORP agreed on a new drag sampler for C-107 completion, developing a sampling design for residual waste in tank C-104, reducing the list of organic analytes using existing data for the remainder of C-Farm, and sampling locations for tank C-104 RDR sampling. ORP and Ecology have also agreed with the *Single-Shell Tank Component Closure DQO* RPP-23403 revision 5, and *Sampling and Analysis Plan for Single-Shell Tanks Component Closure* RPP-PLAN-23827 revision 3. This signed agreement directs ORP to initiate both the DQO and SAP per the attached attachment.

Michelle W. Brown for Date 1-22-13  
Jeff Lyon, Tank Farms PM  
Nuclear Waste Program  
Department of Ecology  
State of Washington

Chris Kemp Date 1/22/13  
Chris Kemp, Tank Farms PM  
Tank Farms Project  
Office of River Protection  
Department of Energy

## RDR SAMPLING MEETING NOTES

LOCATION: Ecology  
DATE: January 10, 2013

### Attendees:

Mike Barnes	Ecology
Beth Rochette	Ecology
Jerry Yokel	Ecology
Jacob Reynolds	WRPS <i>DR</i> 1/16/13
Duc Nguyen	WRPS <i>DMN</i> 1/16/13

### Additional Distribution:

Jeff Lyon	Ecology
Chris Kemp	ORP
Mike Peloquin	WRPS
Susan Eberlein	WRPS
Chris Burke	WRPS

### Meeting Agenda

- Including a new sampler (drag sampler) in the Retrieval Data Report (RDR) data quality objectives (DQO) and sampling and analysis plan (SAP)
- Developing a sampling design for residual waste in tank C-104
- Reducing the list of organic analytes using the existing data.

### Results of discussion

- The drag sampler is planned to be deployed with the Mobile Arm Retrieval System in C-107 and C-105. The attendees agreed to include the drag sampler in the DQO and SAP.
- Most of the residual waste in C-104 is located in two areas; therefore, sampling should focus on these areas. It was agreed that a sampling design specific to this tank should be developed. The attendees agreed on the following sampling design: two samples from each area for a total of four samples; duplicate analyses will be performed on one sample and single analysis on the remaining three samples for a total of five analyses. The samples will be taken using the Off-Riser Sampling System (ORSS).
- Organic compounds that have been detected in C Farm tank residual solids samples were summarized and discussed (see Attachment). The attendees agreed that when sampling the residual solids in the remaining C Farm tanks to support RDRs, only the detected organics will be analyzed with the exception of phthalates because phthalates were judged to be contaminants from plastic ware used at the laboratory.

Residual waste in tanks to be retrieved after C Farm will be analyzed for the organics listed in the current DQO (RPP-23403, Rev 4) and SAP (RPP-PLAN-23827 Rev 2). The list will be re-evaluated for reduction after collecting organic data from a small number of tanks in a tank farm.

- The DQO, SAP, and the C-104 tank-specific SAP will be revised to reflect these changes. The changes will be discussed and approved at the next Tri-Party Agreement Project Managers meeting. Ecology's approval will be documented as part of the meeting log.

### ATTACHMENT

#### Detected Organic Compounds in C Farm Tank Residual Solids Samples (As of 1-10-13)

Detected Compound	Found in Tank Residual	Additional Information
Phthalates (butylbenzylphthalate, di-n-butylphthalate, di-n-octylphthalate)	C-106, C-103, C-204	<ul style="list-style-type: none"> <li>• Significant levels in the laboratory blanks. Most likely due to contamination from plastic ware.</li> <li>• All results are J flagged (near laboratory DLs)</li> </ul>
Acetone	C-106, C-201, C-203, C-202, C-103, C-204	<ul style="list-style-type: none"> <li>• Observed occasionally in laboratory blanks.</li> <li>• All results are J flagged.</li> </ul>
2-butanone (MEK)	C-106, C-201, C-203, C-202, C-103, C-204	<ul style="list-style-type: none"> <li>• Observed occasionally in laboratory blanks.</li> <li>• All results are J flagged.</li> </ul>
Hexone (4-methyl – 2pentanone or MIBK)	C-201, C-202, C-202	All results are J flagged.
Tributyl phosphate	C-103, C-204	Detected at high concentrations
Trichloroethene	C-201	Only one detected result; J flagged
Xylenes	C-203	All results are J flagged.
Acetate	C-203, C-202, C-103, C-108	All results are J flagged.
Formate	C-203, C-202, C-103, C-108	All results are J flagged.
Oxalate	C-106, C-103, C-108	All results are J flagged (except for one from C-106). C-106 MDL was high.
PCB	C-106, C-108	All results are J flagged.

