# Distribution:

W. Abdul	ORP	H6-60
J. M Bruggeman	ORP	H6-60
S. L. Charboneau	ORP	H6-60
J. F. Grindstaff	ORP	H6-60
F. B. Hidden	ORP	H6-60
L. A. Huffman	ORP	H6-60
J. M. Johnson	ORP	H6-60
C. J. Kemp	ORP	H6-60
D.P. Knight	ORP	H6-60
J. J. Lynch	ORP	H6-60
D. L. Noyes	ORP	H6-60
G. B. Olsen	ORP	H6-60
S. C. Stubblebine	ORP	H6-60
G. D. Trenchard	ORP	H6-60
J.D. Young	ORP	H6-60
D. Becker	Ecology	H0-57
R.K. Biyani	Ecology	H0-57
A.S. Carlson	Ecology	H0-57
T.Z. Gao	Ecology	H0-57
J. J. Lyon	Ecology	H0-57
J. D. McDonald	Ecology	H0-57
J. Price	Ecology	H0-57
H.M. Bowers	WRPS	H6-14
J.W. Donnelly	WRPS	H3-26
J. J. Luke	WRPS	H6-14
S. E. Killoy	WRPS	H6-14
R. J. Skwarek	WRPS	H3-28
R. A. Kaldor	MSA	H7-28
	MSA	11/-20

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.

Chris Kemp, DOE-ORP	Date: 11-18-2013
Wahed Abdul, DOE-ORP	Date: _ 1/19/13
Jason Young, DOE-ORP	Date:
Jeff Bruggeman, DOE-ORP	Date:
J. Lyon, Project Manager,	Date: 11/21/13
J. D. McDonald, Project Manager, Washington State Department of Ecology	Date: 11-19-13

Purpose: ORP Project Managers Meeting

# **Table of Contents**

Meeting Minutes	15 Pages
Attachment A, Agenda, AR List, Agreement, Issues and Actions	5 Pages
Attachment B, List of Attendees	2 Pages
Attachment C, Presentation Materials	43 Pages
Attachment D, Items Submitted to TPA Administrative Record	10 Pages

### 1.0 Administrative Items

Recent Items Entered/To Be Entered into the TPA Administrative Record - ORP provided copies of meeting minutes associated with the revision to RPP-9937, which will be entered into the Administrative Record (AR). The list of items entered into the AR is noted on today's agenda.

# 2.0 Agreements, Issues, Actions

Action No. TF-13-08-01 - ORP reported that an internal meeting was held yesterday (9/23/13) to discuss ideas for improvements to track TPA work scopes. ORP stated that the agreements, issues and actions list and the key documents list are useful documents to aid with tracking and updating work scopes. A suggestion made during the meeting to make the project managers meeting (PMM) more productive was for Ecology to respond to the draft reports and draft agreements, issues and actions list with any questions, which would give ORP more prep time to provide a response. ORP noted that some questions would need to be resolved at the senior management level, but the issue or action would continue to be carried on the agreements, issues and actions list. ORP added that new senior management are coming to ORP in October 2013, and following them coming on board another internal meeting will be held. This action remains open.

Action No. TF-13-06-01 - ORP and Ecology will have a follow-up meeting the week of September 30, 2013 to discuss System Plan 7. This action remains open.

Action No. TF-13-05-04 - This action remains open.

Action No. TF-13-05-03 - ORP stated that a meeting has been scheduled with Ecology. This action remains open until the meeting is held.

Action No. TF-13-05-01 - This action remains open.

<u>Action No. TF-13-04-01</u> - ORP reported that revision of the implementation plan (IP) for the Defense Board recommendation 2010-2 is nearing completion. A quarterly update to the Defense Board is being prepared. This action remains open.

Action No. TF-13-03-05 - ORP stated that WRPS is preparing the information that Ecology requested and it should be available within a month. This action remains open.

Action No. TF-13-03-04 - ORP reported that there have been discussions with Ecology regarding the path forward for M-062-40ZZ/45ZZ. At one point, Ecology's position was to delay the one-time report for six months (40ZZ), but not to delay the negotiations. ORP and Ecology have met recently to discuss a change to the system planning delivery date as well as the one-time report and the negotiations. ORP and Ecology discussions continue, and no agreement has been reached. ORP noted that the milestones for system planning, the one-time report, and negotiation for supplemental immobilization remain as they are in the TPA, and the draft change packages for 40ZZ/45ZZ have not been signed. This action remains open.

Action No. TF-13-02-03 - ORP stated that discussions have been based on doing the remedial field investigation (RFI) work prior to the performance assessment (PA), and completing the RFI portion by December 2014. After the PA is done, the corrective measures study (CMS) for the soil work would be completed sometime in 2016. ORP stated that a better definition of what work to be included in FY14 will be identified next week, and then negotiations will be restarted with Ecology. ORP noted that a continuing resolution (CR) of \$409 million is anticipated at the start of FY14. Ecology referred to an email that was sent to ORP requesting discussion on the content of the CMS. ORP acknowledged Ecology's email request, and stated that ORP is waiting until after next week when the work to be included in FY is identified. This action remains open.

<u>Action No. TF-12-10-04</u> - This action remains on hold until Tank C-107 RDR sampling is completed.

Action No. TF-12-10-02 - ORP stated that Ecology requested a meeting with the site water purveyor, which was held in early August 2013. During another discussion, Ecology requested the water purveyor's sketches of the raw and potable water lines located around the single shell tanks (SSTs). The sketches were provided to Ecology. ORP stated that these actions were generated from the annual barrier meeting (M-045-56), and that the completed actions satisfies M-045-56I. This action was closed.

Action No. TF-12-09-02 - This action remains open.

TPA and CD Milestone Status - ORP noted that the TPA and CD reports list all the milestones for fiscal years 13, 14 and 15. ORP stated that the TPA milestones are on schedule, with the exception of M-045-61, M-045-62 and M-045-82, which have been declared to be missed. The CD milestones are listed as ongoing. ORP noted that asterisks were added to CD milestones D-00B-01 and D-00A-07. The asterisks and follow-on explanation of the June 6, 2013

notification regarding serious risk to meeting the milestones were included at the request of Ecology at the last PMM. ORP stated that the notification for the three-year review meeting (D-006-00-A) will be determined by legal counsel. Ecology asked when ORP anticipates the notification will be made. ORP indicated that they did not know exactly when this might occur.

# 3.0 Review of the ORP Summary

### **Tank Farms**

System Plan - ORP reported that all of the milestones are currently on schedule. ORP stated that a meeting was held with Ecology on August 29, 2013 to discuss System Plan 7 uncertainties, and a draft TPA change package was provided. ORP has not received a response from Ecology on the draft change package, and no agreement has been reached. A meeting is scheduled next week with Ecology to discuss the path forward for System Plan 7. ORP noted that the System Plan 7 framing sessions continue to be on hold.

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

ORP stated that the Interim Hanford Storage (M-090-13) and Secondary Liquid Waste Treatment (M-047-07) projects did not operate in FY13, due to lack of funding. ORP added that these two milestones require conceptual design reports and accompanying documents to get a critical decision 1 approval, which is due by the end of FY14.

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

ORP noted that M-062-40ZZ is due by October 31, 2014, and there have been negotiations with Ecology to change the due date. ORP's position is that it is not the appropriate time to analyze the supplemental treatment choices and to negotiate a selection with Ecology. ORP stated that discussions will continue with Ecology to attempt to negotiate a change to the due dates for M-062-40ZZ and M-062-45ZZ.

<u>242-A Evaporator Status</u> - WRPS stated that the evaporator schedule in today's handout is current. ORP stated that readiness evaluation preparations are under way, and there continue to be challenges with some of the equipment. During engineering technical walkdowns of the support systems, issues have been identified and repairs or replacement of components are being done. The estimated start for the campaign is anticipated for early FY14. ORP added that the environmental compliance division has been meeting with Ecology to work on the permitting for

the campaign runs. WRPS asked if Ecology wanted to carry the historical information going back to FY10 for the evaporator. Ecology responded that the information should be carried.

# M-045-91, SST Integrity Assurance:

ORP reported that the milestones are currently on schedule. ORP submitted to Ecology the report for completion of milestone M-045-91E, which documents the results of the dome surveys conducted on all of the SST farms. ORP noted that the surveys are done to provide early signs of structural distress in a tank, and if the domes are settling it is picked up via the dome surveys. ORP added that no settling of the domes was observed that would cause a concern with the structure of a tank. ORP noted that the dome surveys are conducted every two years, and for TPA administration purposes, milestones M-045-91E1 and M-045-91E2 were created. Milestone -91E1 will be due September 30, 2015, and -91E2 will be due September 30, 2017.

Ecology asked if the tanks that are being observed for liquid level riser decreases are included in the SST integrity assurance program. ORP responded that those tanks are included in the program. Ecology asked if there will be reports coming out at the end of FY13 for the in-tank characterization of the tanks being observed for liquid level riser decreases. ORP responded that the evaluations for the 12 tanks for intrusion and the 20 tanks for decreasing levels are planned for completion by the end of this month. Ecology asked if ORP plans to conduct in-tank camera work for additional tanks in FY14. ORP responded that the plan is to complete the intrusion evaluations for all of the tanks that were identified, and there are eight more tanks on the list that are planned to be completed in FY14. ORP noted that under the issues section of the agreements, issues and actions table, issue No. 3 tracks this subject and will be updated with the issuance of the reports.

In Tank Characterization and Summary - ORP reported that operational acceptance testing of the core sampling in 200 West is under way. There was an issue with the electrical trailer that was used with the old sampler, and there are plans to purchase a new trailer. ORP stated that after a full action with the core sampler has been done, Ecology will be contacted to observe the sampling. Ecology requested a copy of the RPP-RPT-47306, Rev. 1, Waste Type Analysis for Aluminum Leachability Estimate of All Non-Retrieval Hanford Tank Wastes. ORP will provide Ecology with a copy.

<u>Tank Operations Contract (TOC) Overview</u> - ORP noted that under schedule variance reporting for retrieval and close SSTs, the removal of the hose-in-hose transfer lines has been completed.

ORP added that C-112 has been moved into the queue ahead of C-102, due to the deep sludge gas release issue associated with C-102. C-102 is planned to follow C-112. Under the supplemental treatment section, ORP noted that the last of the materials that were sent to Savannah River National Lab for the fluidized bed steam reforming testing will be received this week. The granular material produced from the testing will be stored at the 222-S Lab in case performance testing will be needed in the future.

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

M-045-22-TO1 - ORP reported that six of the eight pushes have been done at TX Farm, and the seventh and eighth pushes are being completed.

M-045-22-TO2 - ORP stated that the surface geophysical exploration (SGE) work at U Farm was completed in June 2013, and those efforts will be included in the report for the M-045-22 work. Ecology inquired about the SGE briefing scheduled in October 2013. DOE-RL responded that the briefing is being prepared to present to Ecology in October.

M-045-22-TO3 - ORP reported that the test rig is sitting at the Columbia Energy shop in north Richland, and is expected to be deployed in October 2013 to start the soil desiccation study at SX Farm. ORP noted that the intent is to capture the mobile Tc-99 nitrate, among other contaminants.

M-045-61/62 - ORP noted that these two milestones were discussed under action No. TF-13-02-03. ORP is waiting to receive funding guidance for FY14 before continuing discussions with Ecology.

### TPA-SST Retrieval and Closure Program:

M-045-86 - ORP stated that a draft retrieval data report (RDR) for C-108 should be available for Ecology review within a few weeks. Ecology stated it had suggestions about information to be included in the C-104 RDR. ORP took an action to meet with Ecology to discuss the C-104 RDR.

<u>Significant Planned Activities in the Next Six Months</u> - ORP stated that the numeric modeling for the C Farm PA will be initiated after stakeholders meetings are held on October 28 and 29, 2013.

<u>Issues</u> - ORP stated that the comments on the PA issue have not changed, but the PA work is starting up. ORP added that the delay with starting the PA does affect the tier 1, 2 and 3 closure submittals, and milestone M-045-82 is to be missed, as noted. Ecology referred to the potential

for a continuing resolution in FY14, and asked if a CR would pose further issues with M-045-61/62 and -82 in terms of the time it will take to complete the PA. ORP responded that M-045-61, which is the RFI work, could be decoupled from the PA and continue with the RFI work in FY14. ORP stated that logically the CMS work should be done after the PA is completed, which poses the risk, and that is a discussion that will be continued with Ecology. Ecology asked if the appropriate funds will be allocated to accomplish the RFI and PA in FY14. ORP responded that under a CR, the appropriate funds would not be available.

Tank Waste Retrieval Work Plan (TWRWP) Status - ORP stated that the limits of retrieval technology have been reached in tank C-101 via modified sluicing and high pressure water. Retrieval is currently under way in C-110, which was previously modified sluiced. Mechanical conditioning and high pressure water is being used in C-110, and a third of the heel has been retrieved. Retrieval in C-110 is projected to be complete around October 13/14, 2013. Ecology asked if a volume measurement on C-101 has been done. ORP responded that C-101 is in the 900 cubic foot area, and the residuals on the bottom of the tank was done by displacement. ORP noted that there are 1,100 gallons up on the walls of the tank and the liquids can only be raised so high, so there is some uncertainty with the wall measurement.

# CD-SST Retrieval and Closure:

<u>D-00B-01</u> - ORP referred to the issues section, noting that tanks C-102 and C-105 are at risk for meeting the Consent Decree (CD) milestone due 9/30/14.

<u>Significant Planned Activities in the Next 6 Months</u> - ORP stated that the failed enhanced reached sluicer (ERS) in C-112 will be replaced with an improved ERS, and it should be completed this week to continue with hard heel removal. ORP noted that some caustic addition to condition the waste in C-111 and C-112 will be done

<u>TWRWP Status</u> - ORP noted that the TWRWP status is the same table that is in the TPA summary report.

Tank in Appendix H. Status (tank 241-C-106) - There was no change in status to report.

<u>Tank Retrievals with Individual Milestones (tanks 241-A-103 and 241-S-112)</u> - No change in status.

# **Waste Treatment Plant**

ORP addressed the open actions as follows:

<u>Action No. WTP-13-04-03</u> - Discussion under LAW regarding the TCO vendor concerns. This action remains open.

Action No. WTP-13-04-01 - A briefing will be scheduled with Ecology. This action remains open.

<u>Action No. WTP-13-01-01</u> - ORP noted that there have been discussions during the project managers meetings (PMM) regarding the cathodic protection issue, and efforts have been made to understand the scope of information that Ecology is seeking. ORP will schedule a meeting with Ecology for a detailed discussion. This action remains open.

ORP stated that there hasn't been much change in the project since last month's report. ORP noted that there have been high-level discussions regarding the project, but no details are available for discussion in the PMM forum. ORP stated that currently one of the main issues is understanding what the federal budget will be for fiscal year 2014, and that there is a wide range of potential outcomes. ORP noted that there will be some carryover into FY14 from the reprogramming funds that were received in June 2013 in Bechtel's contract, unless specific direction is given to counter use of the carryover.

Ecology asked if ORP would be in a position of authority to reorient funding, if needed. ORP responded that it is dependent on what Congress authorizes. ORP stated that if Congress does not pass a budget for FY14, there would be a continuing resolution (CR), which would be the same budget as FY12 since a budget has not been issued since then. ORP added that with a CR, the money would be appropriated to the same facilities as in FY12, and a congressional action would be needed to reorient the funding. ORP noted that the schedule variance for the month of July 2013 reflects the delay in receipt of the reprogramming funds until June 2013.

<u>Significant Past Accomplishments</u> - ORP noted that a second construction shift has been initiated in the LAW facility, although the ramp-up has been slower than originally planned due to concerns with potential budget issues. Ecology asked if the reason for starting a second shift was to meet a milestone. ORP responded that meeting the CD milestone for construction substantially complete in LAW is part of the effort, as well as helping to move forward efficiently by allowing more workers in the facility (see discussion under LAW).

Significant Planned Actions in the Next 6 Months - Ecology asked about the status of the number of vessel configurations that will need to be tested. ORP responded that it is still under discussion, and there has been no final decision or a time frame when a final decision will be made. ORP noted that it is working extensively with the National Labs and other groups to better define the scope and pathway for the full-scale vessel testing, and it is considered a very high priority.

# Pretreatment (PT) Facility

ORP reported that as requested, briefings were provided to Ecology this month on the priority level 1 findings and the RLD vessel system redesign. ORP stated that there is no construction work in PT, and the focus continues to be on resolution of three key technical issues: 1) hydrogen in vessels, 2) criticality in vessels, and 3) hydrogen in piping and ancillary vessels (HPAV). ORP stated that Bechtel's execution plan for resolution of the three issues is anticipated for approval next week. Ecology requested a copy of the execution plan when it is issued. Ecology asked who would be involved with the execution plan. ORP responded that there are a number of consultants and experts who will be working along with ORP and Bechtel, and there will be six to eight months of paper studies to determine what is required to move forward to solve the issues. ORP noted that the three key issues are safety-related issues, and the studies will result in a safety strategy. ORP added that there are operational implications associated with the technical issues that go beyond the safety-related issues.

Ecology asked if ORP anticipates that a new safety design strategy (SDS) and control strategies will be part of the result from the execution plan studies. ORP concurred, stating that the focus will be for the HLW facility's control strategy SDS, but that PT's control strategy SDS will incorporate some of the results to solve the mixing issue.

