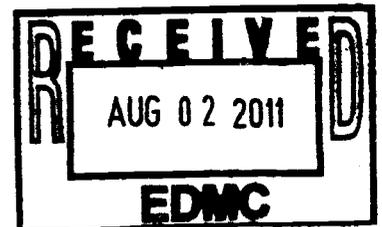


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**Distribution:**

W. Abdul	ORP	H6-60
S. L. Charboneau	ORP	H6-60
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C. J. Kemp	ORP	H6-60
D.P. Knight	ORP	H6-60
R. W. Lober	ORP	H6-60
J. J. Lynch	ORP	H6-60
J. F. Norton	ORP	H6-60
D. L. Noyes	ORP	H6-60
G. B. Olsen	ORP	H6-60
R. W. Russell	ORP	H6-60
S. C. Stubblebine	ORP	H6-60
W. J. Taylor	ORP	H6-60
G. D. Trenchard	ORP	H6-60
J. S. Trent	ORP	H6-60
J.D. Young	ORP	H6-60
D. Becker	Ecology	H0-57
R.K. Biyani	Ecology	H0-57
T.Z. Gao	Ecology	H0-57
J. J. Lyon	Ecology	H0-57
J. D. McDonald	Ecology	H0-57
D.W. Mears	Ecology	H0-57
J. Price	Ecology	H0-57
H.M. Bowers	WRPS	R1-51
J.W. Donnelly	WRPS	R1-51
J. J. Luke	WRPS	R1-51
S. E. Killoy	WRPS	E6-20
R. J. Skwarek	WRPS	R2-50
R. A. Kaldor	MSA	A5-11
R. E. Piippo	MSA	H7-28



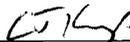
ADMINISTRATIVE RECORD – Heather Childers: H6-08

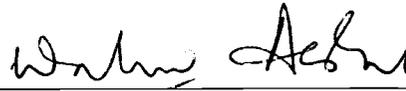
Please send comments on distribution list to Woody Russell ([Woody\\_Russell@orp.doe.gov](mailto:Woody_Russell@orp.doe.gov)).

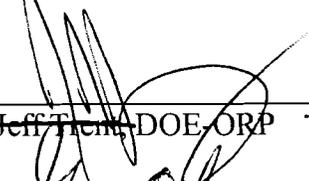
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The undersigned indicate by their signatures that these meeting minutes reflect the actual occurrences of the above dated Project Managers Meeting.

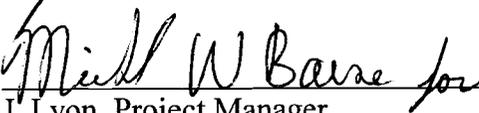
  
\_\_\_\_\_  
Bob Lober, DOE-ORP Date: 7-26-2011

  
\_\_\_\_\_  
Chris Kemp, DOE-ORP Date: 7-26-11

  
\_\_\_\_\_  
Wahed Abdul, DOE-ORP Date: 8/1/11

  
\_\_\_\_\_  
~~Jeff Young, DOE-ORP~~ J. Young Acting FPM Date: 7/26/11

  
\_\_\_\_\_  
Gary Olsen, DOE-ORP Date: 7/26/11

  
\_\_\_\_\_  
J. Lyon, Project Manager,  
Washington State Department of Ecology Date: 7-26-2011

  
\_\_\_\_\_  
J. D. McDonald. Project Manager,  
Washington State Department of Ecology Date: 7-26-11

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Purpose: ORP Project Managers Meeting

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**1.0 Administrative Items**

- Previous meeting minutes approval: The April 26, 2011 Project Managers Meeting (PMM) minutes were partially approved.

**2.0 Review of the ORP Project Summary**

- Action Item List

The action items were not updated during today's PMM. The actionees will provide a status to ORP via e-mail and then be sent out to all the parties. An update will be given during the next PMM.

- Key Documents List

An updated key documents list was distributed.

**Tank Farms**

Tri-Party Agreement and Consent Decree (TPA and CD) Statistics/Status - ORP reported that all the milestones are on schedule. ORP noted that TPA M-045-100 is in dispute resolution. See further discussion regarding this issue under TPA-SST retrieval and closure program.

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

M-045-60 - ORP reported that it continues to work with Ecology in developing work plan modifications regarding groundwater and providing responses to Ecology questions.

M-045-56G - ORP will set up a meeting with Ecology during the first half of July 2011 to discuss interim measures.

M-045-92K - The bids for the evaporation basin construction are expected this week (6/27-7/1). Construction is scheduled to start in August 2011 in SX Farm.

Significant Past Accomplishments - C-Farm characterization is ongoing, and samples have been collected for the A and B sites and submitted to the lab. ORP noted that the Data Quality Objective (DQO) process for the Phase 2 RCRA Feasibility Investigation Corrective Measures Study (RFI/CMS) for WMA-A/AX is ongoing; however, finalization of the DQO process will be deferred to after the nine tank discussions are held. The reanalysis report of well-to-well

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resistivity data from C Farm shows a significant resistivity anomaly under C-101. ORP will provide a briefing to Ecology after the data is gathered.

TPA-SST Retrieval and Closure Program:

M-045-100 - ORP stated that a notice of violation (NOV) was received from Ecology that this milestone has not been fulfilled. ORP responded to the NOV by initiating dispute resolution under the TPA in letter No. 11-TF-065 dated June 1, 2011. ORP has since received verbal statements from Ecology that ORP is not in dispute but is in violation; however, Ecology has not responded formally. Discussions are ongoing between ORP and Ecology attorneys. ORP's intent is to continue resolving the M-045-100 submittal to Ecology under the TPA process by submitting a statement of dispute to the Inter-Agency Management Integration Team (IAMIT) on July 1, 2011 if no extension is agreed upon. ORP has requested an extension to August 31, 2011 to resolve the NOV, and Ecology needs to provide ORP a response to the extension request. ORP has been informed that the Ecology project managers' intent is also to resolve the issue under the TPA, but Ecology management has indicated that discussions are on hold. ORP stated it is prepared to begin discussions as soon as Ecology is able to do so.

M-045-80 - ORP has received comments from Ecology via review comment records (RCRs) on three of the four primary documents associated with this milestone: 1) RCRA/CERCLA integration white paper; 2) C-301 retrieval paper; 3) tank removal feasibility study. ORP is working through Ecology's comments. Discussions on the comments are scheduled to start with Ecology on July 5, 2010. ORP has not received comments from Ecology on the radioactive waste determination paper, and Ecology has requested a third extension to June 30, 2011 to provide comments. ORP noted that a working status table was provided to Ecology today that includes all the submittals and their status.

Significant Past Accomplishments - Installation of the Mobile Arm Retrieval System (MARS) into C-107 continues, and completion is anticipated by tomorrow (6/29/11). The initial retrieval technology in C-111 has been completed to its limits of technology. Ecology noted that the declaration of C-111 meeting the limits of technology was not reported in the project summary report. ORP acknowledged that it was an oversight to not include it in today's report. Bulk retrieval in C-104 was completed. A briefing was sent to Ecology, and it was signed by ORP and Ecology on June 5, 2011.

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Significant Planned Activities in the Next Six Months - ORP noted that with the significant amount of documents to review associated with M-045-100, M-045-101, M-045-80 and M-045-81, an extension request for comment review was sent to Ecology via letter No. 11-TF-067 on June 15, 2011. ORP has not received a response from Ecology and has requested a written response. M-045-100 and 101 are TPA primary documents, and the extension request is to August 31, 2011. M-045-80 and 81 are secondary documents, and the extension request is to September 25, 2011.

Issues - The tank farm soil cleanup issue is in legal review. The issue regarding coordination of the SST components with IS-1 is in discussions with RL, Ecology and EPA. EPA's preference is to break out the components of IS-1 that include tank farm SST past practice components in the West Area, and Ecology prefers to keep the components together.

C-Farm Critical Path - ORP reported that the schedule for C Farm is on track. Tank C-104 retrieval operations show a one-month improvement as the limits of technology were declared, and retrieval completion documentation is being assembled. Ecology asked if the end of retrieval reflected for C-104 is bulk retrieval, and ORP concurred. Tank C-105 has been carrying some negative float. The MARS eductor phase 3 testing was implemented. Baseline change request (BCR) RPP-11-077 adjusted the design, installation, startup and readiness activities, which were pushed out due to the changes in the MARS testing and delivery dates. The lost time is expected to be captured during the MARS installation. Procurement of MARS and ancillary equipment for tank C-107 involved spares which are not needed for installation and are not impacting the start of retrieval, although the potential to receive equipment will resolve the negative 30 days. Delay with repairs to the POR-104 valve box in C-108 is due to contractual resource availability. Additional resources are being obtained, as well as additional shifts are anticipated to meet the construction schedule. This will capture negative lost time from the last month prior to FY12. The negative change to the sample for hard heel retrieval (HHR) decision activity in tank C-110 is due to activities linked with installing the central tank benchmark, which is being adjusted out into September 2011. This action maximizes resources for other work this summer, which is a positive. C-112 startup and readiness negative change is due to schedule revisions for the safety basis amendment using the extended reach sluicer for the first time, which delayed the start of retrieval operations. The expectation to capture additional positive float will occur during HHR decision activity in FY12.

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Tanks with Individual Milestones - ORP stated that these tanks are scheduled in out years, and there was no change in status.

Double-Shell Tank Closure - No change in status to report.

242-A Evaporator Status - No change in status to report.

CD-SST Retrieval and Closure - D-00B-02 - Following the last facilitated meeting between ORP and Ecology on the nine SSTs, ORP is stepping back to evaluate the progress, including the funding shortfall for FY12.

CD-TWRWP Status - ORP stated that there was no change in status from last month. ORP and Ecology are in the process of modifying several Tank Waste Retrieval Work Plans (TWRWPs). ORP will be sending a letter to Ecology within a week submitting the RPP-22393 Rev. 5 TWRWP, which encompasses tanks C-102, C-104, C-107, C-108 and C-112. ORP stated that the importance of the revision is to define chemical dissolution as the second technology in C-104, and defining the first and second technology at C-111 using the MARS, both sluicing and high pressure water. The TWRWP will be in redline strikeout format, and the formal process of review under the TPA will begin after it is transmitted to Ecology.

M-045-91, SST Integrity Assurance - ORP reported that the milestones are currently on schedule or ahead of schedule. ORP noted that M-045-91F-TO2 has a revised date of 2013 through a change form, and the milestone is out of sequence on the TPA project summary report (pg. 18).

Significant Past Accomplishments - ORP will be sending a letter to Ecology today transmitting the final DQO report (M-045-91B) and the completion letter for the final test plan for C-107 samples (M-045-91D). The letter will request approval from Ecology on the test plan.

Significant Planned Actions in the Next Six Months - ORP noted that completion of M-045-91D will be completed today and should be included as a bullet under this topic.

In Tank Characterization and Summary - A status was provided on accomplishments, planned actions, BBI updates and current DQOs.

Tank Operations Contract (TOC) Overview - ORP provided an update for the current month (April 2011), contract-to-date, and Recovery Act (RA) cost and schedule variances. Oregon Department of Energy (ODOE) asked if the 90 percent design package for a mixer pump was

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resubmitted (CLIN 3 - WFD/Treatment Planning/DST Retrieval/Closure). ORP will provide ODOE and Ecology an answer to the question at a later time.

Acquisition of New Facilities; M-90-00; M-47-00 - ORP stated that all of the milestones are on schedule, although with the funding shortfall for FY12, priorities will need to be evaluated as to which projects will move forward. ORP added that Ecology will be included in the discussions regarding project priorities. ORP reported that the contractor is moving forward toward a down-select decision regarding Secondary Waste Treatment (M-047-00). ORP noted that Secondary Waste Treatment is separate from the negotiation of more milestones (M-047-06), but the two will tie together. ORP has slowed the progress on the down-select process somewhat due to ORP's belief that the contractor did not have adequate data to proceed with the option of steam reforming.

Supplemental Treatment and Part B Permit Applications; M-62-00, -20, -30, -45 ORP reported that a draft change package was submitted to Ecology for review and comment. The change package proposes to delete M-062-30 and incorporating elements of the milestone during M-062-40 or M-062-45 negotiations. Ecology stated that a review of the change package has been done, and a response to ORP is being prepared.

Issues - ORP suggested that the issue of Ecology's January 2011 letter regarding M-062-30 could be removed from the issue list since ORP and Ecology are on a path to reach agreement. Ecology agreed with ORP's assessment and that the issue could be removed.

System Plan - ORP reported that all of the milestones are on schedule. System Plan 6 is on schedule for a release date of October 31, 2011. On June 9, 2011, ORP received a letter dated June 3, 2011 from the Hanford Advisory Board (HAB) transmitting advice No. 245. ORP is drafting a response to the HAB that will go out within three weeks. ORP and Ecology plan to submit separate responses to the HAB, due to the specific nature of the few pieces of advice that are addressing the ORP project management process.

### **Waste Treatment Plant**

Discussions are ongoing regarding funding in tank farms and relevant priorities and how that will impact WTP in terms of moving forward. The two major milestones due this year are on schedule. The Consent Decree report, associated with M-062-01W, was completed last week, and ORP reported that there were no issues in terms of a major change in status. ORP stated that

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a schedule has been set up for Bechtel to provide delivery of Milestone M-062-49 a month ahead of schedule.

For May 2011, the schedule variance was a positive 0.2 million dollars, and the cost variance was a negative 2.5 million dollars. ORP predicted a neutral to positive overall performance in the next six months. ORP reported that there are no new significant issues. One of the major technical issues is the Large Scale testing and the risk associated with the five vessels. ORP noted that the five vessels at risk have been pared down from 39 vessels. The Hydrogen Piping in Ancillary Vessels (HPAV) is not seen as a risk, and work continues through the design/build and construct to the design until the HPAV model is validated and approved. The Process Vessel Vent (PVV) is the other major technical issue regarding whether any equipment change is needed. PNNL is conducting spray release testing, and Bechtel is doing some testing to support the PVV system.

Ecology inquired about a significant number of entries with one of the vendors for piping that is provisionally released to ship. ORP will determine what the cause or issue is and provide a response to Ecology.

Ecology initiated a discussion regarding the Defense Nuclear Facilities Safety Board (DNFSB) letter about the Low Order Accumulation Model (LOAM) validation testing. ORP stated that there isn't much difference between the concerns flagged by the DNFSB and ORP's engineering concerns. ORP's issue with the letter is that the DNFSB is assuming the LOAM testing will be used for design confirmation and specific safety functions. ORP stated that it is using the LOAM testing as a tool to inform its testing, decision-making, and to assist in closing the M-3 issue. A response is being drafted to the DNFSB that the LOAM testing is not being used for design confirmation or a safety basis use. When the response is completed, ORP will meet with Ecology to provide more detail.

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

ORP reported on the calculation results from the Pretreatment Vessel Vent Process (PVP) aerosol generation. It was anticipated to see a factor of 10x improvement in reduction of solids, but the calculation indicated about a 65 percent reduction. Efforts will continue with the mitigation strategy for PVP/PVV. Ecology asked what cumulative impact would be on the process train and various systems as a result of the 65 percent reduction results. ORP responded that the issue is the carryover of solids from the vessel vent system, the design basis accident event and how fast the solid material carries over and plugs the filters. A certain amount of time is needed during a

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design basis event for the equipment to run without operator action. Currently the filters are loading too quickly with solids, and several phases of actions need to be developed to mitigate the situation. Calculations were reviewed to ensure accuracy, which was achieved, but not to the level that was anticipated. Additional testing is ongoing, and design options are under way for new equipment to be installed, if needed, to reduce the solids.