Table 4. Primary Organic Analytes – Requirements for Remaining C Farm Tanks<sup>1</sup>

Organic Analyte	CAS Number	Analysis Method
1,1,2-Trichloroethylene	79-01-6	Method 8260 for VOA
2-Butanone (MEK)	78-93-3	Method 8260 for VOA
2-Propanone (Acetone)	67-64-1	Method 8260 for VOA
4-Methyl-2-pentanone (MIBK)	108-10-1	Method 8260 for VOA
Xylenes (Mixed isomers of o-, m-, and p-)	1330-20-7	Method 8260 for VOA
o-Xylene	95-47-6	Method 8260 for VOA
m-Xylene <sup>2</sup>	108-38-3	Method 8260 for VOA
p-Xylene <sup>2</sup>	106-42-3	Method 8260 for VOA
Tributyl phosphate	126-73-8	Method 8270 for SVOA
PCB	N/A	Method 8082 for Aroclors

Abbreviations: CAS= Chemical Abstracts Service; VOA=volatile organic analysis; SVOA=semivolatile organic analysis, PCB=polychlorinated biphenyls; N/A=not available

Notes:

<sup>1</sup>Remaining C Farm tanks are 241-C-101, 241-C-102, 241-C-104, 241-C-105, 241-C-107, 241-C-109, 241-C-110, 241-C-111, and 241-C-112.

<sup>2</sup>m-xylene and p-xylenes will be analyzed together as xylenes (m+p).

Table 4-3. Primary Organic Analytes – General Requirements

Primary VOA analytes	CAS	Primary SVOA analytes	CAS
1,1,1-Trichloroethane	71-55-6	2-Methylphenol (o-cresol)	95-48-7
1,1,2,2-Tetrachloroethene	127-18-4	Butylbenzylphthalate	85-68-7
1,1,2,2-Tetrachloroethane	79-34-5	2,4,5 Trichlorophenol	95-95-4
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	2,4,6-Trichlorophenol	88-06-2
1,1,2-Trichloroethane	79-00-5	2,6-Bis(tert-butyl)-4-methylphenol	128-37-0
1,1,2-Trichloroethylene	79-01-6	2-Chlorophenol	95-57-8
1,1,Dichloroethene	75-35-4	2-Ethoxyethanol	110-80-5
1,2-Dichloroethane	107-06-2	4-Methylphenol (p-cresol)	106-44-5
Chloroethene (vinyl chloride)	75-01-4	Acenaphthene	83-32-9
2-Butanone (MEK)	78-93-3	Cresylic acid (cresol, mixed isomers)	1319-77-3
2-Nitropropane	79-46-9	Cyclohexanone	108-94-1
2-Propanone (Acetone)	67-64-1	Di-n-butylphthalate	84-74-2
4-methyl-2-pentanone (MIBK)	108-10-1	Di-n-octylphthalate	117-84-0
Benzene	71-43-2	N-nitroso-di-n-propylamine	621-64-7
Carbon disulfide	75-15-0	Fluoranthene	206-44-0
Carbon tetrachloride	56-23-5	o-Nitrophenol	88-75-5
Chlorobenzene	108-90-7	p-Chloro-m-cresol (4-Chloro-3-methylphenol)	59-50-7
Chloroform	67-66-3	m-Cresol (3-Methylphenol)	108-39-4
Dichloromethane (methylene chloride)	75-09-2	Pyrene	129-00-0
Ethyl acetate	141-78-6	N-Nitrosomorpholine	59-89-2
Ethylbenzene	100-41-4	1,2,4-Trichlorobenzene	120-82-1
Diethyl ether	60-29-7	2,4-Dinitrotoluene	121-14-2
Toluene	108-88-3	Hexachloroethane	67-72-1
trans-1,3,-Dichloropropene	10061-02-6	Hexachlorobutadiene	87-68-3
Trichlorofluoromethane	75-69-4	Nitrobenzene	98-95-3
Xylenes	1330-20-7	Naphthalene	91-20-3
o-Xylene	95-47-6	o-Dichlorobenzene	95-50-1
m-Xylene	108-38-3	Pyridine	110-86-1
p-Xylene	106-42-3	Isobutanol <sup>1</sup>	78-83-1
--	--	n-Butyl alcohol (1-butanol) <sup>1</sup>	71-36-3
--	--	Tributyl phosphate	126-73-8