Ecology asked if the Defense Nuclear Facilities Safety Board (DNFSB) would be providing any support to the execution plan. ORP responded that it is working on an update to the 2010-2 Implementation Plan (IP) recommendation on mixing, and briefings to the DNFSB will be initiated next week on the revision. The goal is to issue the revised 2010-2 IP in January 2014. ORP stated that as soon as the revised IP is close to a final product, it will be shared with Ecology.

Ecology asked if the resolution of the three key safety-related technical issues in PT (hydrogen in vessels, criticality in vessels, HPAV) will have any impact on other facilities. ORP responded that there will be minimal impact on the other facilities because the criticality issue, the amount of solids and the hydrogen retention are mostly associated with PT. ORP stated that HLW uses an

agitator for mixing, which is a sound and robust design, and the solids and hydrogen retention are not a concern. ORP added that the three issues will be considered for the other facilities.

ORP stated that the pulse jet mixing (PJM) controls testing is under way in the 8-foot test facility, and testing should be completed sometime in October 2013. ORP stated that the PJMs were designed with no holes, and the software was supposed to control any overblow. A concern was raised that the software may not be able to control the overblow, and a solution was proposed to make holes in the PJM. ORP stated that testing has been done with different size holes of one-half inch and one inch, and there were good preliminary results with the one-inch holes. Testing will continue with three-quarter inch holes and on the baseline design of no holes. ORP noted that if testing on the baseline design of no holes works, then no modification would be needed. Ecology asked how many configurations would be tested. ORP responded that three different sized holes and no holes comprise the full gamut of testing. ORP noted that this is non-Nuclear Quality Assurance 1 (NQA-1) testing, and it will narrow down the number of configurations needed on the full-scale testing of the PJMs.

ORP stated that construction of the full-scale test facility is progressing well. The PJM air lines should be completed in December 2013, and commissioning is projected for April 2014. ORP added that the RLD-8 vessel has been placed outside the facility, and will be moved inside next month. ORP noted that the critical path for testing in the full-scale facility is the preparation of the detailed test plan, the simulant, and instrumentation by the National Labs.

Ecology inquired about the status of the ashfall criteria. ORP responded that the national phenomenon hazards (NPH) criteria for ashfall changed, and Bechtel was asked to do a proposal on the design impact and cost estimate. ORP noted that this is being done as a result of the sitewide NPH ten-year update, in which the ashfall loading numbers were increased. Ecology asked about the impact to other facilities. ORP responded that it will impact all the facilities, but the evaluation shows that the main impact is on the ventilation systems for PT and HLW, with limited impact on the other facilities. ORP stated that since the main impact is in PT, it is taking the lead on the issue.

# **High Level Waste**

ORP stated that there is limited construction work in HLW, and the key effort is towards conditional resumption of design and construction. ORP stated that the plan for conditional resumption of design and construction in HLW is being finalized for issuance to Bechtel, with a target date for conditional resumption in February 2014. Ecology inquired about the status of the plan associated with the first box in the graph to complete some of the technical issues for HLW design. ORP responded that the risk assessment plan for the first box was issued this past August. Ecology requested a copy of the risk assessment plan associated with the first box in the graph, and ORP will provide Ecology a copy. ORP stated that the plan for conditional resumption of design and construction is comprised of several elements, and one of the elements is input from the risk assessment plan. ORP added that Bechtel is currently working through every system in HLW, in support of conditional resumption, to determine what the risks are and whether a design change is needed or the system is acceptable. The systems will be graded according to risk.

Ecology expressed concern about the number of technical initiatives under way, citing the Reliability Validation Process (RVP), level 1 findings, technical completion team issues, 2010-2, and whether any decision that is made or design media that is received for review and approval will have been informed by all of the technical initiatives.

ORP responded to Ecology's concern, using HLW as an example. In HLW, final resolution for some of the technical issues will not be achieved by the February 2014 time frame, so the strategy to do a risk evaluation for conditional resumption was implemented. There is the team reviewing the priority level 1 findings and the RVP findings, and the systems will be graded accordingly. There is also the safety design strategy (SDS) which will provide the controls in the Preliminary Documented Safety Analysis (PDSA). ORP stated that all of these findings will provide different grading on different systems, and the findings will be reviewed to determine which system design can move forward. ORP noted that some of the system designs will need to be held for further technical issue resolution. ORP stated that the first decision point for HLW is the conditional resumption in February 2014, and the next decision point will be when all of the remaining issues are resolved and the full design and construction can be released for HLW. ORP noted that the same path forward will be applied to the PT facility after the release of HLW for full design and construction.

Ecology asked how ORP would provide assurance that everything has been considered for conditional approval to resume in HLW, including RVP, level 1 findings, 2010-2 and input from

the technical completion teams. ORP responded that the plan is to consider every technical issue that is necessary before proceeding with conditional approval. Ecology stated that if the graph is followed, that will provide the mechanism to ensure all the bases are covered and how the parties will move forward with HLW. ORP concurred, stating that the graph provides the framework to ensure and document that all the bases have been covered. ORP added that when engineering and construction are released in HLW, there will be sufficient limitations and controls for the actions that still have high risk, and there will be a whole body of resolutions that are defensible.

Ecology asked if the DNFSB will be providing input on the 2010-2 recommendations. ORP stated that the DNFSB is not a regulatory agency, and it does not review or approve documents. ORP stated that the 2010-2 IP has a requirement for mixing in HLW, which is under evaluation for testing. ORP noted that the percentage of solids in the HLW vessels is small and the risk associated with mixing is considered to be limited. Ecology expressed concern that the DNFSB could raise an issue in the future that something wasn't done with the HLW vessels. ORP responded that the Department of Energy is the entity that took the action to put the controls in place, and the DOE will be the entity to release the controls. ORP added that the DNFSB will be informed of DOE's actions, but the DNFSB is not a decision-maker and there is no requirement that the DNFSB review the evaluation for mixing. Ecology stated that there still could be a risk, since the DNFSB has given input and stopped activities. ORP responded that the DNFSB has not stopped any activity, and it was the DOE that halted construction activities in HLW and PT.

ORP noted that the DNFSB sent a recommendation asking for a plan, and the plan (2010-2 IP) was submitted and is currently being revised and will be shared with the DNFSB. ORP added that the DNFSB's charter does not provide for signature or approval of documents. ORP stated that the components in the plan for conditional approval that could impact moving forward are the SDS, which hasn't been done before, and resolution of the level 1 findings and the RVP to the satisfaction of risk evaluation. Ecology stated that when conditional approval occurs, there will be several qualifiers on the items in the graph. ORP concurred with Ecology's statement. ORP added that the bulk of its oversight will be focused on doing all the reviews and actions to ensure that the residual risks of the open findings and the RVP, as applied to HLW, are understood. Ecology stated that as ORP moves through those reviews, it will make an informed decision as to whether re-ramping up production engineering is the right thing to do. ORP concurred with Ecology's statement, adding that the appropriate controls will be put in place for the activities that are not ready.

Ecology expressed appreciation to ORP for the detailed discussion, and commented on the magnitude of the effort to move HLW forward with limited engineering and construction. ORP stated that part of what is being done within the framework is to go through each issue, then clearly and specifically document the evaluation so there is a complete record if future concerns are raised. ORP added that the purpose is to provide a recommendation to senior management that is supported by comprehensive documentation which includes a wide range of potential impacts that could affect the decision and recommendation. ORP stated that that includes DNFSB recommendations, past enforcement actions, control strategies and SDS's. ORP added that an SDS will be done and approved before the decision is made to move forward with conditional resumption of design and construction. ORP emphasized that the sixth and final element of the first box in the graph is under review. ORP stated that there are 35 personnel conducting the design review for HLW, which is being led by ORP, and the team is comprised of personnel from six or seven different organizations, and they are all non-project personnel.

# Low Activity Waste Facility (LAW)

Significant Past Accomplishments - ORP provided an update on the status of the thermal catalytic oxidizer (TCO). The purchase order was issued for the TCO and ammonia skid, and Bechtel has a team embedded at the Ionics plant in Denver, Colorado. ORP provided Ecology a photo showing a part of the Ionics warehouse and the TCO and ammonia skid components. ORP stated that the team is inspecting all the paperwork and comparing it with the equipment components to determine what can or cannot be used. Following that inspection, a firm schedule for manufacturing the unit will be established. Ecology asked about the time frame for finalizing the inspection and establishing a schedule. ORP responded that it has been projected to take about two months.

ORP reported that there are about 63 personnel working on the second construction shift, consisting mainly of electricians and pipefitters. The second shift is concentrating in the -21 and up levels, with the goal to finish out those areas. The electricians are working on the cable tray finish out, and the pipefitters are finishing up the last bits and pieces. Hydrotesting is being done, and there is also scaffold support for both the day and night shift. ORP noted that a lot of the work on the second shift is work that would disrupt the day shift work. Large areas need to be isolated for the hydrotesting, and areas have to be red-taped when scaffolding is being built.

# **Balance of Facilities (BOF)**

<u>Significant Past Accomplishments</u> - ORP stated that the excavation was completed for the standby diesel generator building, and construction on the building has started. ORP noted that the standby diesel generator has been procured for some time, and it is not the emergency safety class power generator.

<u>Significant Planned Actions in the Next Six Months</u> - ORP stated that the physical construction of the chiller compressor plant has been complete for some time, and paperwork issues are being worked through. During confirmation of calculations, which were done earlier in the year, the need was identified for a couple more supports for some of the new construction of facilities. Those supports have been installed.

ORP provided an explanation for the poor schedule performance of 0.68 for the month of July 2013. The original FY13 budget for LAW, BOF and LAB (LBL) was reduced after it became apparent all the funding would not be available. Then the replan was implemented in the fall of 2012, but the funding for the replan via the reprogramming of funds from PT/HLW to LBL did not become available until June 2013. Actions were taken to scale back activities to ensure that a deficit spending situation did not occur. ORP stated that with the outlook for funding and the likelihood of another reprogram effort, the activities under the budget planned for FY14 are being scaled back to avoid another deficit spending situation and to ensure continuity of work progress. ORP stated that going into FY14, there is a \$70 million shortfall, which will create a substantial schedule variance going forward for a while.

Ecology asked if ORP will be maintaining the same priorities and taking longer to do the work due to lack of funding, or if there is a potential to change priorities and restack the work that is done. ORP responded that the work priorities will depend on which area the money is directed, and if the money goes into dictated buckets, the money cannot be moved outside those buckets and reprioritized to different areas. ORP stated that the ability to be flexible with moving the funding to different control points is dependent on what Congress appropriates, and the current planning is to the FY12 continuing resolution numbers. ORP noted that the goal is to maintain a stable work force. ORP stated that within LBL, the priorities are being maintained, and rather than extend the length to complete the priorities, certain activities will be stopped that can more easily be turned on or off.

# **Analytical Laboratory (LAB)**

ORP stated that there won't be a lot in the way of significant accomplishments in the next several months. ORP added that the LAB is on track to complete construction by the middle of FY14. Large amounts of electrical cabling have been pulled through the facility, and bulk installation of commodities is nearing completion. ORP stated that the key focus is completion of the repairs to the RLD vessels. The physical work on RLD vessel 165 has been completed, with a few items left to complete. Work is under way on RLD vessel 163, with a couple significant pieces of work to be done, and then the emphasis will be on RLD vessel 164. ORP noted that RLD 164 is the primary work front, and the engineering group has been working closely with the subcontractor to disposition what needs to be done for each weld and to ensure all the quality documentation is lined up when the welds are completed.

Ecology asked if the vessel welds will be completed by the planned December 2013 time frame. ORP responded that the December time frame is still on track. ORP added that there is a concern that the disposition of the welds tends to be driving the schedule to the right, but in some cases the scope is being reduced as the specifics of each weld is dispositioned. ORP stated that it has requested a level 5 schedule from Bechtel after discussions with the contractor regarding RLD 164 are completed. The schedule will start at the current point and go through N-stamping the vessels. ORP indicated that completion of the physical work on the vessels should be completed in the November 2013 time frame, and the paperwork is a major portion of getting to N-stamping the vessels. Ecology suggested involvement with the schedule for tracking purposes and to be able to reduce the time for closing out the vessels. ORP stated that when it is satisfied that the schedule hits the key points, a copy will be provided to Ecology. ORP noted that the key points include physical work complete, recertification tests complete, and N-stamp on the vessels.

# 4.0 Key Documents List

An updated ORP key documents list was provided. ORP noted that the SST dome deflection surveys were submitted to Ecology this month, and the concrete dome samples from the C-107 plug were submitted to Ecology in May 2013. ORP stated that a response will be needed from Ecology regarding the dome deflection surveys submittal since it is a milestone (M-045-91E). ORP added that the C-107 plug submittal is associated with a target date and does not require Ecology acceptance and approval, but Ecology comments would be accepted. ORP stated that the hose-in-hose (HIH) management plan will be formalized, and a TPA change package will be submitted to make the HIH plan a primary document.

# 5.0 Upcoming Meetings

The October 2013 ORP TPA project managers monthly meeting is tentatively scheduled for Tuesday, October 22, 2013 from 9:00-11:30 a.m. in ORP room 1200. Ecology has indicated that several key staff members may be out this day for training. ORP and Ecology need to discuss other meeting arrangements, if needed.

Attachment A: Agenda, AR List, Agreement, Issues and Actions
(5 pages including this cover sheet)

# ORP TPA September Project Managers' Monthly Meeting Tuesday, September 24, 2013 2440 Stevens Center Richland, Washington Room 1600, 9:00AM-11:30AM

# **AGENDA**

# 1.0 Administrative Items

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

Item Description	TPA/CD Topic Milestone Tie	TPA Admin Record – EDMC File Number	
August 2013 TPA Monthly Summary Report	All	1221294	
August 2013 CD Monthly Summary Report	All	1221293	
RPP-37739, Rev. 1, 241-C-111 TWRWP, Notice Number 2013-07	TWRWP	1221245	
RPP-9937 Revision, 07/10/2013 Meeting Minutes	Primary Document RPP-9937	Handout at 09/24/13 PMM	
RPP-9937 Revision, 08/21/2013 Meeting Minutes	Primary Document RPP-9937	Handout at 09/24/13 PMM	

- 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 October 2013 ORP TPA Project Managers' Monthly meeting is tentatively scheduled for Tuesday, October 22, 2013 from 9:00-11:30AM in ORP Room 1200.
 Ecology has indicated that several key staff members may be out this day for training.
 ORP and ECY need to discuss other meeting arrangements if needed.

# ORP/Ecology TPA and CD Agreements, Issues, and Actions for September 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 Primary Tank Leak: Monitoring of the leak into the annulus of AY-102 continues. The tank is ready to be able to transfer liquids out of the primary tank or from the annulus to the primary. A pumping plan was submitted to Ecology on June 14, 2013 and ORP is proceeding with the planning, procurement and installation of out-of-tank equipment that will be needed to remove the solids from the primary tank of AY-102.
- 3. T-111 and Other Single Shell Tank Level Decreases: 20 tanks have been identified to be evaluated due to declining surface and/or interstitial liquid levels. T-111 evaluation has been completed and determined that based on the available in-tank data, the tank appears to be leaking. 5 other priority tanks have had visual inspections performed and the evaluations will be complete by September 30, 2013. Evaluation of the remaining 14 tanks will be complete no later than January 31, 2014.
- 4. Ecology TPA Project Managers expressed concerns with a line item in the ORP FY2014 budget request for planning for the direct-feed of the WTP Law Facility, and why there has been no discussion with Ecology prior to this being included in the budget request. The ORP and Ecology TPA PMs have agreed to raise this issue to their respective management for discussion/resolution.