Ecology inquired about the nature of the challenges with fabrication at Northwest Copper. ORP stated that it is a combination of fabricating what has been planned and also a difference in fabrication. The Pulse Jet Mixer (PJM) nozzles for vessel UFP-1A/1B are being changed, and the nozzles will be long-lead items (approx. 20 weeks) for the material and the casting. The fabrication for the rest of the changes to the PJMs is being changed, and there are additional changes to the PJMs in UFP-1A/1B and seismic changes. NW Copper has indicated there may be some issues with the current schedule, which BNI is working with NW Copper to narrow down their time frame and schedule. Ecology noted that it had been provided a schedule of vessels, and requested a new schedule once the issue with NW Copper is resolved. ODOE asked if there is any concern with the critical path for the vessels. ORP responded that there is a concern, but any impact to the critical path will not be known until the schedule issue is resolved.

Significant Planned Actions in the Next Six Months - ORP noted that vessel

HLP-27A/27B will not be shipped in six months, but it will be completed and then shipped in mid-2012. The vessel won't be needed onsite in the next six months, and the intent is to obtain the best shipping costs.

Issues - Vessel HLP-22 continues to be the critical path; however, efforts with the analysis of the onsite vessels to support vessel modification are staying within the current schedule. It was noted that ORP has formally approved the feed vectors from System Plan 6.

### **High Level Waste**

Significant Past Accomplishments - The 42-inch large ducting pieces that are associated with the C5V 42-inch vertical riser have been installed. The majority of the challenges in the filter cave have been worked through, and progress is going well. A very complicated wall for HLW melter cave #2 has been placed. The progress has been excellent with the fabrication of the filter housings, and a small amount of float for filter housing fabrication has been gained. The first PJV filter housing has been fabricated and will remain at the vendor until it is needed to ship. ORP noted that the filter cave will remain on the critical path until the slab is placed over the top.

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Significant Planned Actions in the Next Six Months - The delivery of the C5V dampers is expected in late July or early August 2011. The C5V filter housings are onsite, and installation will start in August 2011.

**Low Activity Waste Facility (LAW)**

Significant Planned Actions in the Next Six Months - ORP reported that the design substantially complete is targeted for the end of this year. The remaining design work mainly encompasses the offgas system components. The thermal catalytic oxidizer (TCO) design is nearly complete. A fabrication readiness will be performed in August 2011. Bechtel has been asked to accumulate lessons learned, in terms of quality requirements, to ensure they are passed on to the vendor.

Issues - ORP provided an update on the issue with fabrication vendor for the carbon bed adsorber (CBA). During welding of some stiffeners that are required on the outside of the half-inch stainless steel plates in the CBA, the thermal stresses caused the plate to bow out. A senior-level person was sent to the vendor and is residing there until the CBA is ready to ship. A welding engineer was also deployed to provide expertise. Issues have been identified and coordination with the project has enabled the fabrication to proceed. Two of the four plates have been placed back on the CBA with some of the stiffeners. The CBA is not considered critical path.

**Analytical Laboratory (LAB)**

ORP reiterated that although the overall facility complete is 46 percent, the performance measurement baseline for the Lab is roughly 360 million dollars, and about 120 million dollars is in the startup, commissioning, analytical methods development and nuclear safety portion, so the construction aspect is actually much further along. The architectural specialty and the high purity gas subcontracts were awarded. Work is ongoing on the Automatic Sampling System (ASX). Efforts to procure some components for the ASX are under way, and receipt is expected by the end of this year.

**Balance of Facilities (BOF)**

ORP reported that there are several facilities that are about 95 percent complete. The two remaining major facilities are the emergency power facility and the wet chemical storage facility that supports Pretreatment, and they are in the early design stage. ORP stated that by next month the bid for the turbine generator supplier should be awarded. The emergency turbine generator (ETG) will provide power in the event of a loss of offsite power. The turbine generators have

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been proven to have better reliability than the diesel generators. The only significant difference between a turbine and diesel generator is the startup time in accepting an electrical load. With diesel generators it is 12 seconds, and turbines take about 30 seconds to a minute. The key is to consider what electrical load is needed from a safety perspective and how fast it is needed. The critical loads would be in Pretreatment and HLW.

ORP stated that there are a couple of options to mitigate the one minute, roughly, that it takes for the turbines to ramp up. One option is to do a calculation to determine how fast the turbine needs to ramp up, taking into consideration there is already flow in the ventilation system, and the systems are nuclear quality safety class designed for confinement and they should not leak. If the calculation doesn't show mitigation, two areas for uninterruptable power supplies to mitigate that amount of time have been identified. ORP noted that the LAW offgas system currently has uninterruptable power supply for two hours. Ecology expressed the importance of being able to handle a design basis event, and noted that between the uninterruptable power supply and the ETG, it sounds like ORP has defense in depth.

Issues - ORP stated that there are some fabrication issues with the ammonia vessel, which has been delayed about six months, but it is not critical path.

### **3.0 Agreements**

Ecology provided comments regarding the current budget for tank farms and WTP. As a result of funding awarded at a lower level than requested by ORP, discussions between ORP and Ecology are ongoing. The topics of the discussions are whether the activities that are being undertaken are the right activities, whether the activities are the right priority, and whether the right discussions between all the ORP and Ecology technical staff are occurring. Ecology expressed an interest that as the discussions take place, that ORP include Ecology as much as possible and that the two parties work together. Ecology stated that there is a possibility some of the milestones may be impacted by the reduced funding, and if the parties work together it will eliminate any unexpected defaults on milestones.

### **4.0 Items for the Administrative Record**

The following items were provided for review today and will be submitted to the AR: 1) May 6, 2011 meeting minutes for the workshop on selecting the second technology under the Consent Decree; 2) May 25, 2011 meeting minutes for the hose-in-hose transfer line waiver request; 3) June 7, 2011 Tank 241-C-104 retrieval briefing to Ecology; 4) June 14, 2011 Waste Management

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Area-C closure planning meeting summary & action items; 5) draft schedule for WMA-C closure for the June 28, 2011 PMM.

## **5.0 Upcoming Meetings**

The next PMM is scheduled for July 26, 2011.

## **6.0 WTP/Tank Farms Integration**

The ORP representative for WTP and tank farms integration provided an overview of the organization. Staffing has started for startup/commissioning. Activities within the next year will include the ramp-up for turning over facilities, processes associated with training and procedure development, and a nuclear safety licensing strategy. WTP will integrate with tank farms to ensure the waste feed delivery systems will support startup of the facilities. Over the course of startup there will be nine to ten full Operational Readiness Reviews (ORR), and there will be an ORR manager assigned. ORP stated that there will be distinct roles and responsibilities from the ramp-up to cold commissioning as the project moves towards Critical Decision 4 (CD-4). ORP is developing a plan and strategy, which will be available to review with Ecology in the August-September 2011 time frame. The plan will contain an organizational chart.

Ecology asked if the early LAW concept is still active. ORP responded that early LAW is active, and it is being worked through the final decision processes and contract proposals. ORP noted that the budget will present an issue that will have to be dealt with. The phased ORR and cold commissioning is currently in the baseline budget. Ecology asked if the 2016-2017 time frame is still being targeted for some of the activities for early LAW. ORP indicated that the construction schedule is still holding, and hot operations could start in December 2016. It was noted that once a melter is started, it would have to be kept energized. The plan is to start one melter to be able to allow everyone to run through procedures operations, and then put another melter online when Pretreatment is ready. ORP noted that the waste feed will be sized for that process. Ecology expressed some concern regarding what the feed to early LAW will be. ORP responded that technology down-selects are being done in tank farms, utilizing the Environmental Management Advisory Board (EMAB) recommendations report, legal interpretations, and contract interpretations.

Ecology asked how construction complete and turnover complete for the WTP is defined. ORP explained that Bechtel has a formal process for construction complete that ORP will be participating in. There will be a design checklist. A startup organization will accept a facility or

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system or components by conducting inspections and providing a list of issues that need to be addressed. Ecology asked if there is a conceptual flow sheet. ORP stated that there is not one simple flow sheet because the WTP project is so complex, but a review is done by the construction project review team. ORP added that there will be a very detailed and formalized managed system that defines who has ownership at the facility level, the system level, and the component level.

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**Attachment A: Action Tracking**  
**(3 pages including this cover sheet)**

**ORP TPA and CD Action Items  
June 2011**

Open (O)/ Closed (X)	Action No.	Co.	Actionee	Project	Action Description	Date Opened	Status
O	100-208	ORP/ ECY	J. Diediker/ J. Lyon	Tank Farms	Provide Ecology the 222-S lab performance information. These will be tracked at the regular PMMs.	10-26-10	5-12-11: Remains open.
O	100-220	ORP	C. Kemp	Tank Farms	Ecology requested a schedule for any TWRWP changes.	3-22-11	5-12-11: Separate ECY / DOE meeting needed. Related to 100-225 and 100-226.
O	100-221	ORP	C. Kemp	Tank Farms	Discuss the IS-1 Common Vision in the Closure Plan meeting. Asking IAMIT for update.	3-22-11	5-12-11: Meeting 4-27-11 with ORP/RL/ECY. IAMIT update 5-19-11.
X	100-222	ORP	J. Johnson	Tank Farms	Ecology asked for information on the waste feed delivery DQO process; who is attending the meetings, how often, and when.	3-22-11	5-26-11: Document sent to ECY via email. Closed.
O	100-223	ORP	J. Diediker	ORP	Ecology asked for a meeting for information sharing on the secondary HLW waste storage and supplemental treatment (M-045, -047, -062, and -090).	3-22-11	5-12-11: ECY input is requested to determine scope of the meeting.
O	100-225	ORP	C. Kemp	TWRWP	DOE wants to issue a revised Tank Retrieval Technology Roadmap Document and ORP want to resolve 2 <sup>nd</sup> and 3 <sup>rd</sup> technology discussion.	4-26-11	5-12-11: Related to 100-220 and 100-226. Technical experts/team meeting 5-17/18-11.
O	100-226	ORP	C. Kemp	TWRWP	ORP wants to reopen discussion on end of retrieval discussions that include cost benefit analysis and how the finish of a retrieval decision occurs.	4-26-11	4-26-11: Open. Related to 100-220 and 100-225. Technical experts/team meeting 5-17/18-11.
O	100-229	ORP	D. Noyes	WTP/PT	DNFSB Briefing and Draft Reports	4-26-11	5-12-11: Open.

Open (O)/ Closed (X)	Action No.	Co.	Actionee	Project	Action Description	Date Opened	Status
X	100-230	ORP	J. Young	WTP/ HLW	Filter Cave Build-Out	4-26-11	6-28-11: Closed. Young provided presentation.
O	100-231	ORP	G. Olsen	WTP/ LAW	LAW Commissioning Schedule: current baseline high-level overview.	4-26-11	5-12-11: DOE to meet with ECY soon.
O	100-232	ORP	C. Kemp	Tank Farms	Setup meeting with Dennis Faulk (EPA) and ECY regarding M-045-80/-81	5-19-11	5-19-11: Open.
O	100-233	ORP	C. Kemp	Tank Farms	Tank C-104 – need meeting and signed minutes on limits of technology for 1 <sup>st</sup> technology (modified sluicing)	5-19-11	5-19-11: Open.
X	100-234	ORP	J. Johnson	Tank Farms	TSAP RPP-PLAN-43865, Sampling and Analysis Plan for Liquid Solids in 204- AR-TK-1 Catch Tank – ECY wants info on this.	5-19-11	5-23-11: Document sent to ECY via email. Closed.

ORP Project Managers Meeting  
June 28, 2011  
2440 Stevens Ctr.  
Richland, Washington  
**Meeting Minutes Transmittal**

**Attachment B: List of Attendees**

**(3 pages including this coversheet)**

**Sign In Sheet**  
**Managers Monthly Milestone Review Meeting**  
**June 28, 2011**

NAME	ORG	MSIN	PHONE
Woody Russell	ORP	H6-60	373-5227
DAN KNILNE	DOE-ORP	H6-60	392-3064
Dan McJannet	Ely		372-7988
Chris Kemp	ORP	H6-60	509-373-0649
STEVEN CIMON	ODOE		(541)963-0853
Nancy Brinkler	Ecology		3727928
Steve Pfaff	ORP	H6-60	376 2188
Theresa Mandelopoulos	MSA		
Killy Egan	ORP/MSA	H6-60	205-8457
Dabrisha Smith	ORP	H6-60	376-4306
MICHAEL PEOREIN	WRPS		539-5357
Steve Kilroy	WRP S		205-8279
Kathy Higgins	ORP	H6-60	376-3658
Jeremy Johnson	ORP	H6-60	376 1766
Lori Huffman	ORP	H6-60	376-0104
Joni Norton	ORP	"	376-6200
Jeff Kambo	ORP	"	3764997
Kathy Knox	Knox Reporting		946-5535
JAMES LYNCH	ORP		376-4170
Gary Olsen	ORP		438-4707
Delmar Noyes	ORP		376-5166
Jason Young	ORP		376-0375



ORP Project Managers Meeting  
June 28, 2011  
2440 Stevens Ctr.  
Richland, Washington  
**Meeting Minutes Transmittal**

**Attachment C: Presentation Materials**

**Agenda**  
**(2 pages)**

**ORP TPA Project Summary and Handouts**  
**(42 pages)**

**And**

**ORP Consent Decree Project Summary and Handouts**  
**(24 pages)**

**And**

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

**(74 pages including this coversheet)**

ORP TPA Project Managers Meeting  
Tuesday, June 28, 2011  
2440 Stevens Center  
Richland, Washington  
Room 1200, 9AM-12PM

**AGENDA**

**1.0 Administrative Items**

- Previous months' minutes approval

**2.0 Review of the ORP Project Summary**

- Action Item List – per Project Manager
- Key Documents List – per Project Manager

**3.0 Agreements**

**4.0 Items for the Administrative Record**

- Meeting Minutes for the Workshop on Selecting the Second Technology Under the Consent Decree – May 6, 2011
- Meeting Minutes for the Hose-In-Hose Transfer Line (HIHTL) Waiver Request – May 25, 2011.
- Tank 241-C-104 Retrieval Briefing to Ecology – June 7, 2011
- WMA C Closure Planning Meeting Summary & Action Items – June 14, 2011
- Draft Schedule for WMA-C Closure – Handout for June 28, 2011 PMM