## Notes:

<sup>1</sup>Included in VOA list in RPP-23403, but will be analyzed by SVOA.

CAS = Chemical Abstracts Service.

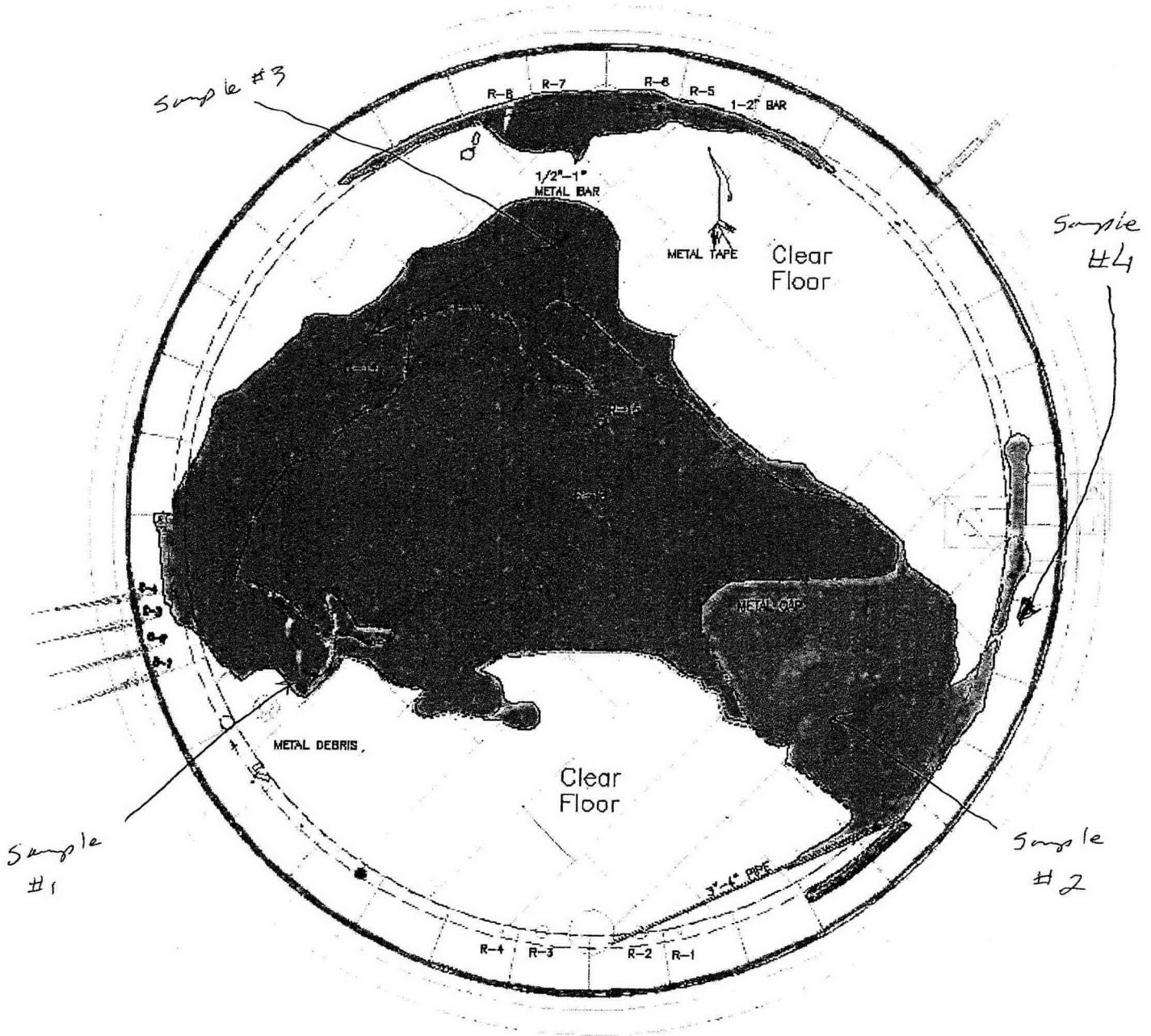
SVOA = semivolatile organic analysis.