# **Actions:**

#	Date Initiated	Action Description	Action Status	Actionee(s)	Date Closed
		Tank Farms	s Actions		
TF-13- 08-01	08/13/13	ORP will discuss ideas for improvement to current structure/processes for tracking TPA scopes of work (internal meeting first then discussion with ECY).	Open.	Jim Lynch	

# ORP/Ecology TPA and CD Agreements, Issues, and Actions for September 2013

#	Date Initiated	Action Description	Action Status	Actionee(s)	Date Closed
TF-13- 06-01	06/25/13	5/13 ECY requests a meeting with ORP PMs to look at issues with the System Plan (unknowns, scheduling/timing of the milestone deliverables/decisions, etc.)  Open. ORP met with ECY on 08/29/13 to discuss the System Plan and would like to meet again with ECY in late September.		DaBrisha Smith / Steve Pfaff	
TF-13- 05-04	05/16/13	ORP will set up a meeting with ECY to discuss direct feed LAW and TF support (with TF/WTP Integration POCs). ECY requests that ORP close with them on this action within the next month.	<b>Open.</b> Combined with Action TF-13-02-04 which was opened on 02/21/13.	Tom Fletcher	
TF-13- 05-03	05/16/13	ORP will set up a meeting with ECY to discuss the SSTs for chemistry effects/changes on liners based on current inspection data.	Open. ORP would like to schedule a meeting with ECY after the intrusion evals are completed (October timeframe).	Jeremy Johnson / Billie Mauss	
TF-13- 05-01	05/14/13	ORP will provide two DQOs to ECY (Mike Barnes) for a Solubility Model and Tank C-112 Hard Heel Dissolution	Open.	Billie Mauss	
TF-13- 04-01	04/23/13	ECY would like to gain a better understanding of the WFD pulse jet mixing change request for implementation of DNFSB 2010-2.	ECY would like to gain a better understanding of the WFD pulse jet mixing change request for The WFD pulse request for The WFD pul		
TF-13- 03-05			<b>Open.</b> ORP provided tables of sampling efforts.	Billie Mauss	
TF-13- 03-04	03/26/13	ECY will review the draft TPA Chg Pckg for M-062-40ZZ and M-062-45ZZ (regarding work on the one-time Supplemental Treatment Technologies Report) provided by ORP and will provide any comments before the Parties agree to finalize any changes.	Open. ORP provided a draft change package for these milestones on 02/12/13. ECY comments were received on 05/09/13. To be included in System Plan discussions described in action item TF-13-06-01.	Steve Pfaff	,

# ORP/Ecology TPA and CD Agreements, Issues, and Actions for September 2013

#	Date Initiated	Action Description	Action Status	Actionee(s)	Date Closed
TF-13- 02-03	02/21/13	ECY would like to meet with ORP to discuss work on the WMA C PA and other options for M-045-61/-62. Update: ORP met with ECY on 03/14/13	<b>Open.</b> Talks between the PMs are ongoing. A TPA change package is being drafted.	Chris Kemp	
TF-12- 10-04	10/16/12	and 05/13/13, 05/16/13, and 06/20/13.  ECY would like to discuss C-107 and considerations for Tc-99 concerns with tank residuals and technology selection.	6/13, and 06/20/13.  discuss C-107 and Tc-99 concerns with tank  Open. On hold until after C-107 RDR sampling has occurred.		
TF-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). This meeting was held on 11/13/12.	Open. ECY will review these results for discussion at a follow-up overall ORP/ECY Comms Improvements meeting.	Jeff Lyon	
		WTP A			
WTP- 13-04-03	04/23/13	ORP will update ECY on a monthly basis on the path forward for the TCO vendor concerns.	Open.	Jeff Bruggeman	
WTP- 13-04-01	04/23/13	ORP will meet with ECY to discuss status on the RVP Wave I and path forward for RVP Wave II.	Open.	Gary Olsen	
WTP- 13-01-01	01/22/13	ORP will get back to ECY on a briefing to discuss the LAB cathodic protection issue.	Open.	Jason Young	

Attachment B: List of Attendees

(2 pages including this coversheet)

ORP	Smon	9-24-13
	. 1	A parameter of the same of the
OZOB PILERO	MSA TOA	373-3285
Billie Mauss	ORP	373-5113
Lathy dianin	ORP	376-3658
Hever Cimon	DD06 1	EAV 962-0853
Steve Afalf Mon	ORP	374-2188
Chr.3 Kens	ORP	509-373-0649
Mike Barnes	Ecology	372-7927
GLYN TREMCHARD	GRP	373-4016
Jeremy Johnson	ORP	376 /866
Dan Marald	V23	372.7988
James Lynch	ORP	376-4170
Darisha Smill	DRP	376-4306
Jeff Luke	WILPS	,
Nancy Uzremblo	Ecology	
Here Killy	WRP50	727-7804
Ellen Mattlin	DOE	376-1900
RPH /debrande	DOE	373-9626
Reed Kaldor	m sa	372-1992
Joni Grindstate	DOE-ORP	376-6200
Chris HarringTon	DOE-ORP	376-1239
walm Asdry	DOE-ORP	438-0455
Jason Young	00€	376-0375
Patrick Laurdon	DOE	376-4205
KAYLIN BURNETT	DOE	B372-0662
DAVID BECKER	Ecotogy	372-7990
Mandy Jones	Eccloqu	372-79/le
Arland Tortoso	Ecology	372-7956
Tracy Gao	Ecology	372-7901
Robbie Biyani	>>	372-7884
Jof Brigan	DOE/WIC	438-0440
Barry Curn	WTP	371-279/
Delmar Nayos	WIP	376 - S166
1		

**Attachment C: Presentation Materials** 

ORP TPA Project Summary (19 pages)

And

ORP Consent Decree Project Summary
(21 pages)

And

Working ORP Key Documents List (2 pages)

(43 pages including this coversheet)

# **FINAL**

# Office of River Protection

Tri-Party Agreement
Monthly Summary Report
September 2013



# Office of River Protection Tri-Party Agreement Milestone Review

# September 2013 (Monthly Summary Report/Project Earned Value Management System reflects July 2013 information)

Page	Topic	Leads	
1	Administrative Items/Milestone Status	James Lynch/Dan McDonald/Jeff Lyon	
2	System Plan; M-62-40	DaBrisha Smith/Jeff Lyon/Dan McDonald	
3	Acquisition of New Facilities; M-90-00; M-47-00	Janet Diediker/Jeff Lyon/Dan McDonald	
3	Supplemental Treatment and Part B Permit Applications; M-62-00, M-62-20, M-62-30, and M-62-45	Steve Pfaff/Jeff Lyon/Dan McDonald	
5	242-A Evaporator Status	Ron Koll/Jeff Lyon	
5	SST Integrity Assurance; M-45-91	Jeremy Johnson/ Jim Alzheimer	
6	In Tank Characterization and Summary	Billie Mauss/Michael Barnes	
9	Tank Operations Contract Overview	Kathy Higgins/Jeff Lyon	
15	Single-Shell Tank Corrective Action; M-45, M-50, and M-60	Chris Kemp/Jeff Lyon	
16	Single-Shell Retrieval and Closure Program TPA Milestones Status; M-45-00 series	Chris Kemp/Jeff Lyon	
18	Tank Waste Retrieval Work Plan Status	Chris Kemp/Jeff Lyon	
19	Tank in Tri-Party Agreement (TPA) Appendix H, Status Tank Retrievals with Individual Milestones	Chris Kemp/Jeff Lyon	
CD	Waste Treatment and Immobilization Plant (WTP) Overall TPA Summary and Milestone Status; *see the August 2013 ORP Consent Decree 08-5085-FVS Monthly Summary Report for WTP facility- specific information	Delmar Noyes/Dan McDonald	

Milestone	Title	Due Date	Completion Date	Status
	Fiscal Year 2013			
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	01/31/2013	1/31/2013	Completed
M-045-21	Submit Sampling and Analysis Plan for 241-TX Tank Farm	03/31/2013	3/11/2013	Completed
M-045-91D- T01	Provide Report on the Concrete Dome Samples from Tank C-107 Plug	05/31/2013	5/21/2013	Completed
M-045-91F- T03	Provide Report on Testing for Ionic Conductivity of SSTs	05/31/2013	5/02/2012	Completed
M-045-56I	Ecology And DOE Agree, At A Minimum, To Meet Yearly (By July)	07/31/2013	06/12/2013	Completed
M-062-01AA	Submit Semi-Annual TPA Project Compliance Report	07/31/2013	07/31/2013	Completed
M-045-91E	Provide SST Farms Dome Deflection Surveys Every Two Years	09/30/2013	09/17/2013	Completed
	Fiscal Year 2014			
M-062-40C	Select a Minimum of Three Scenario's for the System Plan	10/31/2013		On Schedule
M-045-86C	Submit Retrieval Data Report to Ecology for C-104	03/21/2014		On Schedule
M-045-22- T02	Submit Results of Vadose Zone Characterization of 241- U to Ecology	04/30/2014		On Schedule
M-045-86F	Submit Retrieval Data Report to Ecology for C-108	05/01/2014		On Schedule
M-045-86G	Submit Retrieval Data Report to Ecology for C-109	06/04/2014		On Schedule
M-045-22- T03	Submit SX Soil Desiccation/Contaminate Removal Tech Results to Ecology	07/31/2014		On Schedule
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-045-22- T01	Submit Results of Vadose Zone Characterization of 241- TX to Ecology	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
	Fiscal Year 2015			1
M-062-40D	Submit System Plan	10/31/2014		On Schedule
M-062-40ZZ	Submit One Time Tank Waste Supp Treatment Technologies Report		On Schedule	
M-045-91G- T03	Provide AOR Final Doc. for SSTs on 1,000,000 Gallon Tanks	10/31/2014		On Schedule
M-045-91F- T04	Provide Report on 100-Series SSTs as having Leaked in RPP-32681	12/26/2014		On Schedule
M-045-61	Phase 2 RCRA Facility Investigation/Corrective Measures Study	12/31/2014		To Be Missed
M-045-91G- T04	Provide AOR Final Doc. for SSTs on 55,000 Gallon Tanks	01/30/2015		On Schedule

Milestone	Title	Due Date	Completion Date	Status
	Fiscal Year 2015 Continued	i		
M-045-91F- T02	Provide Report of Liner Failures for SSTs	03/31/2015		On Schedule
M-062-45- T01	Comp. Neg's 6-Mo After Last Issuance of System Plan	04/30/2015		On Schedule
M-062-45-ZZ	Negotiate a One Time Supplemental Treatment Selection	04/30/2015		On Schedule
M-062-45- ZZ-A	Convert M-062-31-T01 Thru M-062-34-T01 to Interim Milestones		On Schedule	
M-045-91F	Provide Summary Conclusions Report on Leak Integrity	06/30/2015		On Schedule
M-045-62	Phase 2 Corrective Measures Implementation Work Plan For WMA C  06/30/2015			To Be Missed
M-045-92O	Barrier 3 Design/Monitoring Approval From Ecology	06/30/2015		On Schedule
M-045-91G	Provide Summary Conclusions Report of AOR for SSTs	07/28/2015	-	On Schedule
M-045-56K	Ecology And DOE Agree, At A Minimum, To Meet Yearly (By July)  07/31/2015			On Schedule
M-045-91H	Submit Change Pkg (if necessary) to est. Additional Milestones  07/31/2015		On Schedule	
M-045-82	Submit Comp. Permit Modification Request for Tiers 1,2,3	09/30/2015		To Be Missed

# System Plan

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

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

M-062-45-T01, Every six years, within six months after last revision of the System Plan, negotiate tank waste retrieval sequencing, Due: April 30, 2015, Status: On schedule.

# Significant Past Accomplishments:

ORP met with Ecology on August 29, 2013 to discuss the System Plan 7 uncertainties.

# Significant Planned Actions in the Next 6 Months:

ORP will meet with Ecology in late September 2013 to further discuss System Plan 7 uncertainties and a path forward.

### **Issues:**

System Plan 7 framing sessions are on hold until further discussion with Ecology Program Managers is completed.

# **Acquisition of New Facilities**

M-090-13, Submit CD-1 for Interim Hanford Storage Project and Tri-Party Agreement (TPA) Change Request for CD-2 to Ecology, Due: September 30, 2014, Status: On schedule. Created by TPA Change Control Form M-90-12-02, signed by ORP and Ecology on November 19, 2012, to "Submit to Ecology, a Conceptual Design Report Package (Critical Decision-1) for the Interim Hanford Storage Project (storage of the first two years of Hanford Site Immobilized High-Level Waste from WTP operations) and a TPA Change Request (in accordance with TPA Action Plan Section 12.0) to submit to Ecology, a Preliminary Design Report package (Critical Decision-2)."

M-090-00, Acquire/modify facilities for storage of Immobilized High-Level Waste (IHLW), Due: December 31, 2019, Status: On schedule.

M-047-07, Submit CD-1 for Secondary Liquid Waste Treatment and CR for CD-2 to Ecology, Due September 30, 2014, Status: On schedule. Created by TPA Change Control Form M-47-12-02, signed by ORP and Ecology on November 19, 2012, to "Submit to Ecology, a Conceptual Design Report package (Critical Decision-1) for the Secondary Liquid Waste Treatment Project and a TPA Change Request (in accordance with TPA Action Plan Section 12.0) to submit to Ecology, a Preliminary Design Report package (Critical Decision-2)."

M-047-00, Complete Work Necessary to provide facilities for management of secondary waste from the Waste Treatment and Immobilization Plant (WTP), Due December 31, 2022, Status: On schedule.

# **Significant Past Accomplishments:**

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 the completion of milestones M-047-06 and M-090-11.

# None. Issues: None.

# **Supplemental Treatment and Part B Permit Applications**

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

M-062-45ZZ, Negotiate a one-time supplemental treatment selection, Due: April 30, 2015, Status: On schedule. Negotiations are not yet underway.

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

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

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

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

M-062-45XX, No later than December 31, 2021, the DOE and Ecology shall complete negotiations to establish a mechanism that will apply to resolve future disputes regarding the determinations in M-062-45, paragraphs 4 and 5, Due: December 31, 2021, Status: On schedule.

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

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

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

Significant Past Accomplishments:

None.

Significant Planned Actions in the Next 6 Months:

None.

### Issues:

At the January 2013 TPA Project Manager's Monthly (PMM) meeting, ORP stated DOE and Ecology are currently in discussions to move out the due dates six (6) months for M-062-40ZZ and M-062-45ZZ (current due dates October 31, 2014 and April 30, 2015, respectively).

ORP provided a draft change package for these milestones on February 12, 2013. Ecology provided comments on May 9, 2013. At the July 23, 2013 PMM, ORP stated that meetings were to be scheduled with Ecology management to discuss a path forward. ORP and Ecology management met on August 29, 2013 to continue discussions of a path forward.

# 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 Fiscal Year (FY) 2010 through FY2015 depicted in the following table has been updated based on ORP-11242, *River Protection Project Plan* and ongoing schedule integration efforts.

Fiscal Year	Campaign No.	Feed Source	Slurry Tank	Comments
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.
FY10	10-02	AW-106	AW-106	Campaign 10-02 was an acceleration of previously planned Campaign 11-01.
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	No campaign conducted in FY12 due to ongoing 2  NA Tank Farm facility upgrades and revision to the 24  Documented Safety Analysis.	
FY13	NA	NA	No campaigns to be conducted in FY13 due to ong NA and Tank Farm facility upgrades and revision to the Documented Safety Analysis.	
FY14	14-01	AP-107	AP-107 Estimated start late November 2013. Requires two achieve waste volume reduction.	
FY14	14-02	AW-106	AP-107	Estimated start late February 2014.
FY14	14-03	AZ-102	AP-103 Estimated start June 2014.	
FY15	15-01	AW-106	AP-103 Estimated start October 2014.	
FY15	15-02	AZ-102	AP-103	Estimated start March 2015.

FY = fiscal year.

NA = not applicable.

# **SST Integrity Assurance**

M-045-91E, Provide to Ecology a compilation of the single-shell tank (SST) farms dome deflection surveys every two years, beginning September 30, 2013, Due: September 30, 2013, Status: Completed. Transmitted to Ecology via ORP Letter 13-TF-0066 on September 17, 2013.

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: October 31, 2014, Status: On schedule.

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

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

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

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

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

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

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

M-045-91I, Provide to Ecology an Independent, Qualified, Registered Professional Engineer (IQRPE) certification of SSTs structural integrity for the remainder of the mission, or for such time as the IQRPE believes he/she can reasonably certify, Due: September 30, 2018, Status: On schedule.

Significant Past Accomplishments:

On August 23, 2013, WRPS transmitted *Dome Survey Report for Hanford Single-Shell Tanks*, RPP-RPT-55202, to ORP. ORP reviewed this report and delivered RPP-RPT-55202 to Ecology on September 17, 2013 via ORP Letter 13-TF-0066, completing TPA Milestone M-045-91E.

Significant Planned Actions in the Next 6 Months: None.

Issues:

None.

# In Tank Characterization and Summary

For the period from August 1 - August 31, 2013:

# Accomplishments:

- Completed RPP-PLAN-55529, Rev. 1, Grab Sampling and Analysis Plan for the 241-AY-102A Leak-Detection Pit.
- Completed RPP-PLAN-55529, Rev. 0, Grab Sampling and Analysis Plan for the 241-AY-102A Leak-Detection Pit.

- Completed RPP-RPT-47306, Rev. 1, Waste Type Analysis for Aluminum Leachability Estimates of All Non-Retrieved Hanford Tank Wastes.
- Completed grab sampling of the 241-AY-102A annulus leak detection pit on August 28, 2013, per RPP-PLAN-55529, Rev. 1, Grab Sampling and Analysis Plan for the 241-AY-102A Leak Detection Pit. Three samples and one field blank were collected and delivered to the laboratory on 8/28/2013.
- Completed grab sampling of the 241-AY-102A annulus leak detection pit on August 6, 2013, per RPP-PLAN-55529, Rev. 0, Grab Sampling and Analysis Plan for the 241-AY-102A Leak Detection Pit. Three samples and one field blank were collected and delivered to the laboratory on 8/6/2013.
- RPP-RPT-55185, Rev. 1, Final Report for Tank 241-C-104 Waste Solid Samples in Support of Tank Closure was released on August 1, 2013.
- RPP-RPT-55492, Rev. 0, Final Report for Tank 241-C-109 Waste Solid Samples in Support of Tank Closure was released on August 8, 2013.
- RPP-RPT-55731, Rev. 0, Final Report for Tank 241-AY-101 Grab Sampling and Characterization of Double-Shell Tank Supernate and Solids was released on August 20, 2013.
- RPP-RPT-55549, Rev. 0, Final Report for Adsorbent Samples from the Stored Pump for AY-102A Leak-Detection Pit, June 2013 was released on August 22, 2013.
- RPP-RPT-55749, Rev. 0, Final Report for Tank 241-AY-102A Annulus Leak-Detection Pit Liquid Grab Samples, June 2013 was released on August 22, 2013.