**5.0 Upcoming Meetings**

- Next PMM is scheduled for July 26, 2011

<b>Page</b>	<b>Topic</b>	<b>Leads</b>	<b>Time</b>
TPA 1 / CD 1	Statistics / Status	Woody Russell / Dan McDonald / Jeff Lyon	9:00
TPA 6	Single-Shell Tank Corrective Action; M-45, -50, -60	Bob Lober / Jeff Lyon	9:05
TPA 8 / CD 5	Single-Shell Retrieval and Closure Program TPA Milestones Status; M-45-00 series, <ul style="list-style-type: none"> <li>- Tank in Appendix H Status</li> <li>- C-Farm Critical Path</li> <li>- Tanks with Individual Milestones</li> <li>- Double-Shell Tank Closure</li> <li>- 242-A Evaporator Status</li> </ul> SST Retrieval and Closure CD Milestones and TWRWP Status; D-00B series	Chris Kemp / Dan Knight / Jeff Lyon	9:20
TPA 18	SST Integrity Assurance; M-45-91	Jeremy Johnson / Michelle Hendrickson	9:40
TPA 21	In Tank Characterization and Summary	Jeremy Johnson / Michael Barnes	9:45
TPA 22	Tank Operations Contract (TOC) Overview	Kathy Higgins / Jeff Lyon	9:50
TPA 30	Acquisition of New Facilities; M-90-00; M-47-00	Janet Diediker / Jeff Lyon / Dan McDonald	10:05
TPA 31	Supplemental Treatment and Part B Permit Applications; M-62-00, -20, -30, -45	Steve Pfaff / Jeff Lyon / Dan McDonald	10:10
TPA 32	System Plan; M-62-40	Dabrisha Smith / Jeff Lyon / Dan McDonald	10:15
<b>BREAK</b>			
TPA 33 / CD 8	WTP Overall TPA and CD Summary and Milestones Status; M-62-01; M-62-49; D-00A-01, -06, -17	Delmar Noyes / Dan McDonald	10:30
TPA 34 / CD 10	WTP Pretreatment (PT) Facility; D-00A-13, -14, -15, -16, -19	Wahed Abdul / Dan McDonald	10:40
TPA 37 / CD 14	WTP High-Level Waste (HLW) Facility; D-00A-02, -03, -04, -21	Jason Young / Dan McDonald	10:50
TPA 38 / CD 17	WTP Low-Activity Waste (LAW) Facility; D-00A-07, -08, -09	Gary Olsen / Dan McDonald	11:00
TPA 40 / CD 20	WTP Analytical Laboratory (LAB); D-00A-05		11:05
TPA 41 / CD 22	WTP Balance of Facilities (BOF); D-00A-12		11:10

**FINAL**

Office of River Protection  
Tri-Party Agreement  
Project Summary Report  
June 28, 2011



Office of River Protection  
Tri-Party Agreement Milestone Review Meeting  
June 28, 2011

Page	Topic	Leads	Time
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TPA 22	Tank Operations Contract (TOC) Overview	Kathy Higgins / Jeff Lyon	9:50
TPA 30	Acquisition of New Facilities; M-90-00; M-47-00	Janet Diediker / Jeff Lyon / Dan McDonald	10:05
TPA 31	Supplemental Treatment and Part B Permit Applications; M-62-00, -20, -30, -45	Steve Pfaff / Jeff Lyon / Dan McDonald	10:10
TPA 32	System Plan; M-62-40	Dabrisha Smith / Jeff Lyon / Dan McDonald	10:15
<b>BREAK</b>			
TPA 33 / CD 8	WTP Overall TPA and CD Summary and Milestones Status; M-62-01; M-62-49; D-00A-01, -06, -17	Delmar Noyes / Dan McDonald	10:30
TPA 34 / CD 10	WTP Pretreatment (PT) Facility; D-00A-13, -14, -15, -16, -19	Wahed Abdul / Dan McDonald	10:40
TPA 37 / CD 14	WTP High-Level Waste (HLW) Facility; D-00A-02, -03, -04, -21	Jason Young / Dan McDonald	10:50
TPA 38 / CD 17	WTP Low-Activity Waste (LAW) Facility; D-00A-07, -08, -09	Gary Olsen / Dan McDonald	11:00
TPA 40 / CD 20	WTP Analytical Laboratory (LAB); D-00A-05		11:05
TPA 41 / CD 22	WTP Balance of Facilities (BOF); D-00A-12		11:10

### Fiscal Year 2011 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
M-062-40A	Select a Minimum of 3 scenarios	10/31/10	10/27/10										
D-001-00-R46	Quarterly Report	10/31/10	10/28/10										
M-045-100	Submit to Ecology an Agreement Primary Document a Catch Tank "Assumed Leak" Response Plan.	12/28/10	12/28/10										X
M-045-101	Submit to Ecology as an Agreement Primary Document a Report on all Catch Tanks and Pipelines Used for SST Operations	12/28/10	12/28/10										
M-045-91A	Submit an Agreement Change Package with Interim Milestones to Implement the Panel's Recommendations M-045-91	12/27/10	09/27/10										
M-045-92D	Complete Negotiations to Schedule Remaining 4 Additional Barriers	12/31/10	12/07/10										
M-045-92E	Meet Yearly on Performance of Barrier	12/31/10	12/07/10										

### Fiscal Year 2011 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
M-062-20	Complete All 28 Issues in Independent WTP Flowsheet & Throughput Assessment	12/31/10	08/20/10										
M-045-80	Complete those Portions of C-200 Closure Demonstration Plan Necessary to Complete Closure Plan Development for SST System	01/31/11	12/28/10										
M-062-01V	Submit Semi-Annual Project Compliance Report	01/31/11	01/27/11										
D-001-00-R47	Quarterly Report	01/31/11	01/28/11										
M-045-91G-T05	Provide Report of the Visual Inspections of 12 SSTs in Table 3.3	03/31/11	03/11/11										
M-045-92K	Barrier 1 Design/Monitoring Approval from Ecology	06/30/11	05/19/11										
M-036-01A	Submit to EPA & Ecology Lifecycle, Scope, Schedule & Cost for Hanford Site (RL is DOE Lead)	07/25/11		X									

### Fiscal Year 2011 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
M-045-56G	Ecology and DOE Agree to Meet, at a Minimum, Yearly (by July)	07/31/11		X									
M-062-01W	Submit Semi-Annual Project Compliance Report	07/31/11		X									
M-045-91C	Implement DQO Process, Test Plan to Evaluate the Chemistries	09/30/11		X									
M-045-91G-T01	Provide AOR Final Doc. For SSTs on 530,000 Gallon Tanks	09/30/11		X									
M-045-13	Interim Completion of Tank S-112 SST Waste Retrieval and Closure	TBD [In accordance with M-045-84 or -85]		X									
M-045-13E	Complete Negotiations for Interim Milestones for Closure of S-112	TBD [In accordance with M-045-84 or -85]		X									

### Fiscal Year 2012 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
M-062-30	Complete Negotiations Establishing Milestones for Near-Term Actions	10/25/11		X									
M-062-40B	Submit System Plan	10/31/11		X									
M-062-49	Submit Report to Ecology Demonstrating WTP Design Meets Vit. Criteria	10/31/11		X									
M-045-91B	Submit a Sampling and Analysis Plan to Ecology	12/30/11		X									
M-045-92F	Meet Yearly on Performance of Barrier	12/31/11		X									
M-045-91G-T02	Provide AOR Final Doc. For SSTs on 750,000 Gallon Tanks	01/31/12		X									
M-045-91F-T01	Provide Report of the Liquid Leak Rate Assessments	01/31/12		X									
M-045-91D	Submit Analytical Test Plan for Cores Removed from C-107 Plug	03/31/12		X									
M-045-91G-T06	Provide Report of the Visual Inspection of 12 SSTs per criteria in M-045-91G-T05	03/31/12		X									

### Fiscal Year 2012 Tri-Party Agreement Milestone Status

Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abyeance	Dispute Resolution
M-045-92M	Barrier 2 Design/Monitoring Approval from Ecology	06/30/12	05/19/11										
M-047-06	Complete Negotiation of No More Than 2 Interim Milestones	06/30/12		X									
M-045-91F-T02	Provide Report of Liner Failures for SSTs	07/31/12		X									
M-045-91G-T03	Provide AOR Final Doc for SSTs on 1,000,000 Gallon Tanks	09/30/12		X									

## WBS 5.2 Retrieve and Close Single Shell Tanks

**M-045-58, Submit to Ecology for Review and Approval as an Agreement primary document, a phase 2 CMS Master Work Plan, Due: 12/31/08 Status: Complete.**

Master Work Plan is in the Primary document revision process. ORP transmitted its response to Ecology on August 18, 2010. Ecology extended review of comment responses to October 29, 2010. Ecology requested at the October PMM a two week extension from October 27, 2010. ORP acknowledged that Ecology's comment response will be considered in abeyance until DOE-ORP, Ecology, and EPA complete their negotiation of the AIP applicable to Appendix I. Ecology assumed that negotiations would be done December 24, 2010. They have been extended.

**M-045-60, Submit to Ecology for review and approval as an Agreement primary document DOE's Phase 2 RFI/CMS Work Plan and Sampling and Analysis Plan (SAP) for WMA C, Due: 12/31/08, Status: Complete.**

ORP and Ecology continue to meet monthly to identify and manage changes in the work plan. The last meeting was held May 26, 2011. Meeting minutes for the April 28, 2011 sessions have been signed by the parties and have been entered into the TPA administrative record.

**M-045-56G, Complete Implementation of Agreed to Interim Measures, Due: 07/31/11, Status: On Schedule**

**M-045-59, Control surface water infiltration pathways as needed to control or significantly reduce the likelihood of migration of subsurface contamination to groundwater at the SST WMAS (pending the CMS report, milestone M-45-58, and implementation of other interim corrective measures), Due: TBD, Status: On Schedule**

**M-045-61, Submit to Ecology for review and approval as an Agreement primary document a Phase 2 RFI/CMS Report for WMA C, Due: 12/31/14, Status: On Schedule**

**M-045-62, Submit to Ecology for review and approval as an Agreement primary document a Phase 2 Corrective Measures Study Report for WMA C, Due: 06/30/2015, Status: On Schedule**

**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: 9/30/2016, Status: On Schedule.**

**M-045-92K, Barrier 1 Design/Monitoring Approval from Ecology, Due: 6/30/2011, Status: Complete.**

**M-045-92M, Barrier 2 Design/Monitoring Approval from Ecology, Due: 6/30/2011, Status: Complete.** If negotiated, complete installation of 4 additional interim barriers at a rate of one per year, with the first being completed by October 31, 2012. Prior to beginning construction and at least sixteen months before construction is to be complete, DOE will submit to Ecology a final design and monitoring plan for each interim barrier. The barrier design and monitoring plans will be consistent with those developed for WMA T and TY unless DOE and Ecology agree otherwise. Ecology will authorize construction upon approval of these submittals. Ecology

letter, 11-NWP-044, dated May 19, 2011, approved the actions associated with these milestones. ORP sent letter 11-TF-064 to ECY on June 15, 2011 to formally close these milestones.

**M-045-92F, DOE and Ecology will meet yearly to review the monitoring data, agree to changes in monitoring (if needed) and assess the performance of the demonstration barrier,**  
Due: 12/31/2011, Status: On Schedule

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

1. T-Farm interim barrier monitoring continues.
2. TY Interim Barrier monitoring continues.
3. Continued direct push characterization in C Farm at various planned locations. Initiated angled direct push campaign beneath tank C-101
4. Continued the joint process with Ecology and other regulatory agencies and stakeholders to define the inputs, approaches, assumptions and methods that will be used for development of a performance assessment for Waste Management Area C.
5. Continued remediation technology assessments in support of a Corrective Measures Study for WMA C.
6. Completed 90% design review for a surface barrier in 241-SX farm. Ecology transmitted their formal approval of the design to ORP on May 19, 2011.
7. Continued the Data Quality Objective process for the Phase 2 RFI-CMS work plan for WMA A/AX.
8. Issued report, RPP-RPT-49288, on reanalysis of well-to-well resistivity data from C Farm using recent advancements in codes and hardware.
9. Continued analysis of 3-D SGE data set for UPR-200-E-82 in C farm.
10. Deep electrodes placed during direct push campaign in eastern BY farm have been tested and found to have equilibrated with the surrounding soils.
11. Initiated direct push campaign in S-farm in support of a future interim barrier.

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

1. Continue direct push campaign in C Farm.
2. Continue direct push campaign in S-Farm in support of a future interim barrier.
3. Initiate 3-D SGE data collection in eastern BY farm.
4. Complete resistivity data analysis for 3-D SGE characterization of UPR-82 in C Farm.
5. Continue remediation technology assessments in support of a Corrective Measures Study for WMA C.
6. Perform additional updates to WMA C RFI/CMS workplan based on requested changes from Ecology.
7. Initiate construction of the evapotranspiration basin for the interim surface barriers for SX farm, and initiate construction.
8. Complete the Data Quality Objective process for the Phase 2 RFI/CMS work plan for waste management area A/AX.

#### **Issues:**

ORP is in internal discussions in consideration of Ecology's request for additional RFI/CMS milestones.

## SST Retrieval and Closure Program

**M-045-100, Submit as a primary document a Catch Tank "assumed leak response plan,** Due: 12/27/10, Status: In Dispute. Transmitted from ORP to ECY via letter 10-TPD-176 on 12/28/10. Ecology issued a Notice of Violation on May 24, 2011, via letter 11-NWP-038, indicating that the deliverable did not fulfill the milestone. The ORP initiated dispute resolution on June 1, 2011, via letter 11-TF-065.

**M-045-101, Submit to Ecology as a primary document a report on all catch tanks and associated pipelines in the SST System Part A,** Due: 12/27/10, Status: Complete. Transmitted from ORP to Ecology via letter 10-TPD-176 on 12/28/10. Comments were transmitted from Ecology to ORP on May 27, 2011, via letter 11-NWP-048.

**M-045-80, Complete those portions of C-200 Closure Demonstration Plan,** Due: 1/31/2011 Status: Complete. Four primary documents transmitted from ORP to Ecology via letter 10-TPD-166 on 12/28/10. Comments on three of the four documents were transmitted from Ecology to ORP on May 27, 2011, via letters 11-NWP-045, 11-NWP-047, and 11-NWP-051. Ecology requested additional time to review *Radioactive Waste Determination Process Plan for Waste Management Area C Tank Waste Residual* via 11-NWP-049.

**M-045-81, Implement & complete all remaining activities in C-200 Closure Demonstration Plan and provide a report of the results of those activities,** Due: 9/30/2014, Status: On Schedule. The first deliverable specified in the closure demonstration plan was formally transmitted from ORP to ECY via letter 10-TPD-166 on 12/28/10. Comments were transmitted from Ecology to ORP on June 1, 2011, via letter 11-NWP-052.

**M-045-82, Submit complete permit mod requests for Tiers 1, 2, & 3 of the SST,** Due: 9/30/2015 Status: On Schedule

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

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

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

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

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

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

**Significant Past Accomplishments:**

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

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

- See discussions above and related discussions in Consent Decree report.
- Work to discuss and resolve issues and comments associated with deliverables for M-45-100, 101, 80, and 81.

**Issues:**

- M-045-100 Notice of Violation (NOV): Ecology has given ORP an NOV (letter 11-NWP-038, dated 5/24/11) for a determination that the primary document for the Single-Shell Tank System Catch Tank Assumed Leak Response Plan (RPP-RPT-48438, Revision 0) does not fulfill the intent of milestone M-045-100. ORP initiated dispute resolution on June 1, 2011, via letter 11-TF-065.
- Tank Farm Soil Cleanup: Unsigned draft Tentative Agreement and unsigned draft Change Packages C-11-01 (for WMA C soil to be addressed as RCRA/CERCLA Past Practice Unit) and M-45-11-02 (title changes to M-045-61 and -62 to allow CAD/ROD process) were presented to Ecology on 03/29/11. Ecology preference is to address soils through a 3116 and RCRA process.
- The Richland Office of USDOE has proposed an IS-1 alternate to the planned deliverable, as we understand the "IS-1 Common Vision" discussion on 1-18-11. IS-1 requires the delivery of an RFI/CMS that would include Tank Farm Pipelines. This should be included in the critical path as well.
- C-106 Closure Plan approval and SST radiological Categorical Notice of Construction (NOC) Phase 3 (closure) and a toxics categorical NOC application are pending completion of the Tank Closure and Waste Management Environmental Impact Statement (EIS) and associated Record of Decision (ROD); forecast completion for the final EIS is in the Winter of 2011.
- USDOE is delaying the final numeric modeling supporting the WMA C performance assessment to align the timing with completion of the Tank Closure and Waste Management EIS. Impacts of this delay are being incorporated into the critical path schedules.