VOA = volatile organic analysis.

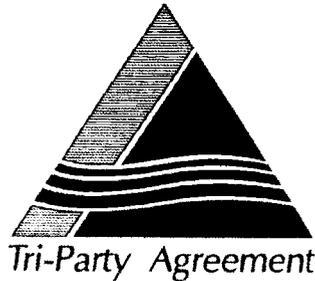
- Preferred locations for C-104 Retrieval Data Report Sampling.

1-17-13

- May require several "drags" for Off Riser Sampling System at each location.



C-104 after retrieval



**Tri-Party Agreement Project Manager (PM) Agreement for Improved Communications  
for Completion of Single-Shell Tank (SST) Retrievals**

The Washington State Department of Ecology (Ecology) will be advised by the U.S. Department of Energy Office of River Protection (ORP) when the SST waste retrieval data is showing that the SST retrieval limit of technology has been reached. Ecology will also be informed when the discussion has started on halting SST retrieval. If the last few shifts of SST waste retrieval can be predicted, Ecology will be invited to view conditions in the tank prior to the end of retrieval operations. Within 72 hours following halting of SST retrieval, the final video of the residual waste in the tank be will be made available to Ecology for viewing and discussions with subject matter experts responsible for concluding operations of SST retrieval.

Mill W. Borne for Date 1-22-13  
Jeff Lyon, Tank Farms PM  
Nuclear Waste Program  
Department of Ecology  
State of Washington

Chris Kemp Date 1-17-13  
Chris Kemp, Tank Farms PM  
Tank Farms Project  
Office of River Protection  
Department of Energy

**RPP-PLAN-53808, Rev 0.,  
200 West Area Tank Farms Interim Measures Investigation Work Plan  
Ecology Comments and Proposed Resolution**

<b>No.</b>	<b>Plan Section</b>	<b>Commenter</b>	<b>Comment</b>	<b>Proposed Change</b>
1	Global	MS	<ul style="list-style-type: none"> <li>• General Wordsmithing</li> </ul>	<ul style="list-style-type: none"> <li>• Text updates will be incorporated.</li> </ul>
2	Section 1.2 Purpose of this Work Plan	MS	<ul style="list-style-type: none"> <li>• Add reference: WRPS/PNNL (Skorska/Truex) conducted bench scale tests in 2011 targeting pore water vapor (and dissolved contaminants) removal rather than soil desiccation by removal of water vapor.</li> </ul>	<ul style="list-style-type: none"> <li>• Reference will be added.</li> </ul>
3	(TX Farm) Section 2.2.1 Leak Assessment Information and Unplanned Releases	MS	<ul style="list-style-type: none"> <li>• Change Section Heading to Tank Waste Inventory, Leak Assessment Information and Unplanned Releases</li> <li>• Add text: TX farm is a good candidate for an interim barrier due to a high inventory of Tc<sup>99</sup> remaining in the TX tanks relative to the Tc<sup>99</sup> inventory in other tank farms.</li> <li>• Add text and figure: Provide a comparison of Tc<sup>99</sup> inventory in the TX farm relative to other tank farms.</li> </ul>	<ul style="list-style-type: none"> <li>• Section and figure will be updated and added, respectively.</li> </ul>
4	(U Farm) Section 3.2.1 Leak Assessment Information and Unplanned Releases	MS	<ul style="list-style-type: none"> <li>• Change Section Heading to Tank Waste Inventory, Leak Assessment Information and Unplanned Releases</li> <li>• Add text: Waste inventory remaining in the U farm tanks is relatively low when compared to other tank farms.</li> <li>• Add text: include a short summary of the waste inventory in the U farm relative to other farms (reference figure that will be added to Section 2.2.1).</li> </ul>	<ul style="list-style-type: none"> <li>• Section will be updated.</li> </ul>