# Planned Action within the next 6 Months:

# Tank sampling

- Tank 241-C-112 grab sampling during hard heel dissolution is currently scheduled for September/October 2013.
- Tank 241-C-107 Off-Riser Sampling System sampling is currently scheduled for January 2014.
- Tank 241-C-110 closure sampling using fold track operations to push samples to a clam shell sampler is scheduled for October/November 2013.
- Tank 241-AN-106 grab sampling for chemistry control is currently scheduled for September/October 2013.

# **Best-Basis Inventory Updates**

The following tanks have been identified for updates in FY13 Quarter 4. The BBI updates will be released in September 2013.

- 241-AN-101
- 241-AN-106
- 241-AY-101
- 241-AY-102
- 241-AZ-101
- 241-C-101
- 241-C-104
- 241-C-107

# Data Quality Objectives

- A data quality objective (DQO) on a solubility model is due to be released in September 2013.
- A revision to the tank farms waste compatibility program DQO is due to be released in September 2013.
- A data quality objective (DQO) on a cone penetrometer is due to be released in September/October 2013.

COTTO	
Issues	

None.

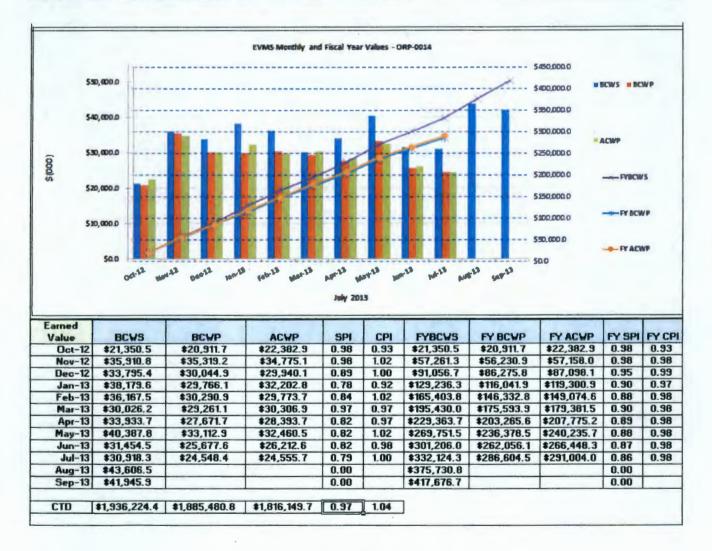
#### TANK OPERATIONS CONTRACT OVERVIEW

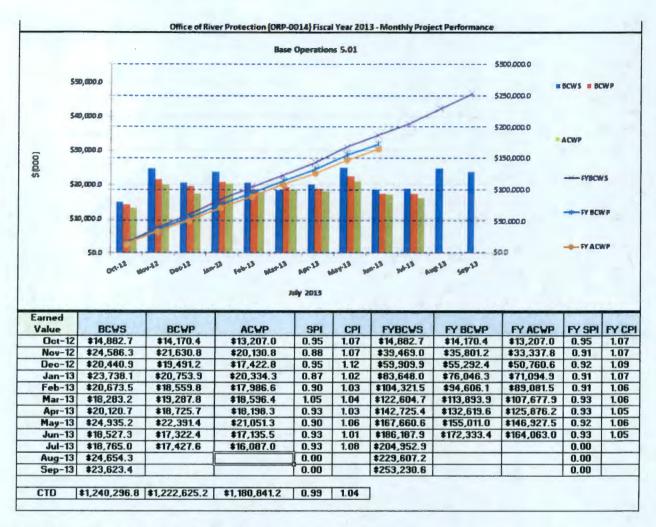
#### **Project Performance**

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

As of July 2013, WRPS TOC has worked 77 days without a Lost Time Workday Injury and 7 days since the last Recordable case. There were no Days Away, Restricted, or Transferred (DART) cases and one Recordable case in July.

	BCWS	BCWP	ACWP	SV	CV	SPI	CPI	BAC	EAC	VAC
CM	30,918.3	24,548.4	24,555.7	(6,369.9)	(7.3)	8.79	1.00			
FYTO	332,124.3	286,604.5	291,004.0	(45,519.8)	(4,399.5)	0.88	0.98	411,560.1	373,606.4	37,953.7
CTD	1,936,224.4	1,885,480.8	1,816,149.7	(50,743.6)	69,331.1	0.97	1.00	3,264,614.8	3,195,092.4	69,522.4
Green s	ided cells indica haded cells ind aded indicates	icate a SPI/CPI	between .90 a							





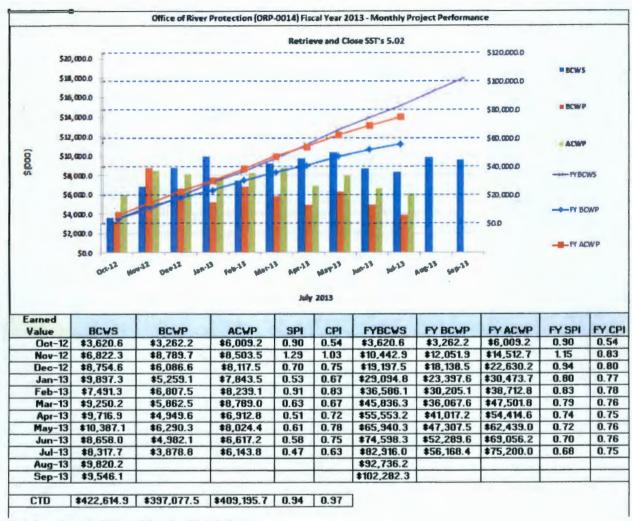
#### Base Operations and Tank Farm Projects

The current month unfavorable schedule variance (SV) of (\$1,337.4K) is primarily due to:

- Tank Chemistry Testing and Analysis delays associated with laboratory procurement of Ammonia cover gas causing a delay of 3 months to testing and reassignment of pitting corrosion testing due to reassignment of resources to DST AY-102 liner corrosion analysis.
- AY-102 corrosion probe coupon assembly removal due to delaying startup due to sequestration.
- Deferral of DST AN-103 Ultrasonic testing into fiscal year 2014 due to sequestration impacts
- NDE Equipment Storage and Support due to camera design and fabrication delays driven by additional time needed to finalize the project specification document.
- 242-A Campaign delay which is now scheduled for November
- DST Infrastructure Upgrades put on hold due to continuing resolution.

The current month favorable cost variance (CV) of \$1,340K is primarily due to the following:

- Tank Waste Sampling Management efficiencies realized during the grab sampling of AY-102 Leak Detection Pit. The sampling plan and equipment used was left in place from the previous sample.
- 222-S Equipment costs or actuals not yet posted.



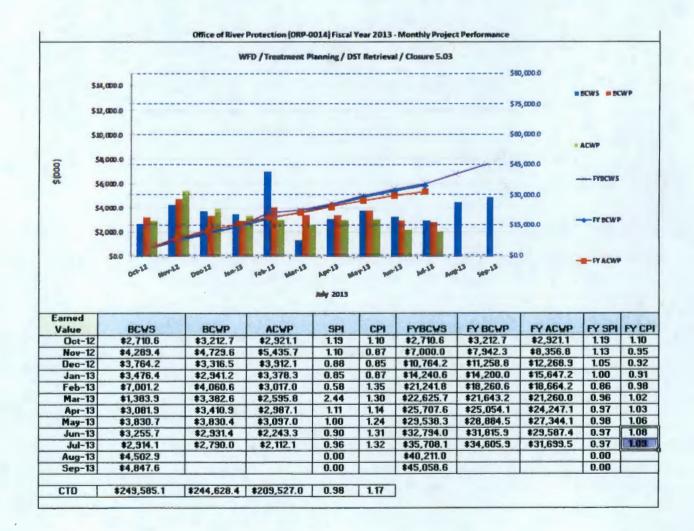
Retrieval and Close Single-Shell Tanks

The current month unfavorable schedule variance (SV) of (\$4,439K) is due to

- Retrieval design delays of the hard heel retrieval system in C-111, as the retrieval strategy
  has changed in response to DST deep sludge safety basis issues and resource availability
  issues.
- Changes in strategy for the C-112 mechanical hard heel retrieval technology. The C-112
  hard heel retrieval activities are being realigned to accelerate caustic dissolution and defer the
  high-pressure Extended Reach Sluicing System as a result of the deep bed sludge safety basis
  issue and resource availability.
- Retrieval operations delays in starting waste retrieval for C-102, as operations have been realigned to coincide with the completion of C-112 hard heel retrieval in fiscal year 2014.
- 5-month delayed starting waste retrieval for C-102, as operations have been realigned to coincide with the completion of C-112 hard heel retrieval in fiscal year 2014.
- 3-week delay to the start of fieldwork for the six HIHTLs to be removed this year, as
  resources were unavailable to support shield plate and hose barn removals.

The current month unfavorable cost variance (CV) of (\$2,265K) is due to

- Longer retrieval operations then planned for C-101, causing high costs.
- Higher subcontract and labor costs need to resolve issues with the MARS-V prior to field
  deployment, including resolving eductor plugging, the safety instrument system, cross-flow
  filter systems, temperature monitoring, and hydraulic power unit corrosion. Management
  oversight has increased to resolve technical issues in support of project demobilization and
  closeout.
- Increased radiological control and engineering resources needed to complete the contract actions associated with the C-110 retrieval system installation activities.
- Unexpected labor costs for troubleshooting the AN-106 pump leak that occurred during the C-107 hard heel retrieval.
- Unanticipated repairs for a leak in the AN-106 pump during start-up of C-107 hard heel removal operations, which required crews to perform replacement of the siphon hose, resulting in additional labor hours charged.
- Unanticipated delays to the Interim Barrier Characterization due to high temperatures during demobilization requiring more time in the field.



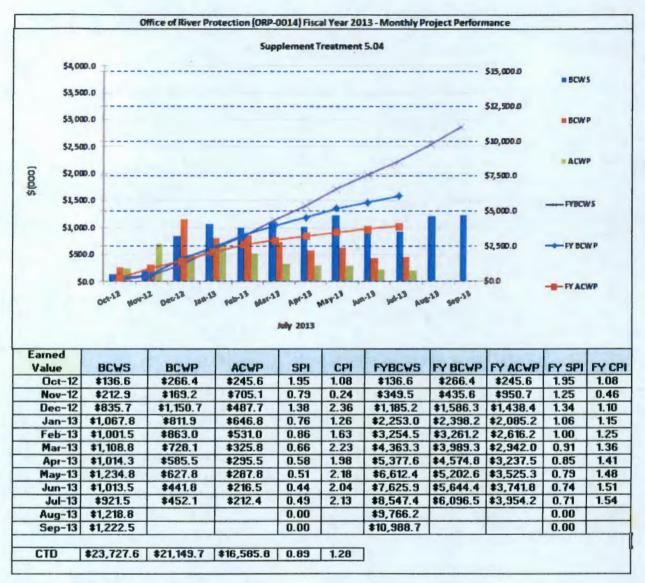
#### Waste Feed Delivery/Treatment/Double-Shell Tank Retrieval Closure

The current month unfavorable schedule variance (SV) of (\$124K) is due to:

- Delaying plans to start construction of the AY/AZ ventilation upgrades at this time, design of the AY/AZ ventilation upgrade was completed in January 2013, but initiation of any associated procurement, construction, and safety basis activities requires DOE-ORP approval.
- The FY 2013 Operational Optimization workscope for Waste Feed Delivery Mixing and Sampling is not being performed and has been deferred to FY 2014 as a result of continuing resolution funding impacts. The full-scale demonstration workscope to support the full-scale waste feed delivery mixing demonstration, is being delayed due to the changed condition of tank AY-102, which was planned to be utilized for the demonstration. Due to tank leaking issues this is not feasible, and the full-scale demonstration workscope will be deferred until a new path forward is defined.
- Not starting the AP Farm infrastructure design due to funding constraints. This scope will be deferred in a company-wide BCR (RPP-13-071).

The current month favorable cost variance (CV) of \$678K is due to:

- WTP Support Program Development of the direct feed high-level waste business case scope that was being performed under an advanced work authorization.
- RPP [River Protection Project] System Plan completing the comment resolution of the draft document activity in the month, while the costs were incurred in previous periods.
- WFD System Performance efficiencies within the optional scaled performance test.
   Remaining simulant from prior testing was utilized so less simulant was needed to be procured.



#### Supplemental Treatment

The current month unfavorable schedule variance (SV) of (\$469.5K) is due to:

The ramp down of the one-time report activities as a result of sequestration.

The current month favorable cost variance (CV) of \$239K is due to:

Technetium (Tc) removal and low temperature waste form maturation subcontract activities.
 A significant portion of the Tc and low temperature waste form subcontract workscope is being performed by SRNL under an inter entity work order agreement.

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

M-045-22, Review M-045-22-T03 Report and Determine Path Forward, Due: September 30, 2014, based on M-045-20 TPA Change Package M-45-12-05, Status: On schedule. This ORP/Ecology decision point will determine whether to continue with soil desiccation/contaminant removal testing and other interim measures, and if the remaining work in milestone M-045-92 should be modified. ORP submitted TPA change package M-45-12-05 adding dates for M-045-22 and its targets with the revised work plan via letter 13-TF-0014, The U.S. Department of Energy, Office of River Protection (ORP) submittal of Revised 200 West Area Tank Farms Interim Measures Investigation Work Plan in Completion of Hanford Federal Facilities Agreement and Consent Order (HFFACO) Milestone M-045-20. Ecology approved the TPA change package on April 1, 2013.

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

M-045-22-T02, Submit Results of Vadose Zone Characterization of 241-U to Ecology, Due: April 30, 2014, based on M-045-20 TPA Change Package M-45-12-05, Status: On schedule.

M-045-22-T03, Submit SX Soil Desiccation/Contaminate Removal Tech Results to Ecology, Due: July 31, 2014, based on M-045-20 TPA Change Package M-45-12-05, Status: On schedule.

M-045-56I, Complete Implementation of Agreed to Interim Measures, Due: July 31, 2013, Status: Completed June 12, 2013. The annual meeting was held on June 12, 2013; meeting notes have been entered into the TPA Administrative Record.

M-045-59, Control surface water infiltration pathways as needed to control or significantly reduce the likelihood of migration of subsurface contamination to groundwater at the SST Waste Management Areas (WMA) (pending the 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: December 31, 2014, Status: To be missed. Please see issues.

M-045-62, Submit to Ecology for review and approval as an Agreement primary document a Phase 2 Corrective Measures Study Implementation Plan for WMA C, Due: June 30, 2015, Status: To be missed. Please see issues.

M-045-92, DOE and Ecology will establish selection criteria for installation of additional interim barriers at additional WMAs (beyond the T-106 and TY barriers), Due: September 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: October 31, 2015, Status: On schedule. The decision to move forward with construction/design of additional barriers is dependent on discussions per M-045-22.

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

#### Significant Past Accomplishments:

- Automated data collection systems for T-Farm and TY Farm interim barrier monitoring continue gathering data.
- The test site was selected for the pore water extraction test south of SX farm under the M-045-20 work plan, and direct-push work to place the extraction and monitoring wells is underway.
- Direct push of four boreholes near the C-200 tanks has been completed and deep electrodes placed for resistivity evaluations. Collection of resistivity data has been completed.
- Data collection in U Farm for electrical resistivity characterization was completed. Data analysis and reporting will be completed in FY2014.
- Direct-push field work in TX Farm continues under the M-045-20 work plan and M-045-21 sampling and analysis plan.

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

- Complete direct-push field work in TX Farm under the M-045-20 work plan.
- Complete analysis and reporting of the electrical resistivity data collected in U Farm under the M-045-20 work plan.
- Complete analysis and reporting of electrical resistivity data collected near the C-200 tanks per the WMA C Phase 2 Resource Conservation and Recovery Act Field Investigation/Corrective Measures Study Work Plan.
- Complete the field set up and equipment design for the SX farm pore water extraction proof
  of principle test under the M-045-20 work plan.

# SST Retrieval and Closure Program

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

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

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

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

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

M-045-00, Complete Closure of all Single-Shell Tank Farms, Due: January 31, 2043, Status: On schedule.

M-045-86, Submit retrieval data report to Ecology for 19 tanks retrieved, Due: To be determined (12 months after retrieval certification), Status: On schedule. The Retrieval Data Report for C-104 is due March 21, 2014. The Retrieval Data Report for C-108 is due May 1, 2014. The Retrieval Data Report for C-109 is due June 4, 2014.

#### Significant Past Accomplishments:

- Completed post-retrieval sampling, analyzing, and reporting of results for tank C-108 in support of the M-045-86 retrieval data report.
- Completed post-retrieval spectral gamma logging of drywells near tank C-108 in support of the M-045-86 retrieval data report.
- Completed post-retrieval sampling analysis and reporting of results for tank C-104 in support of the M-045-86 retrieval data report.
- Completed post-retrieval sampling, analysis, and reporting of tank C-109 in support of the M-045-86 retrieval data report.
- See discussions above and related discussions in Consent Decree report.
- Initiate numeric modeling for the WMA C performance assessment.

# Significant Planned Activities in the Next 6 Months:

- Develop a retrieval data report for tank C-104
- Develop a retrieval data report for C-109
- Issue a retrieval data report for C-108
- See discussions above and related discussions in Consent Decree report.