## **Tank in Appendix H. Status - Single Shell Waste Retrieval Criteria**

### **Tank 241-C-106**

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

None

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

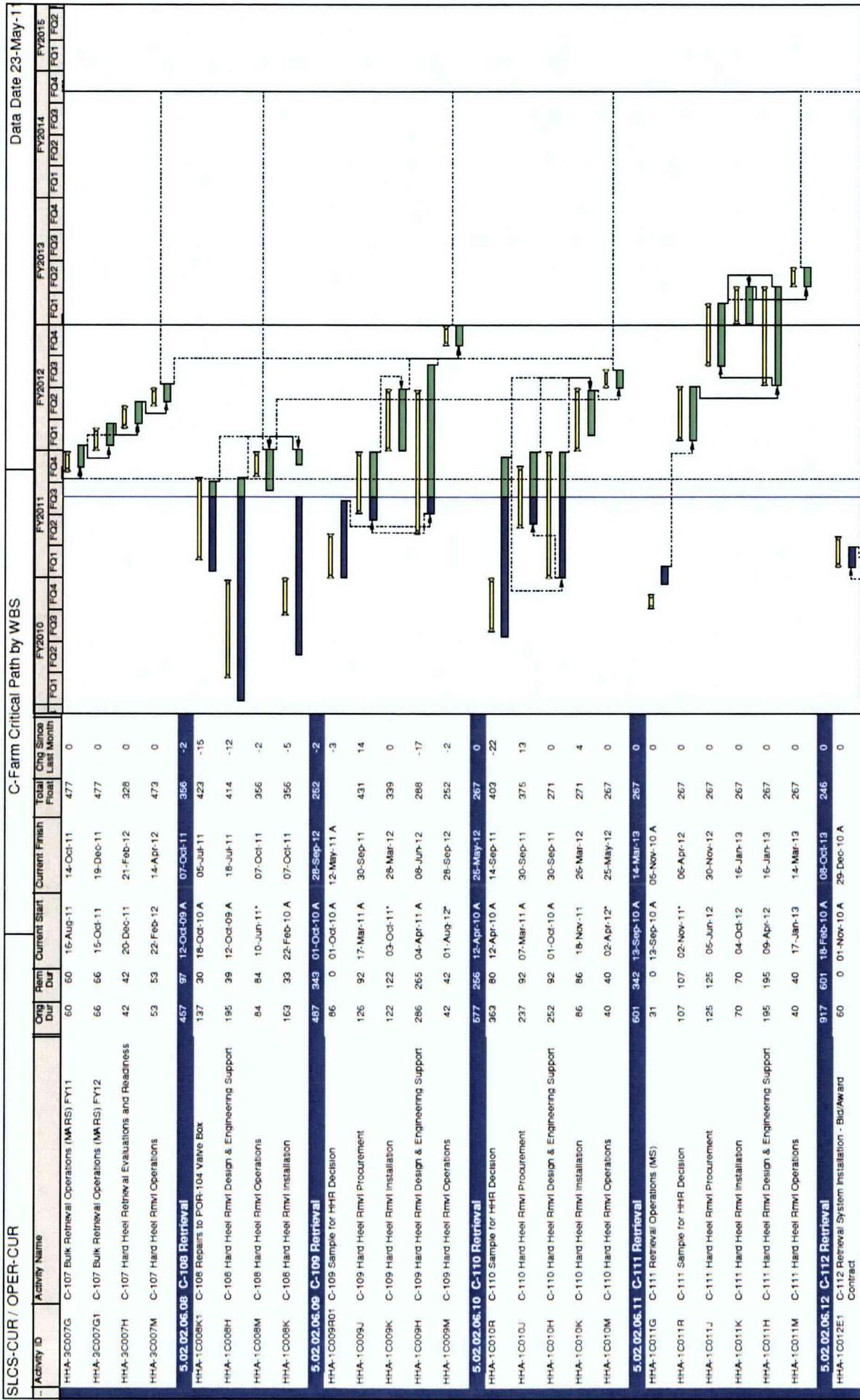
- Continue U.S. Nuclear Regulatory Commission (NRC) review of the C-106 exception request. A Request for Additional Information (RAI) was received from the NRC in February 2009. (It has been discussed with the NRC that much of the additional information requested is dependent upon development of C-Farm residual waste PA and, therefore, cannot be provided until the PA is published.)

#### **Issues:**

None









## Tank Retrievals with Individual Milestones

### Tank 241-A-103

**M-045-15, Completion of Tank A-103 SST Waste Retrieval**, Due: 9/30/22 Status: On schedule. Recent change package M-45-11-04 switched tank S-102 to A-103 with a completion date of 09/30/2022 for M-045-15.

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

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

#### Significant Past Accomplishments:

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

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

None

#### Issues:

None

### Tank 241-S-112

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

**M-045-13E, Complete Negotiations for Interim Milestones for Closure of S-112**, Due: TBD Status: On Schedule as part of M-045-84 and M-045-85.

#### Significant Past Accomplishments:

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

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

None

#### Issues:

None

## **Complete Closure of Double Shell Tanks**

**M-042-00A, Complete closure of all double shell tank farms, Due: TBD, based upon completion of retrieval under M-62-45 plus 5 yrs but no later than 9/30/2052 Status: On Schedule**

### **Significant Past Accomplishments:**

None

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

None

### **Issues:**

None

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

### 242-A Campaign strategy:

One (1) cold run (utilizing water only) and two (2) waste processing campaigns were completed in FY2010. No additional campaigns are anticipated in CY2011 due to ongoing 242-A and Tank Farm Life Extension and ARRA funded facility upgrades. The 242-A Campaign Strategy for FY2010 through FY2015 depicted below has been updated based on ORP-11242, River Protection Project Plan, Revision 5, and ongoing schedule integration efforts.

Fiscal Year	Campaign No.	Feed Source	Slurry Tank	Comments
FY10	10-01	AW-106	AW-106	Campaigns 10-01/10-02 were performed back-to back starting in late August and completing in early October 2010. Campaign 10-02 was an acceleration of previously planned Campaign 11-01.
FY10	10-02	AW-106	AW-106	
FY11	NA	NA	NA	No campaign planned in FY11 due to ongoing 242-A and Tank Farm facility life extension and ARRA funded upgrades.
FY12	12-01	AP-107 AZ-102	AP-104 AP-107	Estimated start June 2012. Anticipates blending AZ-102 high cesium concentration with AP-107 waste. May require two (2) passes to achieve waste volume reduction.
FY12	12-02	AP-107 AZ-102	AP-107	Estimated start August 2012. Anticipates blending AZ-102 high cesium concentration with AP-107 waste. May require two (2) passes to achieve waste volume reduction.
FY13	13-01	AW-106	AP-107	Estimated start March 2013. Two (2) passes required.
FY13	13-02	AZ-101 AN-101 AW-106	AP-107	Estimated start September 2013. Two (2) passes required.
FY14	14-01	AN-106 AZ-102 AW-106	AP-107	Estimated start March 2014. Two (2) passes required.
FY15	15-01	AY-101 AZ-102	AP-107	Estimated start March 2015. Three (3) passes required.
FY15	15-02	AY-101	AP-107	Estimated start August 2015. Four (4) passes required.

## SST Integrity Assurance

**M-045-91G-T05, Provide to Ecology a report documenting and evaluating the visual inspection of 12 SSTs per the criteria listed in Table 3.3 in RPP-PLAN-46847, Rev.0, Due: 3/31/2011, Status: Complete 03/11/11 (Letter 11-TF-039). Ecology completed review and sent an approval letter stating ORP had met this milestone on 5/12/2011.**

**M-045-91C, implement the DQO process to develop and provide Ecology a Test Plan to evaluate the chemistries as specified in RPP-RPT-43 116. Rev 0, Due: 9/30/2011, Status: On Schedule**

**M-045-91G-T01, Provide to Ecology the Structural Analyses of Record final documentation for SSTs for 530, 000 gallon tanks (B, BX, C, T and U Farms), Due: 9/30/2011, Status: On Schedule**

**M-045-91B, Submit a Sampling and Analysis Plan to Ecology for the sampling of sidewall cores from tank 241-A-106 or alternate tank approved by Ecology, Due: 12/30/2011, Status: On Schedule**

**M-045-91F-T01, Provide to Ecology as a HFFACO secondary document a report evaluating the applicability to Hanford SSTs of the liquid leak rate assessments of sludge and salt-cake from the Savannah River Site, Due: 1/31/2012, Status: On Schedule**

**M-045-91F-T02, Provide to Ecology as a HFFACO secondary document a report evaluating the common factors of liner failures for SSTs that have leaked and will provide recommendations as appropriate, such as enhanced Leak Detection, Monitoring, and Mitigation, Due: 7/31/2013, Status: On Schedule, date changed with M-45-11-05 Change Control Form.**

**M-045-91G-T02, provide to Ecology the Structural Analyses of Record final documentation for SSTs for 750,000 gallon tanks (BY, S, TX and TY Farms), Due: 1/31/2012, Status: On Schedule**

**M-045-91D, Submit to Ecology an analytical test plan for the cores removed from the C-107 plug, Due: 3/31/2012, Status: On Schedule**

**M-045-91G-T06, Provide to Ecology a report documenting and evaluating the visual inspection of 12 SSTs per the criteria in M-045-91G-T05, Due: 3/31/2012, Status: On Schedule**

**M-045-91G-T03, Provide to Ecology the Structural Analyses of Record final documentation for SSTs for 1,000,000 gallon tanks (A, AX and SX Farms), Due: 9/30/2012, Status: On Schedule**

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

**M-045-91F-T03, Provide to Ecology, as a HFFACO secondary document a report assessing the feasibility of testing for ionic conductivity between the inside and outside of SSTs, Due: 5/31/2013, Status: On Schedule**

**M-045-91F-T04, provide to Ecology, as a HFFACO secondary document, a report on the 100-series single-shell tanks which have been or will be identified as having leaked in RPP-32681, Rev 0, Due: 7/31/2013, Status: On Schedule. M-045-91E, Provide to Ecology a compilation of the Single-Shell Tank farms dome deflection surveys every two years, beginning 9/30/2013, Due: 9/30/2013, Status: On Schedule**

**M-045-91G-T04, provide to Ecology the Structural Analyses of Record final documentation for SSTs for 55,000 gallon tanks (B, C, T and U Farms), Due: 10/31/2013, Status: 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 -T04, Due: 12/31/2013, Status: On Schedule**

**M-045-91G, Provide a Summary Conclusions Report of Structural Analysis of Record (AOR) for SSTs, Due: 4/30/2014, 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 alternate tank, Due: 9/30/2014, Status: On Schedule**

**M-045-91H, Submit a change package (if deemed necessary by DOE and Ecology) to establish additional milestones based on information obtained from the actions in the preceding M-045-91 series milestones to date, Due: 7/31/2015, Status: On Schedule**

**M-045-91I, Provide to Ecology an IQRPE certification of SSTs structural integrity for the remainder of the mission, or for such time as the IQRPE believes he/she can reasonably certify, Due: 9/30/2018, Status: On Schedule**

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

- M-045-91G-T05: Complete 03/11/11 (Letter 11-TF-039) Approved by Ecology 5/12/2011
- M-045-91B: Draft DQO report sent to Ecology 04/20/11. Comment resolution meeting held May 5/9/2011. All comments satisfactorily resolved.
- M-045-91D: Draft Analytical Test Plan for Tank C-107 dome core analyses were submitted to Ecology 5/5/2011. Ecology provided comments 5/11/2011 and authorized core samples to be shipped to the lab.

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

- M-045-91B: Finalized DQO will be delivered with completion of M-045-91D in June. SAP is planned to be submitted to Ecology 07/2011 (approximately 5 months in advance). Due

12/30/11.

- Complete milestone M-045-91C, implement the DQO process to develop and provide Ecology a Test Plan to evaluate the chemistries as specified in RPP-RPT-43 116. Rev 0, Due: 9/30/2011. The DQO report is being drafted following Ecology review and comment.
- Complete milestone M-045-91F-T03, plan to provide Ecology, Ionic Conductivity Feasibility Report in July 2011. Due: 5/31/2013.
- M-045-91F-T04: Leak assessments are ongoing with meetings every other week through 2012.
- Complete milestone M-045-91G-T01, Provide to Ecology the Structural Analyses of Record final documentation for SSTs for 530, 000 gallon tanks (B, BX, C, T and U Farms), planned submittal to Ecology in July 2011 Due: 9/30/2011.
- Complete milestone M-045-91G-T02, Provide to Ecology the Structural Analyses of Record final documentation for SSTs for 750, 000 gallon tanks (BY, S, TX, and TY Farms), planned submittal to Ecology in October 2011. Due: 1/31/2012.
- Demonstrate the ability to obtain concrete core samples to support M-045-91B-T01. The demonstration will be performed outside the tank farms at a cold test site.
- Complete M-045-91D-T01 in 11/ 2011. Due:5/31/2013

**Issues:**

None.

## In Tank Characterization and Summary

For the period from May 1 – May 31, 2011:

### Accomplishments:

- Completed tank 241-AP-105 corrosion mitigation grab sampling on May 4, 2011
- Completed tank 241-AY-101 corrosion mitigation grab sampling on May 18, 2011
- Completed revision 1 of the data package RPP-RPT-46182, *Final Report for Tank 241-AZ-101 Liquid Grab Samples in Support of the Corrosion Mitigation Program* on May 2, 2011.
- Completed revision 0 of the data package RPP-RPT-48654, *Final Report for the Analysis of Waste Solids in Tank 241-C-110* on May 4, 2011.
- Completed Revision 1 of RPP-10226, *Direction for Disposition of Tank Waste Samples in Archive* on May 18, 2011.
- Completed revision 1 of RPP-RPT-43992, *Derivation of Best-Basis Inventory for Tank 241-AN-106 as of April 1, 2011* for the FY11 quarter 3 BBI update on May 5, 2011.

### Planned Action within the next Six Months:

- Tank Sampling
  - Tank 241-C-104 off riser sampling scheduled for October 2011.
  - Tank 241-AW-106 evaporator samples scheduled for November 2011.
  - Tank 204-AR-TK-1 compatibility samples scheduled for July 2011
  - Tank 241-C-108 hard heel dissolution samples scheduled for August 2011.
  - Tank 241-C-108 off riser sampling scheduled for November 2011.
- BBI Updates
  - Nine tank updates are planned for FY11 Quarter 3.
    - Two tanks are complete and the information sent to BBI users.
    - All seven of the other tanks have been started.
- Data Quality Objectives (DQO)
  - Complete revision 0 of the 244-CR Vault tanks in June 2011.
  - Complete revision 3 of the PCB Management DQO in July 2011.
  - Complete revision 0 of the SST Corrosion Test DQO in June 2011.