**RPP-PLAN-53808, Rev 0.,**  
**200 West Area Tank Farms Interim Measures Investigation Work Plan**  
**Ecology Comments and Proposed Resolution**

No.	Plan Section	Commenter	Comment	Proposed Change
5	Figure 3-7	MS	<ul style="list-style-type: none"> <li>• Add Uranium Plume</li> </ul>	<ul style="list-style-type: none"> <li>• Figure will be updated</li> </ul>
6	Figure 3-10	MS	<ul style="list-style-type: none"> <li>• Add Tanks to figure</li> </ul>	<ul style="list-style-type: none"> <li>• Figure will be updated</li> </ul>
7	Section 3 General	MB	<ul style="list-style-type: none"> <li>• Additional 3D Resistivity</li> </ul>	<ul style="list-style-type: none"> <li>• Section 3.3.3 will be updated to identify that the results of this investigation will be evaluated to provide recommendations regarding additional characterization work.</li> </ul>
8	Section 4.2 SX Tank Farm Description	MH	<ul style="list-style-type: none"> <li>• Update text as necessary to ensure that the most current available information (e.g., leak assessment) from the SST Integrity Team is incorporated into the work plan.</li> </ul>	<ul style="list-style-type: none"> <li>• The draft subject information has been obtained and will be compared against the information presented in this plan. The text will be revised as appropriate.</li> </ul>

**RPP-PLAN-53808, Rev 0.,**  
**200 West Area Tank Farms Interim Measures Investigation Work Plan**  
**Ecology Comments and Proposed Resolution**

No.	Plan Section	Commenter	Comment	Proposed Change
9	(SX) 4.3.1 Background on SX Testing	MS	<ul style="list-style-type: none"> <li>• Add text to identify why the area south of SX was selected to perform test</li> <li>• Add testing area to Figure 4-6</li> </ul>	<ul style="list-style-type: none"> <li>• Add text: The SX Pore Water Extraction Test is a proof of principle test of a contaminant removal technology using tank farm-deployable equipment. The general location of the test at SX Tank farm was specified in <i>Hanford Federal Facility Agreement and Consent Order</i> (HFFACO) (Ecology et al. 1989) Milestone M-045-20. The general location of the test area was chosen due to the presence of relatively shallow moist geologic layers containing mobile contaminants such as Technetium-99 and nitrates. The specific area south of SX Farm was chosen for the test to allow greater operational flexibility than working within the tank farm itself.</li> <li>• Update Figure 4-6 with testing area.</li> </ul>
10	Section 4.3.3 Test Stage Information	MS	<ul style="list-style-type: none"> <li>• Add reference: WRPS/PNNL (Skorska/Truex) conducted bench scale tests in 2011 targeting pore water (and dissolved contaminants) removal rather than removal of water vapor.</li> </ul>	<ul style="list-style-type: none"> <li>• Reference will be added</li> </ul>

MS = Maria Skorska  
 MB = Mike Barnes  
 MH = Michelle Hendrickson  
Jeffery J Lyon  
 Ecology Project Manager (print)

  
 Ecology Project Manager (signature)

1-16-13  
 Date