#### **Issues:**

The WMA-C performance assessment (PA) was not funded at the beginning of FY2013. ORP has reported previously that the WMA-C PA would need to be funded by March 31, 2013, in order to maintain the milestone schedule. Although funding of the WMA-C PA has been identified to begin work in FY2013, TPA milestones M-045-61, M-045-62, and M-045-82 are still to be missed.

ORP began discussions with Ecology about a TPA project manager-level agreement to determine an alternative path forward for milestones M-045-61 and M-045-62 on March 14, 2013. ORP and Ecology have continued to meet (most recently on June 20, 2013) to develop a path forward for these milestones.

ORP and Ecology will meet separately to discuss TPA milestone M-045-82 for the Tier 1, 2, and 3 WMA-C SST closure submittal. ORP and Ecology will discuss impacts to this work scope and the potential for a Tier 1 submittal.

# Tank Waste Retrieval Work Plan Status

Tank	TWRWP	Expected Revisions	Retrieval Technology	Second Technology	Third Technology
C-101	RPP-22520, Rev. 7	Complete	Modified Sluicing with ERSS	High-Pressure Water with ERSS	-
C-102	RPP-22393, Rev. 6A	In Process	Modified Sluicing with ERSS	High-Pressure Water with ERSS	-
C-104	RPP-22393, Rev. 6A	Complete	Modified Sluicing	Chemical Dissolution, retrieval complete per 13-TF-0018	-
C-105	RPP-22520, Rev. 7	Complete	MARS-V	MARS-V-High Pressure Water	-
C-107	RPP-22393, Rev. 6A	Complete	MARS-S	MARS-S -High Pressure Water	-
C-108	RPP-22393, Rev. 6A	Complete	Modified Sluicing	Chemical Dissolution, retrieval complete per 13-TF-0025	-
C-109	RPP-21895, Rev. 5	Complete	Modified Sluicing	Chemical Dissolution, retrieval complete per 13-TF-0037	-
C-110	RPP-33116, Rev. 2	Complete	Modified Sluicing	Mechanical Waste Conditioning	High Pressure Water
C-111	RPP-37739, Rev. 1	In Process	Modified Sluicing	High pressure water with ERSS	Chemical Dissolution with ERSS
C-112	RPP-22393, Rev. 6A	In Process	Modified Sluicing	Chemical Dissolution	-

ERSS = Extended Reach Sluicer System.

MARS = Mobile Arm Retrieval System.

TWRWP = Tank Waste Retrieval Work Plan.

# Significant Accomplishments:

ORP and Ecology approved Modification Notice 2013-07 for TWRWP RPP-37739 allowing the use of second and third retrieval technologies.

# Significant Planned Activities in the Next 6 Months:

None.

Issues:

None.

# Tank in Appendix H. Status - Single Shell Waste Retrieval Criteria Tank 241-C-106

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

None.

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

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

#### **Issues:**

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

#### Tank Retrievals with Individual Milestones

#### Tank 241-A-103

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

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

#### Significant Past Accomplishments:

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

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

None.

#### **Issues:**

None.

#### Tank 241-S-112

M-045-13, Interim Completion of Tank S-112 SST Waste Retrieval and Closure

**Demonstration Project,** Due: To be determined (in accordance with M-045-84 or M-045-85), Status: On schedule.

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

#### Significant Past Accomplishments:

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

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

None.

#### **Issues:**

None.

# **FINAL**

# Office of River Protection Consent Decree 08-5085-FVS

Monthly Summary Report

#### Office of River Protection

# Consent Decree 08-5085-FVS Monthly Summary Report

# September 2013 (Monthly Summary Report/Project Earned Value Management System reflects July 2013 information)

Page	Topic	Leads
1	Statistics/Status	James Lynch/Dan McDonald/Jeff Lyon
2	SST Retrieval and Closure - D-00B-01, -02, -03, -04	Chris Kemp/Jeff Lyon
3	Tank Waste Retrieval Work Plan (TWRWP) Status  - Consent Decree Appendix C	Chris Kemp/Jeff Lyon
4	SST Retrieval Monthly and Fiscal Year Earned Value Management System Data	Kathy Higgins/Jeff Lyon
6	WTP - Immobilization Plant Project - D-00A-06, D-00A-17, D-00A-01	Delmar Noyes/Dan McDonald
9	WTP Pretreatment (PT) Facility - D-00A-18, -19, -13, -14, -15, 16	Wahed Abdul/Dan McDonald
12	High-Level Waste (HLW) Facility  D-00A-20, -21, 02, 03	Wahed Abdul/Dan McDonald
15	Low-Activity Waste (LAW) Facility  D-00A-07, -08, -09	Jeff Bruggeman/Dan McDonald
17	Balance of Facilities (BOF)  – D-00A-12	I Was David
19	Analytical Laboratory (LAB)  — D-00A-005	Jason Young/Dan McDonald

Milestone	lestone Title		Completion Date	Status
	Fiscal Year 201	3		
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
	Fiscal Year 201	4		
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	08/24/2011	Completed
	Fiscal Year 201	5		
D-00A-07	LAW Facility Construction Substantially Complete	12/31/2014		On-going*
D-00A-19 Complete EL. 98' Concrete Floor Slab Placements in PT Facility		12/31/2014		On-going

DOE = U.S. Department of Energy.

Fac. = Facility.

LAB = Analytical Laboratory.

PT = Pretreatment.

WMA-C = C-Farm Waste Management Area.

#### **Consent Decree Reports/Reviews**

D-00C-01 series, Submit to State of Washington and State of Oregon Semi-Annual Report, Due: Semi-Annually – January 31 and July 31 of each year. Status: On-going.

D-00C-02 series, Submit to State of Washington and State of Oregon Monthly Summary Reports, Due: End of Each Month, Status: On-going.

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

<sup>\*</sup>On June 6, 2013, DOE notified the State of Washington and State of Oregon that a serious risk has arisen that DOE may be unable to meet Consent Decree Milestone B-1 for tanks C-102 and C-105.

<sup>\*\*</sup>On June 6, 2013, DOE notified the State of Washington and State of Oregon that a serious risk has arisen that DOE may be unable to meet Consent Decree Milestone A-7.

# Single-Shell Tank Retrieval Program

D-00B-01, Complete Retrieval of Tank Wastes from 10 Remaining single-shell tanks (SST) in WMA-C, Due: September 30, 2014, Status: On-going.\* Please see issues below.

**D-00B-01A thru J, Submit Tank Retrieval Complete Certification**, Due: To be determined, Pursuant to Section IV-B-5 of the Consent Decree, U.S. Department of Energy (DOE) must submit to the Washington State of Ecology (Ecology) a written certification that DOE has completed retrieval of a tank in accordance with the requirements of Appendix C, Part 1, of the Consent Decree. Completed for SST C-104 on March 21, 2013, via DOE Office of River Protection (ORP) letter 13-TF-0018. Completed for SST C-108 on May 1, 2013, via ORP letter 13-TF-0025. Completed for SST C-109 on June 4, 2013, via ORP letter 13-TF-0037.

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

D-00B-03, Initiate Startup of Retrieval in At Least five of nine SSTs in D-00B-02, Due: December 31, 2017, Status: On-going.

D-00B-04, Complete Retrieval of Tank Wastes from the nine SSTs in D-00B-02, Due: September 30, 2022, Status: On-going.

D-00B-04A thru I, Submit Tank Retrieval Complete Certification, Due: To be determined.

# **Significant Past Accomplishments:**

- Operated the C-101 retrieval system, continued with high pressure water and modified sluicing retrieval activities
- Initiated installation of long length-equipment for the Mobile Arm Retrieval System-Vacuum (MARS-V) at C-105, completing installation of the turntable and platform
- Secured retrieval sluicing via the Mobile Arm Retrieval System (MARS-S) at C-107 due to a failed slurry pump, currently at approximately 90 percent of waste volume retrieved to AN-106 double-shell tank
- Completed readiness activities and startup of the C-110 fold track and associated support equipment
- Continued with modification and installation of equipment for C-112 hard heel removal.

# Significant Planned Activities in the Next 6 Months:

- Complete C-101 hard heel retrieval
- Complete installation of the MARS-V in C-105
- Complete replacement of the C-107 slurry pump
- Submit retrieval data report for C-108 to Ecology
- Begin start-up of hard heel retrieval in C-110 using the fold track
- Begin start-up of hard heel retrieval in C-112 using caustic dissolution.

**Issues:** \*On June 6, 2013, DOE notified the State of Washington and State of Oregon that a serious risk has arisen that DOE may be unable to meet Consent Decree Milestone B-1 for tanks C-102 and C-105.

#### Tank Waste Retrieval Work Plan Status

Tank	TWRWP	Expected Revisions	Retrieval Technology	Second Technology	Third Technology
C-101	RPP-22520, Rev. 7	Complete	Modified Sluicing with ERSS	High-Pressure Water with ERSS	-
C-102	RPP-22393, Rev. 6A	In Process	Modified Sluicing with ERSS	High-Pressure Water with ERSS	-
C-104	RPP-22393, Rev. 6A	Complete	Modified Sluicing	Chemical Dissolution, retrieval complete per 13-TF-0018	-
C-105	RPP-22520, Rev. 7	Complete	MARS-V	MARS-V-High Pressure Water	-
C-107	RPP-22393, Rev. 6A	Complete	MARS-S	MARS-S-High Pressure Water	-
C-108	RPP-22393, Rev. 6A	Complete	Modified Sluicing	Chemical Dissolution, retrieval complete per 13-TF-0025	_
C-109	RPP-21895, Rev. 5	Complete	Modified Sluicing	Chemical Dissolution, retrieval complete per 13-TF-0037	
C-110	RPP-33116, Rev. 2	Complete	Modified Sluicing	Mechanical Waste Conditioning	High Pressure Water
C-111	RPP-37739, Rev. 1	In Process	Modified Sluicing	High pressure water with ERSS	Chemical Dissolution with ERSS
C-112	RPP-22393, Rev. 6A	In Process	Modified Sluicing	Chemical Dissolution	-

ERSS = Extended Reach Sluicing System.

MARS = Mobile Arm Retrieval System.

TWRWP = Tank Waste Retrieval Work Plan.

#### Significant Past Accomplishments:

ORP and Ecology approved Modification Notice 2013-07 for Tank Waste Retrieval Work Plan RPP-37739 allowing the use of second and third retrieval technologies.

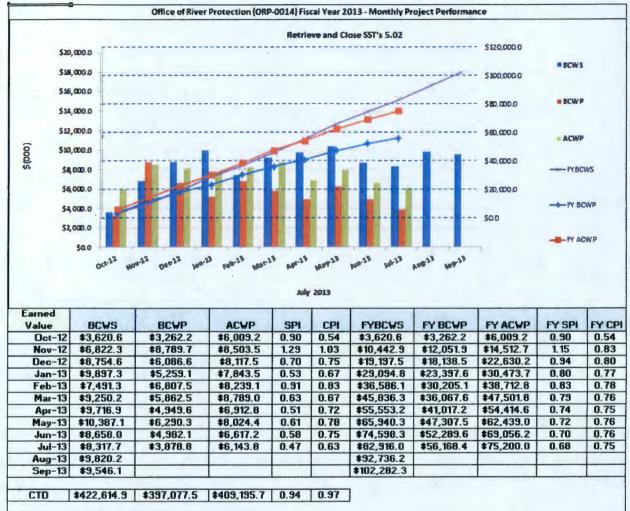
# Significant Planned Activities in the Next 6 Months:

None.

#### **Issues:**

None.

# SST Retrieval Monthly and Fiscal Year Earned Value Management System Data



#### Retrieval and Close Single-Shell Tanks

Schedule Variance of (\$4,439K):

The unfavorable schedule variance is primarily due to:

- Retrieval design delays of the hard heel retrieval system in C-111, as the retrieval strategy has changed in response to double-shell tank deep sludge safety basis issues and resource availability issues.
- Changes in strategy for the C-112 mechanical hard heel retrieval technology. The C-112
  hard heel retrieval activities are being realigned to accelerate caustic dissolution and defer
  the high-pressure Extended Reach Sluicing System as a result of the deep bed sludge
  safety basis issue and resource availability.
- Five-month delayed starting waste retrieval for C-102, as operations have been realigned to coincide with the completion of C-112 hard heel retrieval in fiscal year 2014.
- Three-week delay to the start of fieldwork for the six hose-in-hose transfer lines to be removed this year, as resources were unavailable to support shield plate and hose barn removals.

#### Cost Variance of (\$2,265K):

The unfavorable cost variance is primarily due to:

- Longer retrieval operations then planned for C-101, causing high costs.
- Higher subcontract and labor costs need to resolve issues with the MARS-V prior to field deployment, including resolving eductor plugging, the safety instrument system, cross-flow filter systems, temperature monitoring, and hydraulic power unit corrosion. Management oversight has increased to resolve technical issues in support of project demobilization and closeout.
- Increased radiological control and engineering resources needed to complete the contract actions associated with the C-110 retrieval system installation activities.
- Unexpected labor costs for troubleshooting the AN-106 pump leak that occurred during the C-107 hard heel retrieval.
- Unanticipated repairs for a leak in the AN-106 pump during start-up of C-107 hard heel removal operations, which required crews to perform replacement of the siphon hose, resulting in additional labor hours charged.
- Unanticipated delays to the Interim Barrier Characterization due to high temperatures during demobilization requiring more time in the field.

**Waste Treatment and Immobilization Plant Project** 

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

The Waste Treatment and Immobilization Plant (WTP) Project currently employs approximately 2,069 full-time equivalent contractor (Bechtel National, Inc. [BNI]) and subcontractor personnel. This includes 562 craft, 468 non-manual, and 118 subcontractor full-time equivalent personnel working at the WTP construction site (all facilities).

As of July 2013, the combined Low-Activity Waste (LAW) Facility, Analytical Laboratory (LAB), and Balance of Facilities (BOF) were 63-percent complete, design and engineering was 78-percent complete, procurement was 83-percent complete, construction was 72-percent complete, and startup and commissioning was 11-percent complete.

In September 2012, the baseline change proposal that implemented the LAW, BOF, and LAB (collectively LBL) Replan was incorporated into the project over-target baseline (OTB), resulting in increases/decreases to the LBL facility budgets, which correspondingly increased/decreased the facility/function to-date percent-complete values. In October 2012, the Pretreatment (PT) and High-Level Waste (HLW) Facilities 2-Year Interim Work Plan was incorporated into the project OTB and the percent-complete values for PT and HLW Facilities were frozen at the September 2012 rate. The WTP Project continues to progress in accordance with the LBL replan and PT/HLW 2-Year Interim Work Plan.

In July 2013, the cumulative to-date WTP Project schedule variance was a negative \$21.3 million, and the cumulative to-date WTP Project cost variance was a negative \$21.5 million. The major contribution to the cumulative to-date cost and schedule variance is based on the progress of the LBL Replan and PT/HLW 2-Year Interim Work Plan.

The following is the status of project matters through the end of July.

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

- BNI received DOE concurrence on the risk-informed strategy for the resolution of safety-related technical issues of (1) hydrogen in vessels, (2) criticality in vessels, and (3) hydrogen in piping and ancillary vessels; detailed execution plan expected to be issued in September 2013 (PT/HLW)
- Completed two wall placements at +37-ft elevation (HLW)
- Started construction second shift (LAW)
- Initiated weld repairs on Radioactive Liquid Drains (RLD) vessels (LAB)
- Completed excavation for the Standby Diesel Generator Building (BOF)

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

- Install RLD Vessel 8T at the test platform (PT/HLW)
- Complete Reliability Validation Process reviews (HLW)
- Develop vessel specific particle characteristics report for erosion/corrosion (PT/HLW)
- Complete installation of melter power supplies (LAW)
- Complete installation of ASX System (LAW)
- Complete construction of the Glass Former Storage Facility (BOF)
- Complete construction of WTP Chiller Compressor Plant (BOF)
- Complete repairs to RLD vessels (LAB).

#### **Issues:**

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

On June 6, 2013, DOE notified the State of Washington and State of Oregon that a serious risk has arisen that DOE may be unable to meet Consent Decree Milestone A-7.