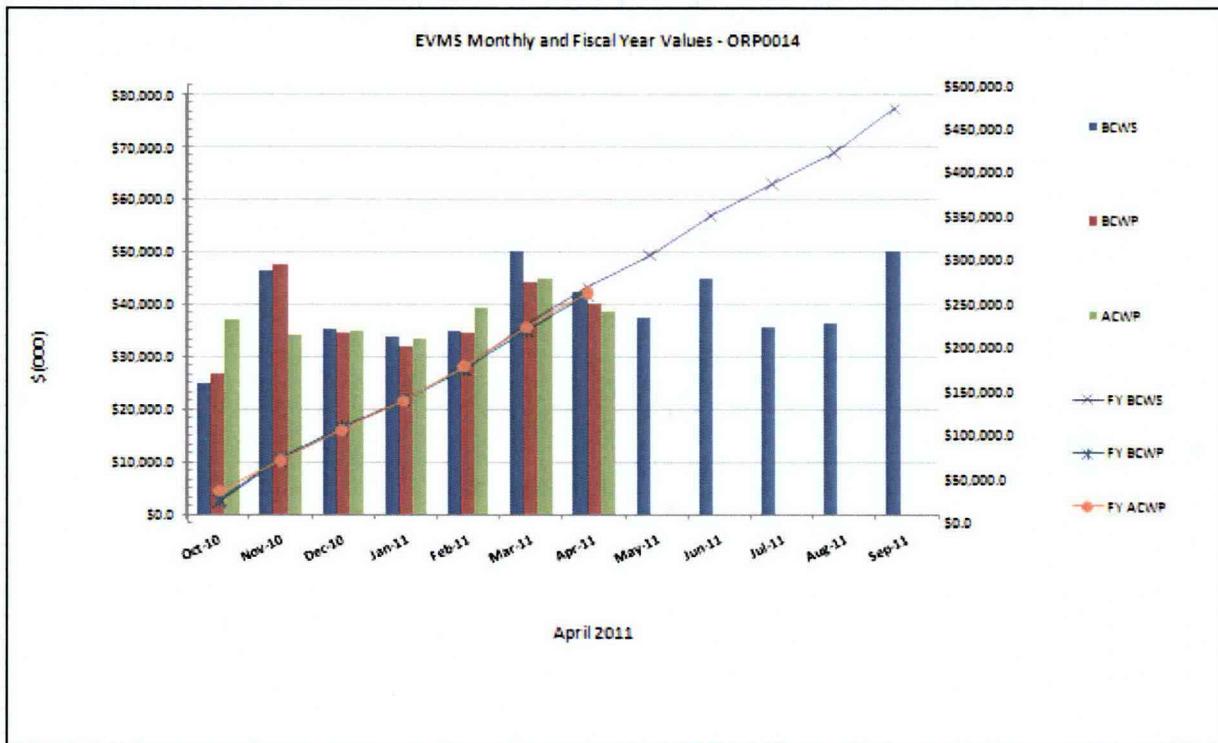
### Issues:

- None

## TANK OPERATIONS CONTRACT (TOC) OVERVIEW

### Project Performance

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



Earned Value	BCWS	BCVP	ACWP	SPI	CPI	FY BCWS	FY BCVP	FY ACWP	FY SPI	FY CPI
Oct-10	\$24,918.8	\$26,782.0	\$37,083.6	1.07	0.72	\$24,918.8	\$26,782.0	\$37,083.6	1.07	0.72
Nov-10	\$46,528.0	\$47,510.9	\$34,301.0	1.02	1.39	\$71,446.8	\$74,292.9	\$71,384.5	1.04	1.04
Dec-10	\$35,469.5	\$34,558.3	\$35,056.5	0.97	0.99	\$106,916.3	\$108,851.1	\$106,441.0	1.02	1.02
Jan-11	\$33,862.5	\$32,115.2	\$33,376.8	0.95	0.96	\$140,778.8	\$140,966.4	\$139,817.8	1.01	1.00
Feb-11	\$35,157.1	\$34,800.5	\$39,288.6	0.98	0.88	\$175,935.9	\$175,766.8	\$179,106.4	0.99	0.98
Mar-11	\$50,219.3	\$44,202.5	\$45,098.7	0.88	0.98	\$226,155.2	\$219,969.3	\$224,205.1	0.97	0.98
Apr-11	\$42,344.0	\$40,218.8	\$38,772.0	0.95	1.04	\$268,499.2	\$260,188.1	\$262,977.1	0.97	0.99
May-11	\$37,492.6					\$305,991.8				
Jun-11	\$44,995.8					\$350,987.6				
Jul-11	\$35,810.2					\$386,797.8				
Aug-11	\$36,303.2					\$423,101.0				
Sep-11	\$50,232.8					\$473,333.8				

<b>CTD</b>	<b>\$1,028,554.8</b>	<b>\$1,013,421.9</b>	<b>\$955,100.0</b>	<b>0.99</b>	<b>1.06</b>
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**The unfavorable current month (CM) schedule variance (SV) is (\$2,125k). The SV for the base contract work is (\$776k) and the Recovery Act (RA) work is (\$1,349k). The major contributors to the CM SV are shown below:**

#### **CLIN 1 - Base Operations (\$2,089k)**

- RA – 242-A Evaporator Upgrades, due to a delay in vendor delivery and installation of the exhaust skid. The vendor was impacted by late long-lead procurements and resolution of issues during the factory acceptance test. The exhaust skid was delivered in May.
- DST Integrity Project, due to delays in the double shell tank (DST) encasement pressure test in the AZ-01A pit driven by the late removal of jumpers and a failed pit coating inspection (recovery expected in May). Also, a late start in the AN-101 ultrasonic testing (UT) support driven by the crew working on predecessor activities for the AN-107 UT support, which was impacted by farm priorities (recovery expected in June).

#### **CLIN 2 - Retrieval and Closure SST's \$153k**

- C-107 Retrieval due to delays in the installation of the Mobile Arm Retrieval System (MARS) driven by system improvements and turnover documentation
- C-112 Retrieval due to delays in system installation related to tool development and removal of the polyvinyl liner from riser 6

The favorable CM SV above is offset by the following favorable variances:

- C-108 Retrieval due to recovery on the hard heel removal installation activities including the POR-104 exhauster valve box and early receipt of flexible jumpers, and the acceleration of post-retrieval sampling and analysis related to procurement of an Off-Riser Sampling System
- C-109 due to recovery on the setup and installation of the ORSS and completion of the sampling activity and shipment to the laboratory

#### **CLIN 3 - WFD/Treatment Planning/DST Retrieval/Closure (\$233k)**

- RA – Re-locatable Mixer Pumps, due to delays in the preparation of an acceptable 90 percent vendor design package for a mixer pump; rework/re-submittal is expected in May.

The unfavorable CM schedule variance (SVs) above are partially offset by the following favorable variances:

- AW Trailer Complex, due to acceleration of training and procurement of office furniture.
- RA- Exhauster Upgrades, due to the acceleration of the SY Farm exhauster design and the AP Farm Exhauster Design.

**The unfavorable contract to date (CTD) schedule variance (SV) of (\$15,133k) is driven by the following projects:**

#### **CLIN 1 - Base Operations, (\$7,340k)**

- RA-242-A Evaporator Upgrades due to delays in receiving the exhaust skid from the fabricator, which delayed installation
- DST Integrity Project, Delays on the Encasement Pressure Checks in the AZ-01A pit
- RA-Remove Obsolete Equipment due to delays in field work for the AN/AW Exhausters
- RA Sampling Operations due to fabrication delays on core sampling platform due to design changes

**CLIN 2 – Retrieval and Closure SST's, (\$5,735k)**

- C-107 Retrieval delays in completing the MARS resulting from addition system improvements and the related turnover documentation
- C-Farm Infrastructure DST Receiver Tank 3 due to the change in designation of DST #3 receiver tank from AY-101 to AN-106 in order to utilize existing slurry distributor, and assembly
- C-108 Retrieval engineering and plant forces resources directed to higher priorities, delaying fabrication of key equipment, and modifications, repairs, and inspections needed to existing equipment prior to installation of new equipment
- SX Farm Infrastructure HVAC resources assigned to higher priority work

**CLIN 3 – WFD/Treatment Planning/DST Retrieval/Closure (\$1,582k)**

- RA-AZ Condensate Line Upgrade due to increased design efforts to support revised seismic qualification for the AZ-02A pit jumper, inability to locate a qualified vendor to NQA-1 standards, delays in procurement/fabrication and delays in fieldwork execution of the AZ Condensate Line Upgrades project due to the ventilation outage in the farm
- AY-102 Tech Maturation Mixing/Sampling Demonstration delays in the master agreement has caused delays in the “Design Services for Removal and Installation of Equipment for AY-102 In-Tank Upgrades” contract
- Waste Reduction Technology Demonstration delayed contract award in FY10 related to extensive legal reviews, additional delays for engineering reviews of procurement specification documents, and delays in approving procurements due to design changes.
- WFD PE Flow Sheet due to deferral of selected work scope into FY12
- RA-DST Feed Delivery Safety Analysis due to a two month delay in releasing the process hazards analysis (PrHA) due to higher priorities

**The favorable contract to date (CTD) cost variance (CV) of \$58,322 is due to the following projects:**

**CLIN 1 – Base Operations, \$24,676k**

- SST Safe Storage & Operations continuous labor and subcontract under runs because work was not performed as planned, partially offset with maintenance overruns
- 222-S Roof Replacement savings due to less material removal, efficient equipment and less hazardous waste
- RA-Remove Obsolete Equipment required fewer hours to prepare engineering documents to support the Demolish AN and AW Exhausters Projects
- RA-DST Valve Assembly Upgrades due to reduced pricing negotiations with the vendor for fabrication work
- RA Electrical Upgrades saving by consolidating similar field tasks
- RA-Drawing Reconstitution efficiencies gained through tank farm walk downs
- DST Infrastructure Upgrades on drawing/evaluations being performed for less than estimated
- RA-SY Farm Upgrades due to reduced engineering support on the Prefabricated Pump Pit Leak Detector and disposal of the SY Farm P-28 exhauster disposal costs
- AY/AZ Farm Upgrade Project due to negotiation of contract with the supply chain, the technical analysis and labor and contract efficiencies
- Liquidations due to rate true-up for FY09 and FY10
- Facility and Property Management due to saving from unfilled positions and slow ramp-up in FY09

- Information Resource Management due to receiving office equipment from Yucca Mountain site at a significant savings

#### **CLIN 2 – Retrieval and Closure, \$7,175k**

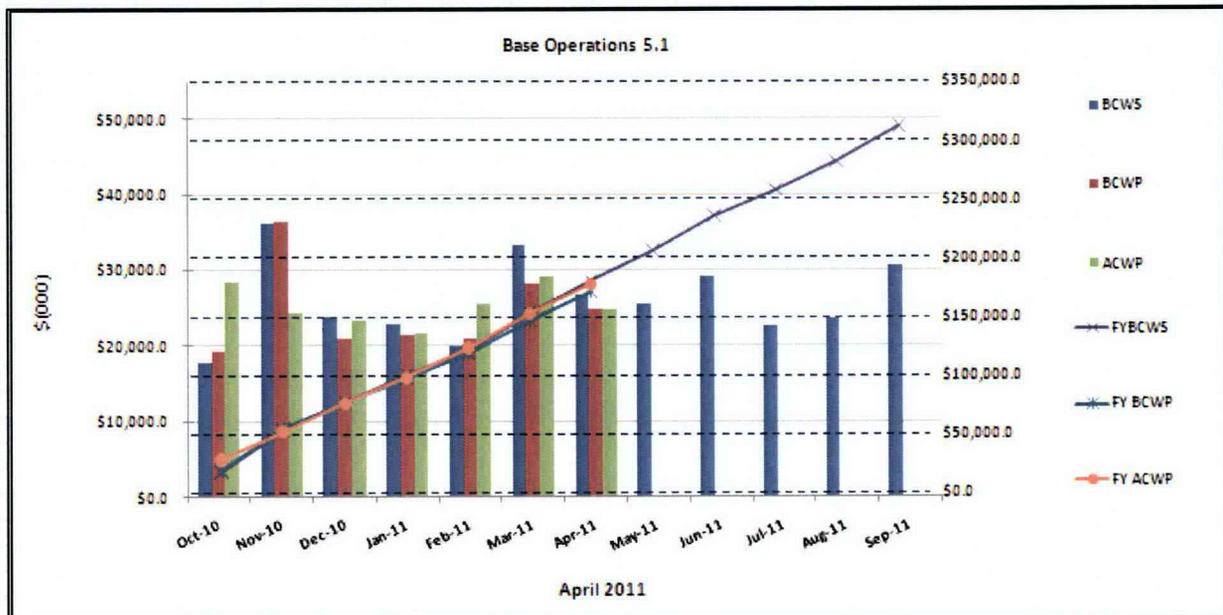
- Hose in Hose Transfer Line disposition efficiencies
- Catch Tank & Pipeline Reporting due to efficiencies gained by using direct labor rather than contract labor
- Interim Barrier efficiencies realized as part of the SGE activities by using multiple depth electrodes for data collection
- RA-Technology Development savings with the MARS vacuum contract from previous experience and designs
- RA-Interim Barrier Construction efficiencies due to the barrier material was significantly less than the spray on polyurea
- C-110 Retrieval due to efficiencies captured during C-110 waste retrieval operations because the amount of slurry solids was greater than the model predicted
- C-Farm Infrastructure DST Receiver Tank 3 due to efficiencies realized from changing the designation of the receiver tank from AY-101 to AN-106. Current infrastructure to the AN Farm avoids duplicating efforts to the AY Farms, which saves resources and reduces the amount of materials and equipment to purchase and install
- C-112 Retrieval due to efficiencies in project management and detail design support activities from using previous experience
- A/AX Common Infrastructure due to efficiencies realized from utilizing experienced, specialized engineers, co-location of the team for enhanced collaboration, and the use of relevant C Farm data
- C-108 Retrieval due to efficiencies in the training and mock up activities and acquisition of the samples
- Closure Demonstration due to less direct labor required to complete the Closure Demo Project Management project, Closure Demonstration in-stabilization project, and the diversion box feasibility study
- C-Farm Enhancements due to labor efficiencies achieved in design and procurement efforts and offsite trailer fabrication from using previous experience

#### **5.3 - WFD/Treatment PLNG/DST Retrieval/Closure, \$25,403k**

- WFD PE/Flow Sheet due to minimal contract support until the scope was established
- WFD Technical Baseline saving on technical work being completed with less engineering hours than estimated
- RPP System Plan efficiencies gained through G2 training, HTWOS model improvements and completed tasks in parallel
- DST Feed Delivery saving on staffing and design activities
- AW Cob Isolation efficiencies gained by awarding to an experienced contractor and requiring fewer resources than planned
- RA-SY Transfer Line Upgrades saving gained in the field, reduced duration and resources
- Hanford IHLW Storage Project Support on labor efficiencies
- Integrated Disposal Facility Glass Testing savings associated with executing glass dissolution modeling
- Interim Hanford Storage Facility Project Mgmt due to labor efficiencies
- WTP Interface Management delayed hiring project stall in the first quarter due to utilization of highly trained individuals with applicable experience
- RA-Secondary Waste Form Testing contractors completing DM-10 testing in parallel, labor efficiencies associated with Ceramicrete and FBSR test plan development

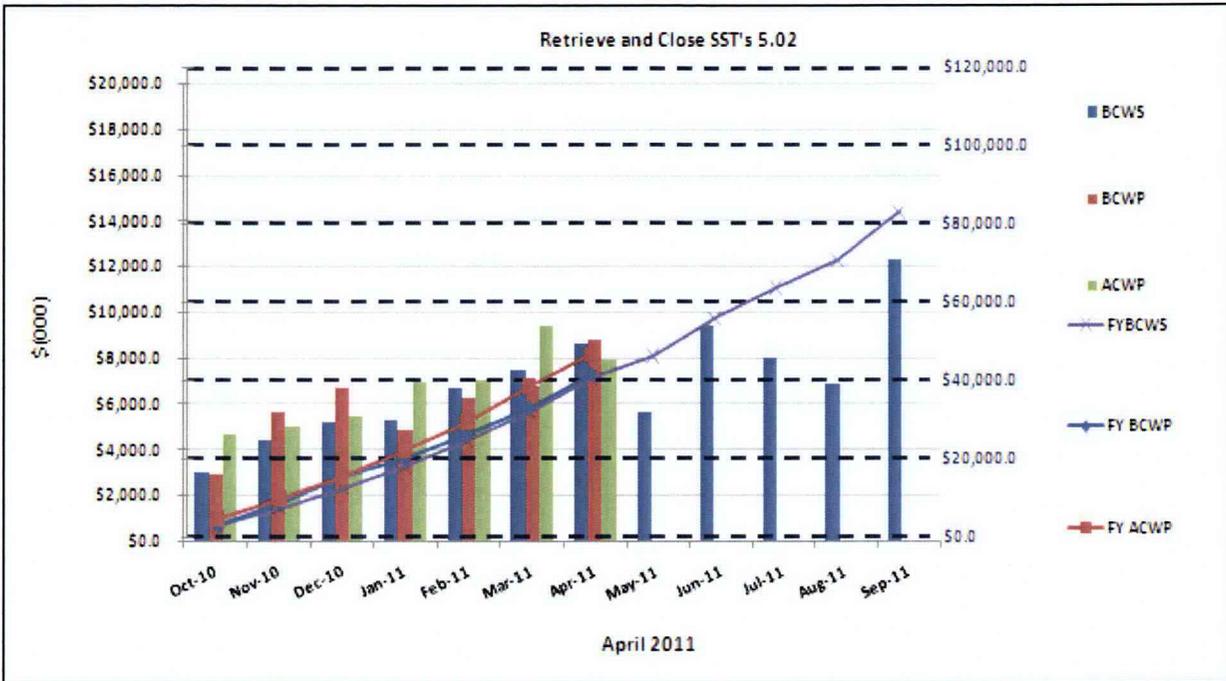
- Secondary Waste Treatment Project Mgmt and Support working with fewer resources than planned
- RA-WFE Specific Site & Regulatory Interfaces contract savings
- RA-SN-278/SN-279 and SN-285/SN-286 Transfer Line due to material and vendor labor efficiencies realized during fabrication of the wall penetrations and refurbished pipe and lower subcontract costs from using less expensive direct engineering resources to complete the design of the SY transfer line upgrades
- Tank Waste Database Management due to the use of fewer and lower cost resources to complete the Tank Waste Information Network Systems (TWINS) database diagnostic activities.
- RA-WFE Application Viability due to efficiencies from completing the SST consolidation pilot-scale testing, test plans, and procedures in parallel; lower rates for subcontract work; and less labor than planned. The work scope is complete.

Office of River Protection (ORP-0014) Fiscal Year 2011 - Monthly EVMS



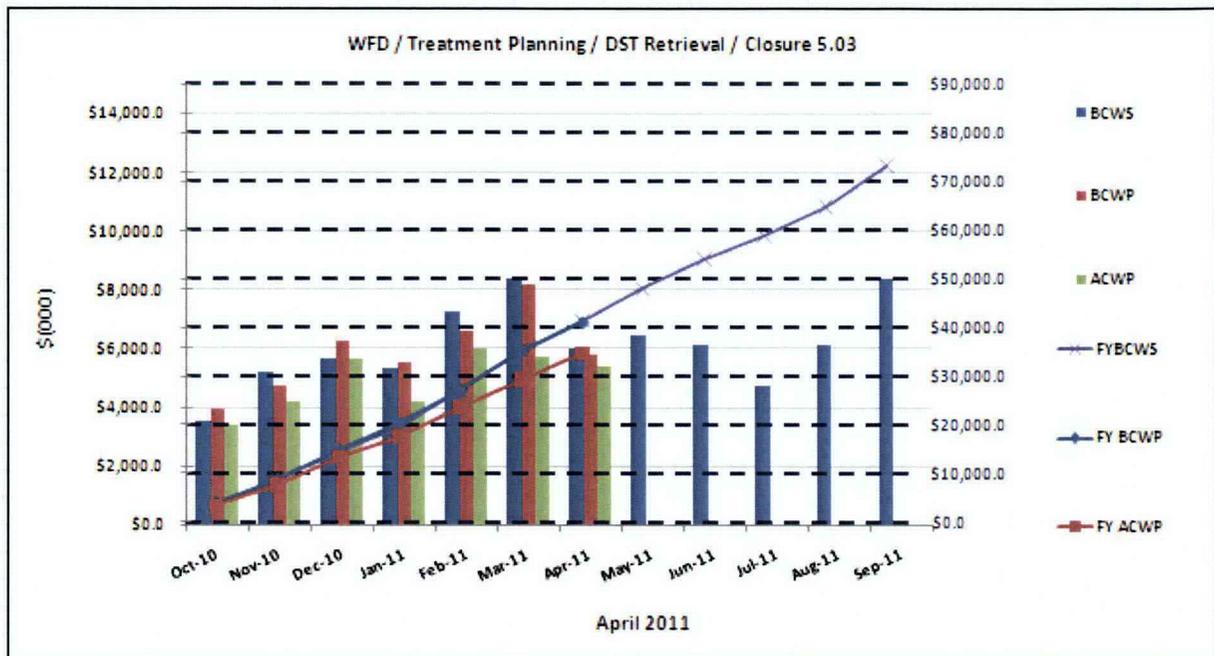
Earned Value Month	BCWS	BCVP	ACVP	SPI	CPI	FYBCWS	FY BCVP	FY ACWP	FY SPI	FY CPI
Oct-10	\$17,777.2	\$19,285.1	\$28,549.6	1.08	0.68	\$17,777.2	\$19,285.1	\$28,549.6	1.08	0.68
Nov-10	\$36,143.1	\$36,366.3	\$24,452.2	1.01	1.49	\$53,920.3	\$55,651.4	\$53,001.8	1.03	1.05
Dec-10	\$23,775.6	\$20,995.7	\$23,448.8	0.88	0.90	\$77,695.9	\$76,647.1	\$76,450.6	0.99	1.00
Jan-11	\$22,876.6	\$21,370.0	\$21,705.1	0.93	0.98	\$100,572.5	\$98,017.1	\$98,155.7	0.97	1.00
Feb-11	\$20,031.0	\$21,023.0	\$25,607.6	1.05	0.82	\$120,603.5	\$119,040.1	\$123,763.3	0.99	0.96
Mar-11	\$33,329.2	\$28,292.6	\$29,059.6	0.85	0.97	\$153,932.7	\$147,332.7	\$152,822.9	0.96	0.96
Apr-11	\$26,817.9	\$24,728.9	\$24,769.1	0.92	1.00	\$180,750.6	\$172,061.6	\$177,592.0	0.95	0.97
May-11	\$25,547.4					\$206,298.0				
Jun-11	\$29,191.6					\$235,489.6				
Jul-11	\$22,640.0					\$258,129.6				
Aug-11	\$23,707.6					\$281,837.2				
Sep-11	\$30,504.9					\$312,342.1				

CTD	\$693,734.5	\$686,394.9	\$661,718.6	0.99	1.04
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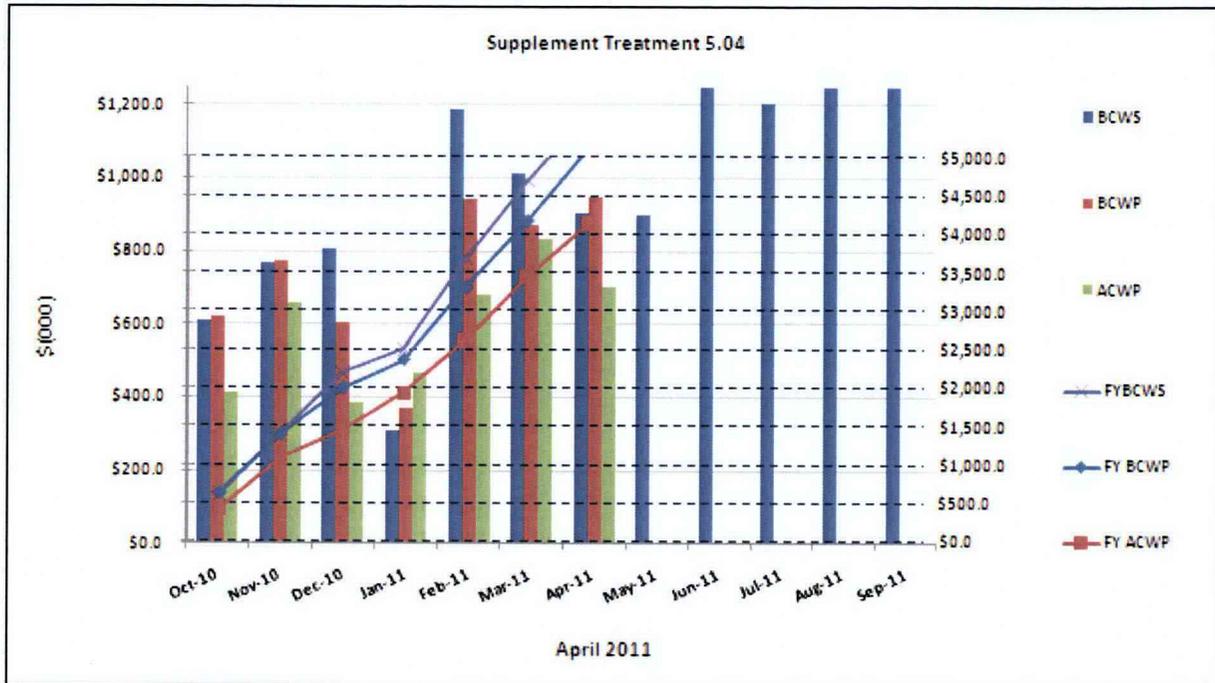
Earned Value Month	BCWS	BCVP	ACVP	SPI	CPI	FYBCWS	FY BCVP	FY ACVP	FY SPI	FY CPI
Oct-10	\$2,991.6	\$2,932.6	\$4,707.6	0.98	0.62	\$2,991.6	\$2,932.6	\$4,707.6	0.98	0.62
Nov-10	\$4,412.7	\$5,622.7	\$5,006.7	1.27	1.12	\$7,404.3	\$8,555.3	\$9,714.3	1.16	0.88
Dec-10	\$5,209.7	\$6,682.7	\$5,494.0	1.28	1.22	\$12,614.0	\$15,238.0	\$15,208.3	1.21	1.00
Jan-11	\$5,310.0	\$4,820.2	\$6,975.6	0.91	0.69	\$17,924.0	\$20,058.2	\$22,183.9	1.12	0.90
Feb-11	\$6,670.0	\$6,253.2	\$7,006.6	0.94	0.89	\$24,594.0	\$26,311.4	\$29,190.5	1.07	0.90
Mar-11	\$7,513.3	\$6,825.3	\$9,447.6	0.91	0.72	\$32,107.3	\$33,136.7	\$38,638.1	1.03	0.86
Apr-11	\$8,613.5	\$8,766.1	\$7,914.2	1.02	1.11	\$40,720.8	\$41,902.8	\$46,552.3	1.03	0.90
May-11	\$5,638.9					\$46,359.7				
Jun-11	\$9,426.5					\$55,786.2				
Jul-11	\$8,022.8					\$63,809.0				
Aug-11	\$6,911.2					\$70,720.2				
Sep-11	\$12,322.2					\$83,042.4				

<b>CTD</b>	<b>\$201,990.8</b>	<b>\$196,256.0</b>	<b>\$189,081.4</b>	<b>0.97</b>	<b>1.04</b>
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Earned Value Month	BCVS	BCVP	ACVP	SPI	CPI	FYBCWS	FY BCVP	FY ACWP	FY SPI	FY CPI
Oct-10	\$3,540.0	\$3,944.3	\$3,413.8	1.11	1.16	\$3,540.0	\$3,944.3	\$3,413.8	1.11	1.16
Nov-10	\$5,203.6	\$4,748.8	\$4,184.7	0.91	1.13	\$8,743.6	\$8,693.1	\$7,598.5	0.99	1.14
Dec-10	\$5,677.1	\$6,277.7	\$5,689.4	1.11	1.10	\$14,420.7	\$14,970.8	\$13,287.9	1.04	1.13
Jan-11	\$5,366.1	\$5,557.1	\$4,225.6	1.04	1.32	\$19,786.8	\$20,527.9	\$17,513.5	1.04	1.17
Feb-11	\$7,269.3	\$6,582.6	\$5,993.5	0.91	1.10	\$27,056.1	\$27,110.5	\$23,507.0	1.00	1.15
Mar-11	\$8,362.9	\$8,213.8	\$5,757.0	0.98	1.43	\$35,419.0	\$35,324.3	\$29,264.0	1.00	1.21
Apr-11	\$6,011.0	\$5,778.2	\$5,384.6	0.96	1.07	\$41,430.0	\$41,102.5	\$34,648.6	0.99	1.19
May-11	\$6,494.3					\$47,924.3				
Jun-11	\$6,152.6					\$54,076.9				
Jul-11	\$4,712.5					\$58,789.4				
Aug-11	\$6,149.0					\$64,938.4				
Sep-11	\$8,377.8					\$73,316.2				

CTD	\$124,340.2	\$122,757.9	\$97,354.7	0.99	1.26
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Earned Value Month	BCWS	BCVP	ACVP	SPI	CPI	FYBCWS	FY BCVP	FY ACVP	FY SPI	FY CPI
Oct-10	\$610.0	\$619.9	\$412.6	1.02	1.50	\$610.0	\$619.9	\$412.6	1.02	1.50
Nov-10	\$768.6	\$773.1	\$657.3	1.01	1.18	\$1,378.6	\$1,393.0	\$1,069.9	1.01	1.30
Dec-10	\$807.0	\$602.2	\$384.2	0.75	1.57	\$2,185.6	\$1,995.2	\$1,454.1	0.91	1.37
Jan-11	\$309.8	\$368.0	\$470.6	1.19	0.78	\$2,495.4	\$2,363.2	\$1,924.7	0.95	1.23
Feb-11	\$1,186.8	\$941.8	\$680.9	0.79	1.38	\$3,682.2	\$3,305.0	\$2,605.6	0.90	1.27
Mar-11	\$1,013.9	\$870.9	\$834.5	0.86	1.04	\$4,696.1	\$4,175.9	\$3,440.1	0.89	1.21
Apr-11	\$901.6	\$945.5	\$704.0	1.05	1.34	\$5,597.7	\$5,121.4	\$4,144.1	0.91	1.24
May-11	\$897.5					\$6,495.2				
Jun-11	\$1,251.4					\$7,746.6				
Jul-11	\$1,205.8					\$8,952.4				
Aug-11	\$1,385.8					\$10,338.2				
Sep-11	\$1,700.7					\$12,038.9				

<b>CTD</b>	<b>\$8,489.3</b>	<b>\$8,013.0</b>	<b>\$6,945.3</b>	<b>0.94</b>	<b>1.15</b>
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## **Acquisition of New Facilities**

**M-090-11, Complete the Negotiation of No More Than Two Canister Storage Facility Construction Interim Milestones**, Due: 12/31/12, Status: On Schedule. Negotiations are not yet underway.