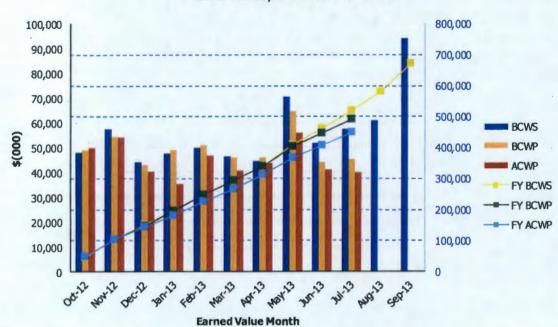
**EXC-01a: Fiscal Year Cost and Schedule Report** 

Data Set: FY 2013 Earned Value Data

Data as of: July 2013

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

**EVMS Monthly and Fiscal Year Values** 



Earned Value FY BCWP FY ACWP FY SPI FY CPI **BCWS BCWP ACWP** SPI CPI FY BCWS Month 0.99 \$49,742 \$47,840 \$49,300 \$49,742 1.03 Oct 2012 \$47,840 \$49,300 1.03 0.99 \$103,658 1.00 0.95 1.01 \$105,251 \$103,698 0.99 \$53,916 Nov 2012 \$57,411 \$54,398 \$144,115 1.02 1.06 \$149,587 \$146,781 0.98 \$44,336 \$40,457 0.97 Dec 2012 \$43,083 \$179,504 0.99 1.09 \$47,780 \$35,389 1.39 \$197,367 \$195,818 Jan 2013 \$49,037 1.03 1.09 Feb 2013 \$49,984 \$50,929 \$47,008 1.08 \$247,351 \$246,747 \$226,512 1.00 1.02 \$292,644 \$267,331 1.00 1.09 1.12 \$293,919 Mar 2013 \$46,568 \$45,897 \$40,819 0.99 \$43,887 1.05 \$338,456 \$338,696 \$311,218 1.00 1.09 Apr 2013 \$44,537 \$46,052 1.03 1.16 \$409,031 \$403,446 \$367,151 0.99 1.10 May 2013 \$70,575 \$64,750 \$55,933 0.92 \$51,759 1.08 \$460,790 \$447,773 \$408,233 0.97 1.10 Jun 2013 \$44,327 \$41,082 0.86 Jul 2013 \$57,703 \$40,078 0.78 1.13 \$518,493 \$492,937 \$448,311 0.95 1.10 \$45,164 \$61,121 \$579,614 Aug 2013 \$94,165 \$673,778 Sep 2013 PTD \$7,659,102 \$7,637,804 \$7,659,369 1.00 1.00

# **Pretreatment Facility**

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

The PT Facility will separate radioactive tank waste into HLW and LAW fractions and transfer each waste type to the respective vitrification facility for immobilization. As of September 2012, the PT Facility was 56-percent complete overall, with engineering design 85-percent complete, procurement 56-percent complete, construction 43-percent complete, and startup and commissioning 3-percent complete. Construction, procurement, and production engineering activities remain on hold, resulting in no change to the percent-complete status since September 2012. BNI and DOE continue to focus on resolving technical issues, performing hazard analyses, and completing safety evaluations for process systems in accordance with the 2-Year Interim Work Plan.

Technical review teams continue to evaluate open technical issues for resolution. Current priority of issue resolution is towards the resumption of HLW production. Construction of the mixing test platform continues in preparation for full-scale testing. Engineering specifications for the full-scale testing have been prepared and are undergoing a multi-discipline review. National laboratories are developing a test plan, simulant, and instrumentation requirements. Phase 1 testing for erosion/abrasivity testing is scheduled to be completed by the end of calendar year 2013.

BNI is performing an impact evaluation for a potential change to the natural phenomenon hazards design criteria that would double the ashfall criteria. This design criteria revision has the potential to impact facility design and heating, ventilating, and air-conditioning (HVAC) system design.

# **Significant Past Accomplishments:**

- Completed conceptual design for slurry pot testing for erosion
- Issued hazard analysis report for cesium nitric acid recovery process (system), pretreatment vessel vent process/process vessel vent exhaust system, and ventilation systems for potential contamination zone C5
- BNI received DOE concurrence on the risk-informed strategy for the resolution of safety-related technical issues of (1) hydrogen in vessels, (2) criticality in vessels, and (3) hydrogen in piping and ancillary vessels; detailed execution plan expected to be issued in September 2013.

9

September 2013

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

- Perform independent review of the potential for criticality in vessels
- Review flammable gas generation, retention, and release from sediments in vessels
- Develop decision process for vessel structural modifications
- Develop vessel-specific particle characteristics report for erosion/corrosion
- Issue engineering specification for vessel testing
- Issue sampling action plan to determine sampling accuracy
- Issue draft procedure for conducting failure mode, effects, and criticality analysis
- Update basis of design for safety classification regarding seismic analysis of vessels
- Install RLD-8T into position in test platform
- Receive 14-ft test vessel
- Complete pulse jet mixer controls testing.

#### **Issues:**

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

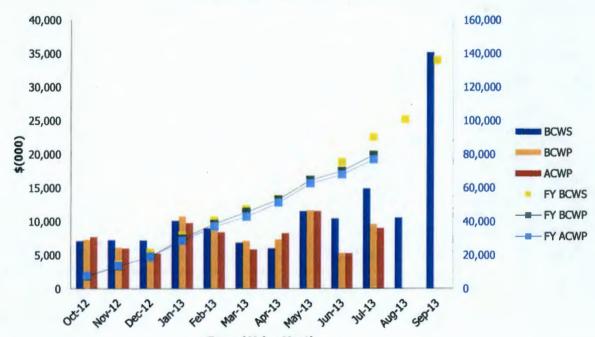
**EXC-01a: Fiscal Year Cost and Schedule Report** 

Data Set: FY 2013 Earned Value Data

Data as of: July 2013

# River Protection Project Pretreatment Facility





**Earned Value Month** 

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	\$7,163	\$5,619	\$5,230	0.78	1.07	\$21,440	\$19,018	\$18,864	0.89	1.01
Jan 2013	\$10,097	\$10,759	\$9,756	1.07	1.10	\$31,537	\$29,777	\$28,620	0.94	1.04
Feb 2013	\$8,994	\$8,716	\$8,382	0.97	1.04	\$40,531	\$38,493	\$37,002	0.95	1.04
Mar 2013	\$6,839	\$7,142	\$5,831	1.04	1.22	\$47,370	\$45,635	\$42,833	0.96	1.07
Apr 2013	\$5,995	\$7,355	\$8,252	1.23	0.89	\$53,365	\$52,990	\$51,085	0.99	1.04
May 2013	\$11,509	\$11,641	\$11,512	1.01	1.01	\$64,874	\$64,631	\$62,597	1.00	1.03
Jun 2013	\$10,410	\$5,286	\$5,242	0.51	1.01	\$75,284	\$69,917	\$67,839	0.93	1.03
Jul 2013	\$14,873	\$9,616	\$8,989	0.65	1.07	\$90,157	\$79,533	\$76,828	0.88	1.04
Aug 2013	\$10,547					\$100,704				
Sep 2013	\$35,145					\$135,849				
PTD	\$1,500,624	\$1,490,000	\$1,487,295	0.99	1.00					

# **High-Level Waste Facility**

Number	Title	Due Date	Status
D-00A-21	Complete Construction of Structural Steel to 37' in HLW Facility	12/31/2012	Complete
D-00A-02	HLW Facility Construction Substantially Complete	12/31/2016	Ongoing *
D-00A-03	Start HLW Facility Cold Commissioning	6/30/2018	Ongoing *
D-00A-04	HLW Facility Hot Commissioning Complete	12/31/2019	Ongoing *

The HLW Facility will receive the separated HLW concentrate from the 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 before shipment to interim storage.

As of September 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 4-percent complete. Construction, procurement, and production engineering activities have significantly slowed down, resulting in minimal change to the percent completion status since September. BNI and DOE continue to focus on resolving technical issues, performing hazard analyses, and completing safety evaluations for process systems in accordance with the 2-Year Interim Work Plan.

Technical review teams continue to evaluate open technical issues for resolution. Construction activities include the placement of walls at the 37-ft elevation, installation of structural steel at the 58-ft elevation, and installation of cable tray supports and ventilation ducts at the 14-ft elevation. Engineering efforts are focused on resolution of Priority Level 1 findings. The Environmental and Nuclear Safety group is in the process of developing the Safety Design Strategy (SDS) as part of the initiative to progress design.

The path forward to ramp up HLW production engineering and construction is separated into three actions: (1) conduct engineering studies to resolve technical safety issues, (2) perform risk assessment for the technical issues, and (3) perform assessment of BNI process improvement for the readiness to proceed.

#### Significant Past Accomplishments:

- Completed two wall placements at +37-ft elevation
- Focused on completing all relevant activities in support of resumption of production engineering
  - BNI developed draft plan for path to ramp up HLW production engineering for ORP review

- Started HLW design review to support resumption of HLW production
- Identified HLW items at risk for erosion/corrosion failure for further evaluation
- Issued HLW Failure Mode, Effects, and Criticality Analysis Plan
- Issued HLW Black Cell Analysis and Requirements Resolution Plan
- Issued HLW Sampling Resolution Plan
- Issued HLW Facility Ventilation Risk Evaluation Plan.

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

- Complete Reliability Validation Process reviews
- Development of HLW-specific safety design strategy
- Develop plan to close technical issues and other issues (e.g., safety basis compliance, quality assurance issues, and design defensibility) of HLW
- Issue first hydrogen in piping and ancillary vessels hydrogen generation rate calculation
- Complete draft analysis of single-point failures in support of failure mode analysis
- Complete conceptual design of in-service inspection
- Complete plan for erosion/corrosion risk evaluation for HLW
- Award second high-efficiency particulate air (HEPA) filter qualification subcontract.

#### **Issues:**

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

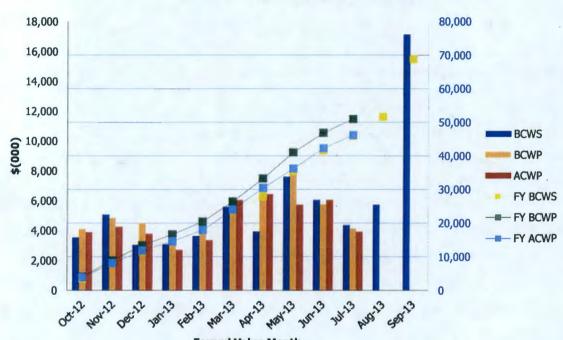
**EXC-01a: Fiscal Year Cost and Schedule Report** 

Data Set: FY 2013 Earned Value Data

Data as of: July 2013

# River Protection Project High-Level Waste Facility

#### **EVMS Monthly and Fiscal Year Values**



**Earned Value Month** 

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	\$3,054	\$4,496	\$3,795	1.47	1.18	\$11,678	\$13,453	\$11,946	1.15	1.13
Jan 2013	\$3,092	\$3,266	\$2,714	1.06	1.20	\$14,770	\$16,719	\$14,660	1.13	1.14
Feb 2013	\$3,639	\$3,791	\$3,362	1.04	1.13	\$18,409	\$20,510	\$18,022	1.11	1.14
Mar 2013	\$5,595	\$5,953	\$6,053	1.06	0.98	\$24,004	\$26,463	\$24,075	1.10	1.10
Apr 2013	\$3,944	\$6,860	\$6,443	1.74	1.06	\$27,948	\$33,323	\$30,518	1.19	1.09
May 2013	\$7,604	\$7,788	\$5,726	1.02	1.36	\$35,552	\$41,111	\$36,244	1.16	1.13
Jun 2013	\$6,045	\$5,767	\$6,047	0.95	0.95	\$41,597	\$46,878	\$42,291	1.13	1.11
Jul 2013	\$4,382	\$4,152	\$3,929	0.95	1.06	\$45,979	\$51,030	\$46,220	1.11	1.10
Aug 2013	\$5,722					\$51,701				
Sep 2013	\$17,135					\$68,836				
PTD	\$968,113	\$973,159	\$968,352	1.01	1.00					

# **Low-Activity Waste Facility**

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

The LAW Facility will process LAW. 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 of on the Hanford Site in the Integrated Disposal Facility. As of July 2013, the LAW Facility is 65-percent complete overall, with engineering design 78-percent complete, procurement 85-percent complete, construction 67-percent complete, and startup and commissioning 5-percent complete.

#### Significant Past Accomplishments:

- Insulated, applied foil, and sealed seams of the foil on the melter pour spouts
- · Poured the castable refractory on bottom of melter discharge chambers
- Issued equipment datasheet and structural/seismic calculation for caustic scrubber
- Issued purchase order for engineering, procurement, and fabrication of the Thermal Catalytic Oxidizer (TCO) and ammonia skid
- Started construction second shift
- · Completed installation of co-axial piping.

# Significant Planned Actions in the Next 6 Months:

- · Complete installation of Autosampling System
- Receive HEPA preheaters for LAW Secondary Offgas/Vessel Vent Process System
- · Continue refractory brick installation in the melters
- · Complete hazard analysis for the melter and melter off-gas.

#### Issues:

\*On June 6, 2013, DOE notified the State of Washington and State of Oregon that a serious risk has arisen that DOE may be unable to meet Consent Decree Milestone A-7.

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

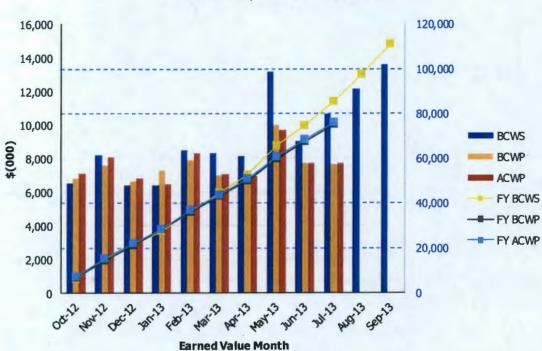
Data Set: FY 2013 Earned Value Data

River Protection Project

Low-Activity Waste Facility

Data as of: July 2013





**Earned Value** FY CPI **BCWS BCWP ACWP** SPI **FY BCWS** FY BCWP **FY ACWP** FY SPI Month 0.95 \$6,787 \$7,142 1.04 0.95 \$6,536 \$6,787 \$7,142 1.04 Oct 2012 \$6,536 0.95 Nov 2012 \$8,212 \$7,602 \$8,071 0.93 0.94 \$14,748 \$14,389 \$15,213 0.98 0.96 Dec 2012 \$6,418 \$6,648 \$6,814 1.04 0.98 \$21,166 \$21,037 \$22,027 0.99 \$28,496 \$6,469 0.99 Jan 2013 \$6,392 \$7,303 1.14 1.13 \$27,558 \$28,340 1.03 \$8,338 \$36,834 1.00 0.98 Feb 2013 \$8,503 0.93 0.94 \$36,061 \$36,213 \$7,873 \$7,054 \$43,888 0.97 0.98 \$44,377 \$43,179 Mar 2013 \$8,316 \$6,966 0.84 0.99 \$50,838 0.98 Apr 2013 \$8,135 \$6,765 \$6,950 0.83 0.97 \$52,512 \$49,944 0.95 \$9,706 \$65,702 \$59,904 \$60,544 0.91 0.99 May 2013 \$13,190 \$9,960 0.76 1.03 0.90 0.99 \$9,044 \$7,701 0.85 1.00 \$74,746 \$67,600 \$68,245 \$7,696 Jun 2013 0.88 0.99 \$7,714 \$85,388 \$75,265 \$75,959 0.72 0.99 Jul 2013 \$10,642 \$7,665 \$97,533 Aug 2013 \$12,145 \$111,139 Sep 2013 \$13,606 0.99 0.94 PTD \$779,098 \$824,504 \$772,254

# **Balance of Facilities**

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

The BOF provides services and utilities to support operation of the main production facilities: PT, HLW, LAW, and LAB. As of July 2013, BOF is 57-percent complete overall, with engineering design 79-percent complete, procurement 73-percent complete, construction 75-percent complete, and startup and commissioning 11-percent complete.

Commercial grade dedication activities in support of the emergency turbine generator procurement are the primary focus for design engineering and the procurement organization. Construction efforts are focused on completion of the Chiller Compressor Plant, Glass Former Facility, and the Non-Radioactive Liquid Waste Disposal building. Excavation activities for the Standby Diesel Generator Building have begun, and facility completion is targeted for June 2014.

#### Significant Past Accomplishments:

- Installed over 6,500 linear feet of cable in the Glass Former Facility
- Completed excavation for the Standby Diesel Generator Building foundation
- Completed functional testing of Building 91 Fire Water System.

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

- Complete construction of WTP Chiller Compressor Plant
- Complete construction of the Glass Former Storage Facility
- Turnover the Non-Radioactive Liquid Waste Disposal system from construction to startup
- Complete the component testing of the low-voltage, medium-voltage, and fire detection systems for Switchgear Buildings 87 and 91.

#### **Issues:**

No major issues at this time.

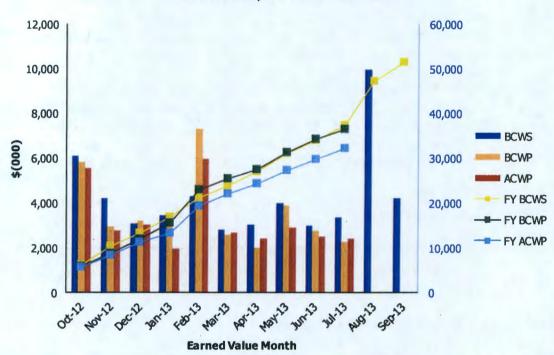
**EXC-01a: Fiscal Year Cost and Schedule Report** 

Data Set: FY 2013 Earned Value Data

Data as of: July 2013

# 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	\$3,077	\$3,213	\$3,026	1.04	1.06	\$13,409	\$11,988	\$11,381	0.89	1.05
Jan 2013	\$3,452	\$3,559	\$1,970	1.03	1.81	\$16,861	\$15,547	\$13,351	0.92	1.16
Feb 2013	\$4,286	\$7,315	\$5,963	1.71	1.23	\$21,147	\$22,862	\$19,314	1.08	1.18
Mar 2013	\$2,799	\$2,588	\$2,675	0.92	0.97	\$23,946	\$25,450	\$21,989	1.06	1.16
Apr 2013	\$3,057	\$1,988	\$2,397	0.65	0.83	\$27,003	\$27,438	\$24,386	1.02	1.13
May 2013	\$3,987	\$3,897	\$2,929	0.98	1.33	\$30,990	\$31,335	\$27,315	1.01	1.15
Jun 2013	\$3,021	\$2,789	\$2,504	0.92	1.11	\$34,011	\$34,124	\$29,819	1.00	1.14
Jul 2013	\$3,357	\$2,277	\$2,396	0.68	0.95	\$37,368	\$36,401	\$32,215	0.97	1.13
Aug 2013	\$9,955					\$47,324				
Sep 2013	\$4,223					\$51,547				
PTD	\$313,115	\$311,986	\$306,147	1.00	1.02					

# **Analytical Laboratory**

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

The LAB will support WTP operations by analyzing feed, vitrified waste, and effluent streams. As of July 2013, the LAB is 70-percent complete overall, with engineering design 76-percent complete, procurement 86-percent complete, construction 84-percent complete, and startup and commissioning is 22-percent complete.