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

**M-047-06, Complete negotiation of no more than two interim milestones governing work necessary to support completion of M-047-00**, Due: 06/30/12, Status: Negotiations are not yet underway.

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

### **Significant Past Accomplishments:**

None

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

None

### **Issues:**

None

## Supplemental Treatment and Part B Permit Applications

**M-062-30, Complete negotiations establishing milestones for near term actions, Due:** 10/25/11, Status: On schedule. Informal agreement has been reached between Ecology and ORP to develop a change package cancelling/deleting this milestone and allowing the elements required by this milestone to be considered during the M-62-40 or M-62-45 negotiations.

**M-062-45ZZ, Negotiate a one-time supplemental treatment selection, Due:** 4/30/2015, Status: On schedule. Negotiations are not yet underway. See "Issues" below for further discussion.

**M-062-45ZZ-A, Convert M-062-31-T01 through M-062-34-T01 to Interim Milestones, Due:** 4/30/2015, Status: On Schedule.

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

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

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

**M-062-45XX, No later than 12/31/2021, the DOE and Ecology shall complete negotiations to establish a mechanism that will apply to resolve future disputes regarding the determinations in M-062-45, paragraphs 4 and 5, due:** 12/31/2021, Status: On Schedule

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

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

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

### Significant Past Accomplishments:

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

- ORP and Ecology sign a change package for M-62-30, as discussed above.

### Issues:

- ORP received a letter from Ecology on 01/13/11 stating Ecology has "...formed the opinion that USDOE actions jeopardize completion of HFFACO Milestone M-062-30."

## System Plan

**M-062-40B, Submit a system plan describing the disposition of all tank waste managed by ORP, Due: 10/31/2011, Status: On Schedule**

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

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

**M-062-40ZZ, Submit a one-time Tank Waste Supplemental Treatment Technologies report if a supplemental treatment technology is proposed other than a 2nd LAW, Due: 10/31/2014, Status: On Schedule.**

**M-062-45-T01, Every six years, within six-months after last revision of the System Plan, negotiate tank waste retrieval sequencing, Due: 4/30/2015, Status: On Schedule**

### **Significant Past Accomplishments:**

The 50% review of the draft System Plan 6 (SP6), which was focused on the model-independent portions of the document and included reviewers from ORP, Ecology and WRPS, was completed in May. All comments were dispositioned and incorporated as appropriate. HTWOS modeling and results verification have been completed for all 10 cases evaluated for SP6. Overviews of results for Case 3: FBSR for Supplemental Treatment, Case 7: Enhanced Tank Waste Strategy, and Case 9: Early U-Farm Retrieval, are currently with ORP and Ecology for review.

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

In addition to HTWOS modeling results, TOC Life Cycle Cost Model (LCM) results are also being developed for each case. More detailed descriptions of case-specific results are being developed and incorporated into the draft SP6 document. Key issues, technology development, and integrated schedules are also being developed at this time and will be included. Draft SP6 will be released for a 90% review, which will allow ORP, Ecology and WRPS to review the entire document, for two weeks in July. Comments will be tracked and closed via RCRs. The finalized document will be approved by ORP, released by WRPS, and transmitted from ORP to Ecology in time to meet the Oct. 31, 2011 milestone due date.

### **Issues:**

None

## **Hanford Waste Treatment and Immobilization Plant (WTP) Project**

**M-062-01W, Submit Semi-Annual Project Compliance Report, Due: 7/31/2011, Status: On Schedule**

**M-062-49, Submit a report to Ecology demonstrating that the WTP is designed to accomplish, pretreat 100% of retrievable waste, vitrify 100% of separated hi level waste, WTP LAW with Supplemental treatment can vitrify 100% of separated low level waste stream, Due: 10/31/2011, Status: BNI was provided direction to prepare this report on March 30, 2011, letter 11-WTP-106 Subject: Tri-Party Agreement (TPA) Changes and BNI Support.**

There are about 3,400 FTE equivalent contractor [Bechtel National Inc. (BNI)] and subcontractor personnel working on the WTP Project, including 1,200 craft, 500 non-manual, and about 180 subcontractor personnel FTE equivalents working at the WTP construction site (all facilities). Overall project percent complete through May 2011 is 59%, design and engineering is 82% complete, procurement is 62% complete, construction is 55% complete and Start-Up and Commissioning is 13% complete.

The overall WTP Project Schedule Variance (SV) in May was a positive \$0.2M, the Cost Variance (CV) was a negative \$2.5M. The negative cost variance was due to Construction Subcontracts and Construction Distributions control accounts and the schedule variances came primarily from Plant Material and Engineering control accounts.

Following is the status through the end of May for current project issues:

### **Significant Past Accomplishments:**

- A permitting strategy for the on-site vessels modifications has been developed jointly and agreed upon between DOE and Ecology

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

- Complete erection of 4<sup>th</sup> tier structural steel (77-ft to 98-ft elevation)
- Complete analytical results from the Low Order Accumulation Model (LOAM) validation testing for the non-Newtonian vessel configuration
- Complete planning and initiate fabrication and testing for the Large Scale testing for the validation of vessel mixing
- Complete Fabrication and Delivery of C5V Dampers
- Complete Siding of HLW Annex
- Complete installation of the LAW and LAB Autosampler systems
- Complete construction of the BOF switchgear facility, cooling tower and fuel oil pumphouse

### **Issues:**

No significant issues at this time.

## Pretreatment (PT) Facility

The PT Facility will separate radioactive tank waste into High Level Waste (HLW) and Low-Activity Waste (LAW) fractions and transfer each waste type to the respective vitrification facility for immobilization. Through May 2011, overall facility percent complete is 47%, engineering is 79% complete, procurement is 44% complete, and construction is 36% complete.

In May, overall construction continues to perform well. Rebar and embed installation and fabrication of rebar wall curtains continues to support additional slab and wall placements at the 56ft to 98ft elevations. Construction completions for May include placement of four 5<sup>th</sup> lift (77ft to 98ft elevation) walls for 480 CY.

On-going work includes fabrication of piping modules, installation of drain piping, service air piping, cable trays and supports, ductwork, and sparge tubing in the hot cell. Sparge tubing welding is 50% complete in the hot cell at elevation 0', with 80% forecast to be done by July.

Engineering continues to implement changes from the technical issue resolutions into Piping and Instrumentation Design (P&ID) and piping isometric drawings. Preliminary analysis for Pretreatment Vessel Vent Process (PVP) aerosol generation has been completed which indicates a possible factor of 10x improvement. When finalized (in June), this would eliminate the biggest PVP re-design risk of the need for de-entrainment equipment. Issued calculations for Ultrafiltration Process (UFP) vessels 1A & 1B, and issued drawings for implementation of the vessel mixing issue resolution and other changes.

A permitting strategy for the on-site vessels modifications has been developed jointly and agreed upon between DOE and Ecology, which allows for modification work to begin in parallel with the permit review and approval process.

Procurement received seven pipe rack frames at the Marshalling Yard. They will now be sent to the Rack Integrator for installation of piping and valves later this year. The HLP-22 vessel vendor was substantially released for fabrication. The UFP VSL-1B bottom head jacket has been removed. A small team of DOE and BNI management visited vessel fabricators North West Copper and Harris Thermal in Portland, to watch and understand the status and issues with the vessel fabrications. The team noted some challenges with the fabrication, and decided that further discussions regarding the path forward were needed.

Procurement issued a Material Requisition (MR) for quotes on rotary-progressive-cavity pumps, and issued a MR for purchase of the PT chiller plant and cooling tower. Thirty five jet pump pairs, and one globe control valve, were released to ship.

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

- Completion of PEMP Milestones for re-Committed design of the CXP and FRP vessels
- Install hot cell piping PJV header
- Ship HLP-VSL-27A /27B Storage vessels
- Complete nineteen mechanical systems re-committed design packages
- Complete twelve process re-committed design packages
- Fab and deliver ten hot cell equipment frames
- Complete analytical results from the Low Order Accumulation Model (LOAM) validation testing for the non-Newtonian vessel configuration

- Complete planning and initiate fabrication and testing for the Large Scale Testing for the validation of vessel mixing
- Issue the revised P&ID's for the PVP system and the PVV system
- Begin Control Building basement excavation in late June
- Complete placement of one 56ft elevation slab, three 4<sup>th</sup> lift (56ft to 77ft) walls, twenty five 5<sup>th</sup> lift walls, three 98ft slabs, and complete placement of the Control Building slab, totaling approximately 4,128 CY
- Complete erection of 4<sup>th</sup> tier structural steel (77ft to 98ft elevation)
- Award contract for High Efficiency Mist Eliminator (HEME)
- Award contract for on-site vessel modifications

**Issues:**

- Testing of the HEPA filters performed at Mississippi State University (MSU) has demonstrated that they will fail during a Design Basis Event (DBE). This would require design changes by the vendor (Flanders).
- DOE sent comments on the BNI ABAR rejecting the change of inspection criteria for the fusion welder, regarding non-compliance with the code. BNI should still be able to use the fusion welder using existing ASME B31.3 code criteria.
- DOE needs to formally provide to BNI the feed vectors from System Plan 6, for them to use that as reference for TPA Milestone M62-049, Certification of WTP design to meet the mission.
- Vessel Critical Path: Fabrication of vessel HLP-22 continues to be the primary critical path for the PT Facility. The fabrication of the vessel is in progress and on track to complete as planned by October 2012. Efforts are also ongoing for the analysis of the on-site vessels in order to support the vessel modifications. Initial site work and pre-modification preparation work has begun. Schedules for the vessel modifications and permit needs have been provided to Ecology. The current plan is to award the first set of vessels modifications in early July 2011. Ecology authorization is required to proceed with the vessel alteration for Waste Feed Receipt Process (FRP) vessels 2A/B/C/D. Ecology is being briefed routinely on the status of vessel design, fabrication and permitting schedule, due to the critical nature of this activity.
- LOAM Test Results: The physical benchmark testing of the LOAM for application to the 5 non-Newtonian vessels is complete. The test report has been issued for DOE review, and scheduled to be finalized by June 15, 2011.
- PVP/PVV System Upgrades: The PVP/PVV systems were upgraded from passive to active safety systems to maintain negative pressure during all normal, off-normal, and Design Basis Earthquake (DBE) conditions. Changes in the requirement of the Entrainment factor, the postulated aerosol loading was increased by several orders of magnitude. This affected PVP/PVVs ability to meet functional requirements during off-normal condition. The execution strategy issued identifies the following actions to ensure that the system design meets the functional criteria:

1. Develop an improved aerosol model based on testing that is aligned with the physical plant configuration. Preliminary indications are that this would lower the aerosol loading significantly.
  - a. Draft aerosol testing strategy has been issued.
2. Evaluate alternative operating scenarios to reduce aerosol generation.
3. Procure the long-lead equipment (Scrubber and HEME) as SC-1 to mitigate schedule constraint.

## High-Level Waste (HLW) Facility

The HLW Facility will receive the separated high-level waste from the Pretreatment (PT) Facility. The concentrate is 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 are sealed and decontaminated prior to shipment to interim storage. Overall facility percent complete is 54%, with engineering design 87% complete, procurement 66% complete, and construction 34% complete.

### Significant Past Accomplishments:

The majority of HLW Filter Cave activities have transitioned from procurement to the installation phase. Installation of the C5V supply header and exhaust headers are complete. Additional activities include the installation of support steel to the +8ft elevation and installation of construction support steel for installation of the 42" C5V Vertical Riser. Installation of steel and piping will continue to the +14ft elevation to coordinate with upcoming filter housing installations.

Fabrication of the final C5V filter housing is complete and all of the units have been delivered to the site. The vendor is continuing fabrication of the HOP and PJV filter housings and progressing as planned. Despite early material supply issues, fabrication of the C5V remote-operated dampers has been accelerated to maintain the original scheduled delivery of the first units in late-July. Electrical and piping commodities are progressing throughout the -21ft elevation including cooling water, cable trays and supports, and fire protection piping.

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

- Receive Canister Decontamination Vessels and Canister Rinse Vessel
- Set Shielded Personnel Access Door RWH-DOOR-20 in the Waste Drum Swabbing and Monitoring Area
- Complete Fabrication and Delivery of C5V Dampers
- Complete Siding of Annex
- Receipt of Melter Cave 1 and 2 Feed and Feed Prep vessels
- C5V housing and remote-operated damper installations

### Issues:

The fabrication and delivery of HLW vessels is being monitored closely due to long lead times and construction acceleration. Vessel status and progress is reported weekly to ensure completion and delivery prior to the scheduled installation dates.

Wall complexity for the #2 Melter Cave is impacting unit rates and adding duration to schedule activities. The Filter Cave still remains on the critical path; however, melter cave build-out is being closely monitored. Lessons learned are being incorporated into #1 Melter Cave walls' activities to ensure a more efficient construction sequence.

## Low-Activity Waste (LAW) Facility

### Significant Past Accomplishments:

The LAW Facility will vitrify low-activity waste from the PT Facility. Waste will be mixed with glass formers, vitrified into glass at an average daily rate of 30 metric tons, and placed in stainless-steel canisters that will be disposed on site in the Integrated Disposal Facility. Overall facility percent complete is 65%, engineering is 90% complete, procurement is 83% complete, and construction is 63% complete.

LAW secondary offgas treatment system component procurement activities continued. Vendor activities are progressing as scheduled for all offgas system components. Other procurement activities included issuance of a purchase memorandum for bid on the LAW/LAW Annex architectural specialties subcontract and release for shipment of 14 flow-indicator rotameters.

Isometric drawings were issued for multiple systems within the LAW facility including the Breathing Service Air (BSA) system, the Radioactive Liquid Waste Disposal (RLD) system, as well as piping isometrics for the Secondary Offgas/Vessel Vent Process (LVP), Steam Condensate Water (SCW), High-Pressure Steam (HPS), Low-Pressure Steam (LPS), Sodium Hydroxide Reagent (SHR), Concentrate Receipt Process (LCP), Melter Feed Process (LFP), and Autosampling (ASX) systems. Several drawing revisions were also issued to incorporate vendor information and for equipment modifications. General arrangement data sheets were issued for instrument racks for the LVP system, as well as instrument data sheets for radar instruments, transmitters, and switches. The anchorage design for the Heating, Ventilation, and Air-Conditioning (HVAC) humidifier was completed.

BNI completed installation of the glove box and two hatches for the container finishing handling (LFH) system, the electrical components and fusible links for six doors in the cask handling area, placement of concrete for the Medium-Voltage Electrical (MVE) equipment foundations, and application of floor coatings in the bogie maintenance room. Construction started on installation of support arms in the process cells and Q-rated partition walls. Thermite welding of rails in the finishing line continued, as well as installation of the fire alarm system, Low-Voltage Electrical (LVE) system equipment, piping for the air-handling unit, fan-coil units and humidifiers for the C2V ventilation system, liner in the pour caves, and container finishing line hoists. Other normal activities continued, including installation of piping for the Non-Radioactive Liquid Waste Disposal (NLD), RLD, and Plant Cooling Water (PCW) systems within the LAW, as well as installation of cable tray, pipe hangers, conduit and wiring, instrument enclosures, lighting fixtures, partition walls, and coatings.

Revised control logic diagrams were issued for the RLD system to support software development and testing. Integrated Control Network (ICN) development continued with the review of software for the primary offgas process system. Commissioning Operations personnel continued working with BNI Engineering to resolve issues associated with freeze protection strategies for sprinkler piping in stagnant air spaces, the need for container decontamination equipment, and location of computer servers that will provide phone and PA communications capabilities. A recommendation was made to Engineering to consider requiring a better carbon bed adsorber carbon media replacement system design prior to any relaxation of media life requirements.