Engineering efforts are focused on supporting radioactive liquid waste disposal (RLD) vessel repairs and finalizing the electrical engineering portions of the LAB design. Construction efforts are focused on installation of instrument tubing and electrical commodities to support the completion of LAB construction.

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

- Initiated weld repairs on RLD vessels
- Started installation of the Facility Network Infrastructure (FNJ) Enclosure internals in the administration area server room
- Electrical cable installation is 50 percent complete.

# Significant Planned Actions in the Next 6 Months:

- Receive instrument and transport lines for the exhaust stack monitors
- Start installation of penetration seals
- Complete repairs to RLD vessels.

#### Issues:

No major issues at this time.

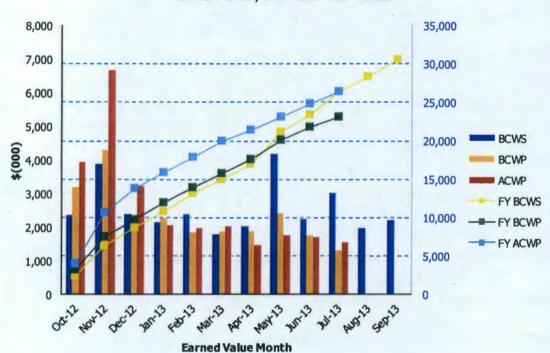
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#### River Protection Project Analytical Laboratory

**EVMS Monthly and Fiscal Year Values** 



Earned Value FY SPI **BCWS BCWP ACWP** SPI **FY BCWS FY BCWP FY ACWP** FY CPI CPI Month 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 0.70 1.19 Dec 2012 \$2,381 \$2,257 \$3,219 0.95 0.70 \$8,647 \$9,743 \$13,846 1.13 0.70 \$2,052 Jan 2013 \$2,137 \$2,270 1.06 \$10,784 \$12,013 \$15,898 1.11 0.76 1.11 Feb 2013 \$2,387 \$1,852 \$1,977 0.78 0.94 \$13,171 \$13,865 \$17,875 1.05 0.78 \$2,044 Mar 2013 \$1,783 \$1,879 1.05 0.92 \$14,954 \$15,744 \$19,919 1.05 0.79 \$1,883 \$1,475 0.93 \$16,975 Apr 2013 \$2,021 1.28 \$17,627 \$21,394 1.04 0.82 \$2,419 \$1,757 May 2013 0.58 \$21,162 \$20,046 \$23,151 0.95 0.87 \$4,187 1.38 \$1,698 0.79 \$23,386 \$21,795 \$24,849 0.88 Jun 2013 \$2,224 \$1,749 1.03 0.93 \$1,560 Jul 2013 \$3,021 \$1,303 0.43 0.84 \$26,407 \$23,098 \$26,409 0.87 0.87 \$28,370 Aug 2013 \$1,964 \$30,591 Sep 2013 \$2,220 \$232,334 \$230,169 0.99 0.92 \$249,764

			V	Vaste Trea	tment Pla	-	ect - (LBL) ough July 201		Complet	te Status					
(Dollars - Millions)	Overall Facility Percent Complete Unallocated Dollars			Design/Engineering Unallocated Dollars			Procurement Unallocated Dollars				onstruction ocated Dolla	irs	Startup & Plant Operations Unallocated Dollars		
Facilities	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)		Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete
Low-Activity Waste	1,196.0	772.3	65%	308.7	239.4	78%	261.3	222.8	85%	448.2	300.7	67%	177.8	9.4	3%
Analytical Lab	330.9	230.2	70%	71.7	54.4	76%	54.7	47.0	86%	135.6	113.5	84%	68.9	15.3	22%
Balance of Facilities	543.5	312.0	57%	93.2	73.4	79%	71.1	51.7	73%	224.4	169.3	75%	154.7	17.6	11%
Total LBL	2.070.3	1.314.4	63%	473.5	367/.2	78%	387.2	321.4	83%	808.3	583.5	72%	401.4	42.3	11%
		PT/H	LW/SS P	ercent Comp	lete Status	Frozen a	s of Septemb	per 2012 (di	ue to proj	ect rebaselin	ing efforts				
High-Level Waste	1,478.6	922.1	62%	364.4	325.2	89%	433.9	349.4	81%	561.1	243.2	43%	119.2	4.4	4%
Pretreatment	2,517.3	1,410.5	56%	761.7	645.8	85%	679.9	380.4	56%	890.0	378.6	43%	185.8	5.6	3%
Shared Services	4,726.9	3,632.6	77%	1,047.0	977.9	93%	451.7	395.0	87%	1,436.5	1,143.0	80%	453.5	133.2	29%
Total WTP w/o UB	n/a	n/a	67%	n/a	n/a	87%	n/a	n/a	73%	n/a	n/a	62%	n/a	n/a	15%
Undistributed Budget	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Total WTP	n/a	n/a	67%	n/a	n/a	87%	n/a	n/a	73%	n/a	n/a	62%	n/a	n/a	15%

Source: Preliminary WTP Contract Performance Report - Formet 1, Data for July 2013

Note: In September 2012, the LBL Replan was incorporated into the project OTB baseline resulting in increases/decreases to the LBL facility budgets, which correspondingly increased/decreased the facility/function to-date percent complete values. In October 2012, the PTHLW/SS Interim Work Plan was incorporated into the project OTB baseline resulting in decreases to the PTHLW/SS facility budgets, this was due to a work scope shift from the Distributed budget to UB. Percent Complete Values shown for PT, HLW and SS have been frozen with the September 2012 values due to the Interim Work Plan and budgets being moved into UB. UB value for the project for PTHLW/SS is \$1,978M.

# WORKING ORP Key Documents List For September 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
ORP and Ecology will review the reports	M-045-22- T01	Submit Results of VZ Characterization of 241- TX to ECY	09/30/14				D. Hildebrand	S. Eberlein	J. Lyon	
generated in M-045-22-T01, -T02, and -T03 and determine whether to continue with soil desiccation/contaminant removal testing and	M-045-22- T02	Submit Results of VZ Characterization of 241- U to ECY	04/30/14				D. Hildebrand	S. Eberlein	J. Lyon	
other interim measures (TPA MS M-045-22).	M-045-22- T03	Submit SX Soil Desiccation/Contaminate Removal Tech Results to ECY	07/31/14				D. Hildebrand	S. Eberlein	J. Lyon	
		WMA C PA Initial Model Run Data Package		TBD			C. Kemp	S. Eberlein	J. Lyon	Feeds input for M-045-61 and all Closure Plans
Submit to Ecology for Review and Approval	Supports M-045-61	WMA C PA Initial Document		TBD			C. Kemp	S. Eberlein	J. Lyon	Feeds input for M-045-61 and all Closure Plans
as an Agreement Primary Document, a Phase 2 RCRA Facility Investigation/Corrective	101-045-01	WMA C Characterization Summary 2013		TBD			C. Kemp	S. Eberlein	J. Lyon	Feeds input for M-045-61 and all Closure Plans
Measure Study Report for WMA C	M-045-61	Phase 2 RFI/CMS Report for WMA C	12/31/14	TBD			C. Kemp	S. Eberlein	J. Lyon	Reported as To Be Missed in the March 2013 TPA PMM.     Discussions ongoing at the PM level.
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	TBD			C. Kemp	S. Eberlein	J. Lyon	Reported as To Be Missed in the March 2013 TPA PMM.     Discussions ongoing at the PM level.
Submit Retrieval Data Report after WMA C SST Retrieval Completion Certifications	M-045-86	Retrieval Data Report for SST C-104, embedded TPA milestone M-045-86C	03/21/14							<ul> <li>CD Retrieval Completion Certification for SST C-104 sent to ECY on 03/21/13 via ORP Letter 13-TF-0018.</li> </ul>
Prior to beginning construction and at least one year before construction is to be	M-045-92O	Future Barrier Design 3	06/30/15	06/30/15			C. Kemp	S. Eberlein	J. Lyon	<ul> <li>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.</li> </ul>
complete, DOE will submit to Ecology a final design and monitoring plan for each interim barrier.	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.
Naste 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	<ul> <li>At the January 2013 TPA PMM meeting, ORP stated DOE and ECY are currently in discussions to move out the due dates for M- 062-40ZZ and M-062-45ZZ</li> </ul>
Complete final design and submit RCRA Part Bermit Modification Request	M-062-31- T01	RCRA Part B Permit ModificationFinal Design	04/30/16	04/30/16			S. Pfaff		D. McDonald	
	M-045- 91D-T01	Provide Report on the Concrete Dome Samples from Tank C-107 Plug	05/31/13	05/21/13			J. Johnson	R. Gregory	J. Lyon	ORP transmitted to ECY via ORP Letter 13-TF-0032 on 05/21/13.
	M-045-91E	Provide SST Farms Dome Deflection Surveys Every Two Years	09/30/13	09/17/13			J. Johnson	R. Gregory	J. Lyon	ORP transmitted to ECY via ORP Letter 13-TF-0066 on 09/17/13.
	M-045- 91G-T03	Provide AOR Final Doc. for SSTS on 1,000,000 Gallon Tanks	10/31/14	10/31/14			J. Johnson	R. Gregory	J. Lyon	<ul> <li>Moved to 09/31/13 per M-45-12-01 TPA Chg Pckg.</li> <li>Updated per TPA Chg Pckg M-45-13-01, approved on 06/27/13</li> </ul>
M-45-91 Interim Milestones and Target Dates for SST Integrity Implementing the Expert Panel's Recommendations	M-045-91F- T04	Provide Report on 100-Series SSTs as having Leaked in RPP-32681	12/26/14	12/26/14			J. Johnson	R. Gregory	J. Lyon	<ul> <li>Reported as To Be Missed in October 2012 TPA PMM Mtg</li> <li>Updated per TPA Chg Pckg M-45-13-01, approved on 06/27/13</li> </ul>
	M-045- 91G-T04	Provide AOR Final Doc. for SSTS on 55,000 Gallon Tanks	01/30/15	01/30/15			J. Johnson	R. Gregory	J. Lyon	<ul> <li>Reported as To Be Missed in October 2012 TPA PMM Mtg</li> <li>Updated per TPA Chg Pckg M-45-13-01, approved on 06/27/13</li> </ul>
	M-045-91B- T01	Provide Ecology report on the Concrete Core from TankA-106 or alt	01/31/15	01/31/15			J. Johnson	R. Gregory	J. Lyon	Updated per TPA Chg Pckg M-45-13-01, approved on 06/27/13
	M-045-91F- T02	Provide Report of Liner Failures for SSTs	03/31/15	03/31/15			J. Johnson	R. Gregory	J. Lyon	<ul> <li>Reported as To Be Missed in October 2012 TPA PMM Mtg</li> <li>Updated per TPA Chg Pckg M-45-13-01, approved on 06/27/13</li> </ul>
	M-045-91F	Provide Summary Conclusions Report on Leak Integrity	06/30/15	06/30/15			J. Johnson	R. Gregory	J. Lyon	<ul> <li>Reported as To Be Missed in October 2012 TPA PMM Mtg</li> <li>Updated per TPA Chg Pckg M-45-13-01, approved on 06/27/13</li> </ul>

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

<sup>&</sup>lt;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.

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>quot;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."

# WORKING ORP Key Documents List For September 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-045-91G	Provide Summary Conclusions Report of AOR for SSTs	07/28/15	07/28/15			J. Johnson	R. Gregory	J. Lyon	<ul> <li>Reported as To Be Missed in October 2012 TPA PMM Mtg</li> <li>Updated per TPA Chg Pckg M-45-13-01, approved on 06/27/13</li> </ul>
M-45-91 Interim Milestones and Target Dates for SST Integrity Implementing the Expert	M-045-91H	Submit Change Pckg (if necessary) to est. Additional Milestones	07/31/15	07/31/15			J. Johnson	R. Gregory	J. Lyon	
Panel's Recommendations (Continued)	M-045-91I	Provide IQRPE Certification of SSTs Structural Integrity	09/30/18	09/30/18			J. Johnson	R. Gregory	J. Lyon	

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
	Tier 1 Framework Closure Plan Update	09/30/15			C. Kemp	S. Eberlein	J. Lyon	<ul> <li>Tier 1, 2, 3 Submittal is associated with M-045-82, due 09/30/2015. This MS was reported as To Be Missed in the March 2013 TPA PMM. Discussions ongoing at the PM level.</li> </ul>
	Tier 2 WMA C Closure Plan	TBD			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		J. Lyon	
	Submit Part B Permit Application for Selected Supplemental Treatment Technology	TBD			L. Huffman		J. Lyon	
	Submit Wiped Film Evaporator Class 3 Permit Modification or Part B Permit Application	TBD			L. Huffman		J. Lyon	
	IDF Performance Assessment (ORP/WRPS has support role to RL/CHPRC)	TBD			T. Fletcher		J. Lyon	
	Submit Categorical TOC HIA	TBD					J. Lyon	
OTHER DOCUMENTS	Temporary Waste Transfer Line Management Program Plan (also known as Hose-In-Hose Transfer Lines (HIHTL) Management Plan), RPP-12711	TBD			J.Vanderpol		J. Lyon	To be made into a TPA Primary Document with submittal of revision 7 per a TPA Project Managers Agreement, signed 01/22/2013.
	Single-Shell Tank System Leak Detection and Monitoring Functions and Requirements Document, RPP-9937	TBD			J. Johnson		J. Alzheimer	Discussions are underway for a number of revisions to this document
	WMA Quarterly Groundwater Reports	Ongoing Quarterly			D. Hildebrand		J. Lyon	<ul> <li>Ecology SST counterparts have been added to this distribution list as of March 2013</li> <li>ORP continues to provide catch-up reports to Ecology SST counterparts (FY12 thru Q1 FY13)</li> </ul>

<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>&</sup>lt;sup>2</sup> Note: The "Anticipated Regulatory Review Completion Date" is generated based on TPA Milestone Agreements and TPA Section 9.0 documentation requirements. 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."

ORP Project Managers Meeting September 24, 2013 2440 Stevens Ctr. Richland, Washington Meeting Minutes Transmittal

Attachment D: Items Submitted to TPA Administrative Record

(10 pages including this coversheet)

	MEETING MINUTES	for Revision of RI	PP-9937			
Date of Meeting: 8/21/2013		Location: Eco	logy/Room 3C			
Preparer: Nancy Uziemblo, Ed	ology	Time: 2:00 – 4:00				
Attendees:	Jeremy Johns	on, ORP				
Jim Alzheimer, Ecology	Tony Miskho,	WRPS				
Jared Mathey, Ecology	John Gubersk	i, WRPS				
Nancy Uziemblo, Ecology						

Meeting minutes:

The RPP-9937 schedule was updated from the original schedule provided at the 6/26/2013 meeting. The following draft sections of the RPP-9937 document will be delivered to Ecology:

- Methods and Monitoring (the how and when), September 4, 2013
- Data Analysis, September 18, 2013
- Response to Data Analysis results, October 2, 2013
- Appendices including discussion on monitoring in the past and new units for consideration for monitoring, October 30, 2013
- Consolidated draft, November 13, 2013

There was discussion on the comments and responses of the review of section 1.1 and 1.2, Purpose and Background. In discussing Comment 1, Ecology stated that RPP-9937 would need to be updated to reflect Final Status standards when the Site Permit is issued. The group discussed that the Part A of the Permit is missing some units of the single shell tank system. This Part A may be the reference in RPP-9937 for a complete list of units, both to be monitored and defensibly not monitored. This list will identify units and how they are being monitored to protect human health and environment, possibly based on how much waste the units are holding, waste type, and risk of leak. WRPS stated that the unmonitored units might be discussed in the Appendix in the present document. WRPS pointed out in HNF-EP-0182, Table 5, Miscellaneous Underground Storage Tanks and Special Surveillance Facilities a list of facilities and monitoring techniques. This table could be used to crosscheck the Part A. Ecology stated that diversion boxes, vault pits, flush pits, pipelines, and anything holding waste would need to be on an agreeable SST unit list. DOE stated that the Part A should have all that will be closed under the Site Permit. Comment 1 was accepted with the provision that we may need to change the proposed language at a later time when additional sections of RPP-9937 get completed and also when the single shell tanks (SST) go under final status.

Comments 2, 4, 5, 6, 7 and 8 were accepted. Ecology noted on comment 7 that there was a slight modification from the Ecology proposed wording that was acceptable to Ecology. There was no agreement on comment 3 because the proposal is to defer the decision until after discussion on HRR or other technology in the monitoring/analysis section.

The group discussed that the earlier version of RPP-9937 was written based on retrieval of SST waste being completed by 2018, but now it appears waste retrieval will extend past 2040. Ecology noted that therefore RPP-9937 should be modified to reflect proper and documented frequent leak monitoring and data analysis. Ecology discussed that the new version of RPP-9937 will need to meet the requirement of demonstrating that human health and the environment will be protected. Ecology explained that if RPP-9937 will replace conditions in the draft Permit, SST components not included or being monitored under RPP-9937 will need permit provisions that demonstrate that human health and the environment will be protected. Ecology stated that language could be added to RPP-9937 that discussed how human health and the environment could be protected even if components had some waste present (e.g., interior

#### surface of pipe )

WRPS introduced describing the units holding waste as "residuals subject to closure" and needing to define amount of residuals vs. "waste considered stored".

Further meetings will discuss frequency of monitoring and adding flexibility for fieldwork.

WRPS suggested to 'harmonize" " what is include as a "catch tank" with the Catch Tank Leak Response Plan (RPP-PLAN 48438) prepared to meet TPA milestone M-45-100?) with the new version of RPP-9937. The Canyon Closure, IS-1, and Single Shell Tank System documents and any applicable drawings and records will need to be checked to capture all units to be discussed in RPP-9937. WRPS shared that they are planning to asked for FY 14 funds from DOE to use to create this list.

John Guberski invited Ecology to come out to the site and see the wall charts and descriptions of the various parts of the single-shell tank system. John thinks this educational opportunity would help Ecology's understanding of the SST system.

A discussion took place on how can we show that we are being protective of human health and the environment for the non-single-shell tank parts of the system.

Jeremy Johnson stated that some activities have been done to monitor other parts of the SST system besides the single-shell tanks themselves.

At the appropriate next meeting, Ecology would like to discuss ex-tank monitoring as being available for a leak response and a section of RPP-9937 written on this topic. DOE will attempt to get the next section of RPP-9937 to Ecology for review prior to the next meeting.

#### **Actions:**

2013-06-12-1: ORP: **(OPEN)** Come with a list of tanks beyond the 100 and 200 series tanks that should be within the scope of -9937 for discussion.

2013-06-12-2: ORP: **(OPEN)** is there a better way to describe what is excluded from RPP-9937 than using the term "past practice."

2013-06-26-1: **(OPEN)** ORP to set up a more detailed briefing on neutron probe data analysis and how it is converted to interstitial liquid levels for: T-111, SX-106, BY-105, and BY-109 to discuss data interpretation.

2013-06-26-2: **(OPEN)** ORP provide a repeat presentation to Ecology/HAB Single Shell Tank Liquid Monitoring from April. Include video on how ENRAF works.

2013-07-07-1: Ecology to determine path forward on ex-tank monitoring.

Decisions made: None.

Next meeting is September 4.

	MEETING MINUTES fo	r Revision of RPP-9937					
Date of Meeting: 7/10/2013		Location: Ecology/Room 3A					
Preparer: A.G. Miskho, WRPS	-	Time: 2:00 – 4:00					
Attendees:	Jeremy Johnson	ORP					
Jim Alzheimer, Ecology	Tony Miskho, W	RPS					
Jared Mathey, Ecology	John Guberski, V	VRPS					
Jeff Lyon, Ecology	Susan Eberlein, V	WRPS					
Nancy Uziemblo, Ecology							

#### Meeting minutes:

Miskho stated the minutes from the last meeting were reviewed and comments were received. The minutes from 6/26/2013 were approved by Ecology and ORP at the meeting and are ready to be entered into the next project manager meeting.

Action item Discussion (See list at the end of the minutes for a description of the action):

2013-06-12-1: OPEN: list is still in development.

2013-06-12-2: OPEN: To be kept action open pending outcome of action 2013-06-12-1.

2013-06-12-3: (Closed 7/7/2013) No discussion needed. The M-26-26 deliverable (June 7, 2007, DOE letter #: 07-TOD-049) satisfied the request.

2013-06-26-1: (Open) Goal to have discussion in smaller group setting.

2013-06-26-2: (Open) Goal to have completed prior to tank waste subcommittee which meets on 8/7/2013.

#### **Dry Well Logging Discussion**

Eberlein presented information concerning dry well logging and does not believe small leak monitoring is appropriate.

Most tanks have dry wells around them. About 778 dry wells exist from when the tanks were constructed or sometime after construction, mostly 1940s and 1950s.

Two fundamental approaches today: (1) spectral gamma and (2) moisture logging.

All dry wells can be used for spectral gamma.

Some wells have concrete as part of completion. Impossible to detect moisture in these wells.

In the past, Gross gamma was used in the 1940s. Gross gamma gives a signal, but no differentiation between gamma emitters.

Alzheimer, reported that Caggiano (ECY) thought spectral was good for a baseline, and then gross can be used after that.

Eberlein said let's talk through what gamma can do first.

Big gamma emitters for tank waste are cesium (30-year half-life) and cobalt (5-year half-life). Cobalt is getting to the end of its ability to be detected.

Cesium binds with the soil. Cobalt is more mobile. A salt solution is needed to get cesium to move again. Experience is once cesium is stabilized, you see the cesium signal in the same place, except for the slow decay.

For cobalt, you can see it moving with the water and the site has used it in the past to give an idea how fast waste migrates through the soil. Cobalt moves normally with the water except a few forms that are less mobile. The problem now is that we have gone through 10 or more half-lives. For old leaks, the leak has gone past the bottom of the dry well.

All dry wells were systematically logged to late 1980s early 1990s. The last few years, logged wells in the T and TY farms to check on barrier performance.

Mathey: Water in wells: Can't you pump the water out of the wells? Is this water contaminated?

Eberlein: Yes the water can be pumped, just has not been a priority and a good reason has not been identified. The water would have to be pumped out and transferred to the Effluent Treatment Facility for treatment. It can be done if it will be a benefit. The water that ran into the wells is treated as contaminated water, because it came from surface water.

We also logged dry wells at C farm. The cesium has been staying put. The cobalt, if detectable, has been moving. At well #30-08-02, from C-108, cesium has moved a little within small pico curies. The Nez Pierce personnel interpreted this to say migration has occurred. The well was re-logged and there is no further change.

After re-logging 100 or so wells after 10 years, there is no real change except for noise. Not a good indicator because there is lack of change.

Mathey stated on a well on C-108, in the TWRWP, Rev 3, it identified no change.

Eberlein: Said the moisture and gross results saw no change. Stoller was brought in for spectra gamma, and there was a small but detectable change. TWRWP could have criteria that were not tripped to indicate there was a leak.

We are not able to get much more information, we might have a small leak but it is hard for the small leak to reach the dry well.

In order to reach a dry well, you need enough lateral migration of the leak to reach the dry well. Dry wells are 7-11 feet away from the tank. Only big leaks will get to there to the dry well and in that case dry wells would be useful, but big leaks are not likely anymore after interim stabilization.

For something like T-111, where the leak is 200-300 gallons, if you went over enough time to the 10,000-20,000 gallons size leak range, the in tank levels would be indicating sooner.

Mathey: So in general, dry well logging is not the best tool to use for leak detection but is better for tracking leaks?

Eberlein: For tracking a new leaks, if there are any wells nearby to go check.

Uziemblo: What is radius for detection?

Eberlein: The radius is about 18 inches. For moisture logging, it is usually less. We know that 13,000 gallons does not get to dry well 17 feet away. We don't have other data. Moisture is transient so you need to perform a log quickly. Once a year is not a good idea.

C-farm logging. Neutron logging is fairly frequent. The gross gamma is done where there are questions to address. Stoller comes in if there are more questions and does spectral gamma.

Mathey: What is the cost, does the work get sub contracted out?

Eberlein: Stoller has the expertise and is subcontracted out. They can come in and give us moisture and spectral gamma for about \$8,000 a well. Plus other costs, is about \$15,000 per well.

Johnson: For the 100 or so recently, all we have seen is the movement of cobalt and pretty soon we can't see them.

Mathey: Are there other radionuclides that can be tracked, e.g., Technetium?

Eberlein: Technetium is a beta emitter and there are no others. I do not think there is enough liquid in a single shell tank to support detecting a leak. If we sluiced a tank that we did not know it was a leaker, we might be able to see the leak. I can't think of a configuration that would be a useful monitoring.

Mathey: For operations and maintenance of a dry well, if we don't maintain them properly, how do we make sure they are useful when we retrieve the waste.

Eberlein: A dry well is a steel metal pipe in the ground. Some have had water. We have an inspection plan that requires operators to inspect them annually. We get a map and verify that the cap is in place and intact. Cracks are reported. Caps have been replaced and the process is done quickly. The inspection plan has been going on for about 4-5 years now since WRPS took over the contract.

Mathey: What types of metals are the dry wells constructed of? Carbon Steel?

Eberlein: New wells ones are stainless steel, but don't know the old ones. Purpose of drywell is to provide access to the soils.

Mathey: So have all of the drywell caps been replaced?

Eberlein: Yes, through the drywell maintenance program, all broken drywell caps have been replaced with new ones.

Mathey: Would it be practical to put a one-time package together to pump out the water from the dry wells? That way, under the current maintenance program, this would keep the wells dry and enable them to be used in the future.

Eberlein: It could be practical, but then it has to be factored into the list of priorities of what ORP wants to do. The other function is for leak detection during retrieval. We use the dry well as an electrode. It does not matter if the pipe is intact or not. Hook up an electrical connection, and put an electrode in

the waste in the tank. New leaks in the process of retrieval can detect a new connection in the soil between the electrodes. This approach provides 2 dimensional high resolution. Can provide 3 dimension monitoring. In the last couple years for vadose zone during pushes, we have left discrete electrodes. A wire exists with different depths. In C-farm, it can give us depth and start to get a 3 dimensional picture. Just finished data collection in U farms and areas next to the CR vault.

Mathey: So there is an initial cost and then how much it is.

Eberlein: We put 4 deep electrode strings in the C-200 area, for vadose monitoring under M-45-61. Set up is the big cost. There are ongoing data analysis costs.

Mathey: If dry wells are not logged, is a simple HRR cost effective?

Eberlein: From a cost benefit, I need to know what the benefit for looking for a small leak. From a technical feasible standpoint, it is the best technology to be able to detect a small ongoing leak. Can detect a change in time over data. If you have reasons to believe you have an ongoing leak, you could see if the leak has been stabilized.

Mathey: We have dry well and HRR as possible ex-tank leak detection technologies. We have a lot of people asking about it. Interested in knowing about it and the maintenance of the dry well caps.

Johnson: We want to propose with this document, that we have confidence in the in tank equipment. In some cases such as T-111, in tank monitoring is giving us an indication. In a case like this, it could make sense to characterize the leak some more. We have not rolled it out yet, but WRPS is working on a proposal to install HRR at T-111 to see what level of information that will give us. If it turns out that this works for application of small leaks, and can be definitive, we can entertain whether it will go beyond T-111.

Mathey: The current permit says all dry wells to be logged within around the first 5 years of permit issuance, and in 10 year cycles thereafter.

Eberlein: With the current truck, 30 wells a year, 1 million a year. For all the wells, bring another truck online, another million dollars.

Guberski: we can't get a LOW van and a dry well van in the farm at the same time.

Mathey: We are looking at SSTs as a long term thing. Dry wells may not be as good, of a tool for purpose of leak detection, but they are used as part of the retrieval process and need to be maintained. The dry well cap maintenance program is a good thing and I did not know about it, but if dry wells have water in them, which could cause them to be less useful in the long run, I think it is important that the water be pumped from them so they can be used in the future. Ex-tank monitoring in certain circumstance is needed and should be part of RPP-9937.

Johnson: We are in the initial phases. The evaluations we are getting is showing that the instrumentation in the tank is relatively good.

Alzheimer: I learned a lot today and I think Ecology has to get together and get back with Caggiano (ECY). It may not be as valuable as we thought it was. We want to spend monitoring money the best

way we can. With liquids having been removed [through interim stabilization], it appears difficult to detect new leaks. For waste leaked out in the vadose zone, it could be a different discussion.

Eberlein: RPP-9937 is not the vehicle to understand what is happening to what is already in the environment. M-45-56 gives you a tool for this.

Johnson: RPP-9937 is the trigger mechanism for how there are areas to point to that another document/program will take over.

Mathey: We could put in HRR as a trigger so when things like T-111 happens, people will know what is going on.

Miskho: But then what you do with the data?

Mathey: You get knowledge of what is going on outside the tank. You understand if the tank is leaking or if the cause is an inside tank issue. You get information needed for closure, you can use the information to implement things like putting an evaporator on the tank to dry it out, or if you need to put a barrier on top to slow the movement of contamination to groundwater. You can even find out where the leak is occurring on the tank.

Johnson: As the time increases for storage in SSTs, it becomes more important to understand what is going on.

Eberlein: To be most constructive, RPP-9937 is a monitoring tool. Ask the question are there indicators to use ex-tank monitoring, or whether there is more of a systematic plan such as use of exhausters and drying to properly spend money.

Mathey: We could require that instead of using dry well logging, that we implement a long term use of HRR. But this costs lots of money, which takes money away from people's jobs and cleanup of the site. It also can impact the implementation of other activities on-site such as catholic protection. A balanced and broad approach is appropriate.

Eberlein: If you spend a lot of money getting information and you can't do anything, we need to ask questions why we are collecting the data.

Alzheimer: Ecology to take an action to determine path forward on ex-tank monitoring

Johnson: We do not have enough experience yet on using HRR.

Eberlein: The 'continuing-to-leak' question is a big open question. The resistivity work with 3-D electrodes takes a snap shot. We have not gone back to take another snap shot to see a change.

Johnson: For RPP-9937, HRR can be a tool in the tool box.

Miskho: For when we agree to do something we don't currently have in place, has Ecology thought about how to implement them: compliance schedules or TPA interim milestones?

Mathey: Need to think about it.

Alzheimer: We anticipate using in-tank monitoring until WPT comes on line.

Mathey: For the next T-111 what do we do?

Lyon: I hope we open RPP-9937 and it tells us what we do.

There are two things: 1) response, and 2) we are trying to avoid permit conditions that are onerous and ineffective. RPP-9937 has to reflect a decision to get approval so that we have the right response.

Alzheimer: Ecology will stick with the in-tank monitoring and may require using dry well logging when there is a leak. I don't see Ecology requiring use of HRR in -9937.

Mathey: I fundamentally disagree with Alzheimer's statement in part. Ecology has to talk about it more.

Lyon: WA attorney will want to know answers to permit conditions. We hope to come to solutions here in these discussions and not have the attorneys help us. I need to satisfy the people that are saying 'no tolerance for tank leaks.' Everyone in the office except for Mathey and Alzheimer think that dry well logging will help. We should talk about dry well logging in RPP-9937 as to why it does not help. If there is a way of evaluating options and a decision tree we consider, and then decide actions, we have solved a variety of issues.

Eberlein: I like the idea of a decision tree.

Mathey: Are we going to have a problem with catch tanks?

Lyon: I think we are ok with catch tanks but you will have to come to your own conclusion.

Mathey: Can we put HRR around catch tanks?

Alzheimer: I really don't want to focus on catch tanks.

Eberlein: From the catch tank work a few years ago, there might be one catch tank we should look at.

End of discussion.

#### RPP-9937 section handout

Johnson handed out the new draft section for RPP-9937 and stated the electronic file will be sent over when Miskho sends the minutes for today.

Miskho: The points from the 2001 inspection are addressed. The daily inspection violation is the only regulatory provision proposed to be addressed in the document. We are asking if Ecology thinks there should be other regulatory requirements that we cannot meet addressed in the document

Lyon: We would like to talk about interim stabilization.

Miskho: There is a discussion on the history of interim stabilization criteria in the file but not a discussion

on the current status.

Guberski: I anticipate that much of the history would be included in an appendix to the document. We are requesting that Ecology use an RCR form to document comments to talk about at the next meeting.

Mathey: I think it is fine that history is discussed in RPP-9937, however, I do not want the history to rule the future of what -9937 needs to become.

#### Actions:

2013-06-12-1: ORP: **(OPEN)** Come with a list of tanks beyond the 100 and 200 series tanks that should be within the scope of -9937 for discussion.

2013-06-12-2: ORP: **(OPEN)** is there a better way to describe what is excluded from RPP-9937 than using the term "past practice."

2013-06-12-3: (CLOSED 7/10/2013) Ecology and ORP: Look at history of M-023-26 (Changed from M-023-25) for the basis of the one-time inspection.

2013-06-26-1: **(OPEN)** ORP to set up a more detailed briefing on neutron probe data analysis and how it is converted to interstitial liquid levels for: T-111, SX-106, BY-105, and BY-109 to discuss data interpretation.

2013-06-26-2: **(OPEN)** ORP provide a repeat presentation to Ecology/HAB Single Shell Tank Liquid Monitoring from April. Include video on how ENRAF works.

2013-07-07-1: Ecology to determine path forward on ex-tank monitoring.

Decisions made: None.

**Next Meeting:** 

Every two weeks, Wednesday afternoon 2-4pm (Next July 24<sup>th</sup>)

Agenda: Meeting minutes, Action items, RPP-9937 section comments