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

- Complete vendor fabrication of the Carbon Bed Adsorber (CBA)
- Complete installation of container handling line shield doors
- Complete installation of the ASX system

**Issues:**

CBA fabrication difficulties were encountered related to warpage due to welding. Bechtel personnel deployed to the vendor facility, including welding engineers, have revised the assembly techniques to successfully resolve the issue and help preserve the schedule.

## Analytical Laboratory

### Significant Past Accomplishments:

The LAB will support WTP operations by analyzing feed, vitrified waste, and effluent streams. Overall facility percent complete is 46%, engineering is 81% complete, procurement is 74% complete, and construction is 63% complete.

On-going construction work includes: the installation of piping in the C2V/C3V system pits, autosampler equipment above the hot cells, trolleys in the hot cells, bulk piping/hanger installation, and conduit in various planning areas. Construction completed installation of the grout covers in the area of the hot cells.

Engineering completed scoping of 15 medium-voltage electrical drawings, all mechanical handling, "M7", drawings for in-cell handling and radioactive solid waste handling, and system block diagram, "J1", drawings for all lab systems. Material requisitions for jet-pump-pair fluidic devices were issued.

As construction and engineering continue commissioning personnel are diligently working on procedure development for caustic and/or oxidative leach during the batch processing of the feed slurry, as well incorporating comments to the Waste Acceptance Criteria Data Quality Objective Report. The operations team is inquiring about the date the LAB will have its environmental permits to allow for methods validation. The operations staff accepted proposed vendor cost savings measures to replace drawer slides and counter top fixtures, other suggestions were either denied or referred to the design authority.

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

- Install fume hoods
- Install LAB waste drum bogie transfer port
- Install Autosampler HEPA filter housings
- Install hot cell monorail airlocks
- Complete installation of Autosampler System

### Issues:

No major issues.

## **Balance of Facilities (BOF)**

### **Significant Past Accomplishments:**

BOF provides services and utilities to support operation of the main production facilities – PT, HLW, LAW, and LAB. Overall facility percent complete for BOF is 47%, engineering is 78% complete, procurement is 46% complete, and construction is 61% complete.

Construction of BOF is progressing, and systems are being completed as demonstrated by the completion of the water treatment facility. Progress continues in the areas of plant service air for the glass former facility, fire detection equipment for the T-52 building, and cable, electrical terminations, and pressure safety valve instrumentation for the plant cooling water system in the chiller compressor plant.

The operations staff continues to evaluate facilities as they are constructed and turned over, and proposed a field change to add low point drains to the domestic water system, and concerns with the fact that the glass former facility does not have a redundant air dryer. They are also actively involved in evaluating the requirements of the emergency turbine generators.

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

- Complete construction of cooling tower
- Complete construction of fuel oil pumphouse
- Substantially complete construction of main switchgear building
- Complete construction of BOF switchgear building
- Install structural steel for anhydrous ammonia facility
- Emergency turbine generator supplier selection and notice to proceed
- Award hi-purity gas subcontract

### **Issues:**

- Welding of anhydrous ammonia vessel
- Evaluation, selection, and procurement of emergency turbine generator

Waste Treatment Plant Project - Percent Complete Status Through May 2011															
(Dollars - Millions)	Overall Facility Percent Complete Unallocated Dollars			Design/Engineering Unallocated Dollars			Procurement Unallocated Dollars			Construction Unallocated Dollars			Startup & Commissioning Unallocated Dollars		
	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete
Facilities	938.6	615.9	66%	222.5	200.7	90%	234.9	195.6	83%	333.1	213.3	64%	148.1	6.3	4%
Low-Activity Waste	346.1	160.7	46%	52.2	42.3	81%	56.1	41.5	74%	102.7	65.2	63%	135.2	11.8	9%
Analytical Lab	522.5	245.4	47%	77.3	60.3	78%	81.2	37.5	46%	227.8	138.8	61%	136.1	8.9	7%
Balance of Facilities	1,460.3	783.1	54%	332.1	289.6	87%	454.1	299.9	66%	556.3	189.4	34%	117.8	4.2	4%
High-Level Waste	2,475.2	1,174.9	47%	680.4	534.2	79%	714.3	312.4	44%	897.9	322.5	36%	182.6	5.8	3%
Pretreatment	4,781.8	3,228.1	68%	1,093.2	881.4	81%	467.2	350.6	75%	1,417.8	1,018.6	72%	455.8	111.4	24%
Shared Services	10,524.4	6,208.2	59%	2,457.8	2,008.5	82%	2,007.8	1,237.6	62%	3,535.6	1,947.6	55%	1,175.5	148.4	13%
Total WTP w/o UB Undistributed Budget	0.0	n/a	n/a	n/a	n/a	n/a									
Total WTP	10,524.4	6,208.2	59%	2,457.8	2,008.5	82%	2,007.8	1,237.6	62%	3,535.6	1,947.6	55%	1,175.5	148.4	13%

Source: WTP Contract Performance Report - Format I, Data for May 2011

Note: Starting with the June 2009 report, facility construction percent complete values decreased significantly, and a couple of Design/Engineering facility percent complete values went down as well. The decrease in values was tied to Phase 1 of BNI's elimination of WBS 1.08, Plant Wide EPCC; scope from WBS 1.08 was moved to facilities as appropriate or to WBS 1.90, Shared Services. This resulted in an increase in the facility construction budgets, which has correspondingly reduced the to-date percent complete values. In July 2010 the allocation of 1.90 to the facilities was removed to show true facility percent complete.

<sup>1</sup> Note: EVMS data is through May 2011.

**FINAL**

Office of River Protection  
Consent Decree 08-5085-FVS

Project Summary Report

June 28, 2011

## Office of River Protection

## Consent Decree 08-5085-FVS

## Project Summary Report

June 28, 2011

9:00 a.m. – 12:00 p.m.

Page	Topic	Leads
1	Statistics / Status	Woody Russell / Dan McDonald / Jeff Lyon
5	SST Retrieval and Closure - D-00B-01, -02, -03, -04 - TWRWP Status	Chris Kemp / Jeff Lyon
8	WTP - Immobilization Plant Project - D-00A-06, D-00A-17, D-00A-01	Wahed Abdul / Jason Young / Gary Olsen / Dan McDonald
10	WTP Pretreatment (PT) Facility - D-00A-18, -19, -13, -14, -15, 16	Wahed Abdul / Dan McDonald
14	High-Level Waste (HLW) Facility - D-00A-20, -21, 02, 03	Jason Young / Dan McDonald
17	Low-Activity Waste (LAW) Facility - D-00A-07, -08, -09	Gary Olsen / Dan McDonald
20	Analytical Laboratory (LAB) - D-00A-005	
22	Balance of Facilities (BOF) - D-00A-12	

Fiscal Year 2011 Consent Decree Milestone Status													
Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
D-00A-20	Complete Construction of Structural Steel to Elevation 14' in HLW Facility	12/31/10	01/31/10										
D-00C-01B	Submit to Ecology and Oregon Semi-Annual Report Documenting Progress During Previous 6 Month Period	01/31/11	01/25/11										
D-00C-02D	Submit to Ecology and Oregon Monthly Summary Reports	02/28/11	2/25/11										
D-00C-02E	Submit to Ecology and Oregon Monthly Summary Reports	03/31/11	03/24/11										
D-00C-02F	Submit to Ecology and Oregon Monthly Summary Reports	04/30/11	04/29/11										
D-00C-02G	Submit to Ecology and Oregon Monthly Summary Reports	05/31/11	05/25/11										
D-00C-02H	Submit to Ecology and Oregon Monthly Summary Reports	06/30/11		X									
**D-00C-02I	Submit to Ecology and Oregon Monthly Summary Reports	07/31/11		X									
** Future Monthly Reports will be added as necessary to maintain a two-months ahead activity.													

Fiscal Year 2011 Consent Decree Milestone Status													
Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
D-00C-01C	Submit to Ecology and Oregon Semi-Annual Report Documenting Progress During Previous 6 Month Period	07/31/11		X									

### Fiscal Year 2012 Consent Decree Milestone Status

Milestone No.	Description	Due Date	Date Completed	On Schedule	At Risk	Recoverable	To Be Missed	Missed	In Litigation	Deleted	In Program Planning	In Abeyance	Dispute Resolution
D-00C-02L	Submit to Ecology and Oregon Monthly Summary Reports	10/31/11		X									
**D-00C-02M	Submit to Ecology and Oregon Monthly Summary Reports	11/30/11		X									
** Future Monthly Reports will be added as necessary to maintain a two-months ahead activity.													
D-00C-01D	Submit to Ecology and Oregon Semi-Annual Report Documenting Progress During Previous 6 Month Period	01/31/12		X									
D-00C-01E	Submit to Ecology and Oregon Semi-Annual Report Documenting Progress During Previous 6 Month Period	07/31/12		X									

## Reports

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

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

**D-006-00-A1, Provide State of Oregon notice of meetings in D-006-00-A, etc. no less than 30 days before they are scheduled, Due: 9/25/2013, Status: On Schedule**

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

## SST Retrieval and Closure Program

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

**D-00B-01A thru J, Submit Tank Retrieval Complete Certification, Due: TBD**  
Pursuant to the requirement at IV(B)(5) of the Consent Decree (CD) DOE must submit to Ecology a written certification that DOE has completed retrieval of a tank in accordance with the requirements of Appendix "C", Part 1, of the CD. Tanks currently in retrieval status are C-108, C-109, C-110, C-104, and C-111.

**D-00B-02, Advise Ecology of the 9 SST's from which Waste Will Be Retrieved by 2022, Due: 9/30/2014, Status: On Schedule.** ORP and Ecology began meeting in December 2010 to discuss the selection of the next nine tanks to be retrieved and why ORP believes those nine tanks should be in A/AX Farms.

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

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

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

### Significant Past Accomplishments:

1. Completed bulk retrieval of C-104 using modified sluicing process.
2. Continued C-107 electrical upgrades and control trailer installation.
3. Continued construction activities for C-108 equipment installation for Hard Heel Removal.
4. Continued installation of the MARS arm equipment in C Farm at C-107.
5. Initiated installation of the POR107 exhauster for use at C-107 during MARS arm operation.
6. Initiated design and procurement for C-109 Hard Heel Removal equipment.
7. Continued design activities for C-112 sluicing system.
8. Continued removal of legacy equipment at C-112.
9. Continued testing of a MARS sluice educator system at Columbia Energy in Pasco.

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

1. Complete the C-101 design, initiate long lead procurements and initiate legacy equipment removals.
2. Complete construction/installation of MARs at C-107.
3. Complete startup of C-107 MARS retrieval.
4. Start up of retrieval activities for C-108 hard heel.
5. Replace the AN-106 supernatant pump to support C-108 and C-107 retrievals.

6. Complete C-112 design, initiate long lead procurements and initiate legacy equipment removals.
7. Finish testing of the MARS with the vacuum educator.

**Issues:**

- D-00B-02, Discussions continue on the issue to advise Ecology of the 9 SST's from which waste will be retrieved by 2022.
- C-106 Closure Plan approval and SST radiological Categorical Notice of Construction (NOC) Phase 3 (closure) and a toxics categorical NOC application are pending completion of the Tank Closure and Waste Management Environmental Impact Statement (EIS) and associated Record of Decision (ROD); forecast completion for the final EIS ROD is in the winter of 2011.

## TWRWP Status

Tank	TWRWP	Expected Revisions	Retrieval Technology	Second Technology	Third Technology
C-101	RPP-22520	Projected revision early fall	MRS (per 10/7/10 agreement, to be Modified Sluicing)	-	-
C-102	RPP-22393	In Process	Modified Sluicing	MS-ITV	-
C-103	RPP-21895	Retrieval Completed			
C-104	RPP-22393	In Process	Modified Sluicing	MS-ITV	-
C-105	RPP-22520	Projected revision early fall	MRS	-	-
C-106		Retrieval Completed			
C-107	RPP-22393	In Process	MARS-S		
C-108	RPP-22393	In Process	Modified Sluicing	Chemical Dissolution	MS-ITV
C-109	RPP-21895	Following RPP-22393	Modified Sluicing	MS-ITV	-
C-110	RPP-33116	Following RPP-22393	Modified Sluicing	-	-
C-111	RPP-37739	Following RPP-22393	Modified Sluicing	-	-
C-112	RPP-22393	In Process	Modified Sluicing	MS-ITV	-

### Significant Accomplishments:

- ECY and ORP met for a TWRWPs Workshop on Selecting the Second Technology Under the CD on May 6, 2011. Goals included development of a table to identify 1<sup>st</sup> and 2<sup>nd</sup> technologies (including rationale for technology selection) and to develop proposed TWRWP language to be submitted with next revision of the TWRWP. The workshop discussions and actions are captured in meeting minutes which have been submitted as a handout in the ORP June PMM meeting for inclusion in the Administrative Record.

### Issues:

- ORP wants to reopen discussion on end of retrieval discussions that include cost benefit analysis and how the finish of a retrieval decision occurs.

## **Hanford Waste Treatment and Immobilization Plant (WTP) Project**

**D-00A-06, Complete Methods Validations**, Due: 12/31/2017, Status: On Schedule

**D-00A-17, Hot Start of Waste Treatment Plant**, Due: 12/31/2019, Status: On Schedule

**D-00A-01, Achieve Initial Plant Operations for WTP**, Due: 12/31/2022, Status: On Schedule

There are about 3,400 FTE equivalent contractor [Bechtel National Inc. (BNI)] and subcontractor personnel working on the WTP Project, including 1,200 craft, 500 non-manual, and about 180 subcontractor personnel FTE equivalents working at the WTP construction site (all facilities). Overall project percent complete through May 2011 is 59%, design and engineering is 82% complete, procurement is 62% complete, construction is 55% complete and Start-Up and Commissioning is 13% complete.

The overall WTP Project Schedule Variance (SV) in May was a positive \$0.2M, the Cost Variance (CV) was a negative \$2.5M. The negative cost variance was due to Construction Subcontracts and Construction Distribs control accounts and the schedule variances came primarily from Plant Material and Engineering control accounts.

Following is the status through the end of May for current project issues:

### **Significant Past Accomplishments:**

- A permitting strategy for the on-site vessels modifications has been developed jointly and agreed upon between DOE and Ecology

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

- Complete erection of 4<sup>th</sup> tier structural steel (77-ft to 98-ft elevation)
- Complete analytical results from the Low Order Accumulation Model (LOAM) validation testing for the non-Newtonian vessel configuration
- Complete planning and initiate fabrication and testing for the Large Scale testing for the validation of vessel mixing
- Complete Fabrication and Delivery of C5V Dampers
- Complete Siding of HLW Annex
- Complete installation of the LAW and LAB Autosampler systems
- Complete construction of the BOF switchgear facility, cooling tower and fuel oil pumphouse

### **Issues:**

No significant issues at this time.

**WTP – Fiscal Year To-Date Performance**

Data Set: FY 2011 Earned Value Data

Data as of: May 2011

**River Protection**  
**01-D-416 - Waste Treatment Plant (WTP) Project**

Monthly 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 2010	\$48,550	\$49,962	\$55,880	1.03	0.89	\$48,550	\$49,962	\$55,880	1.03	0.89
Nov 2010	\$56,608	\$55,427	\$58,449	0.98	0.95	\$105,158	\$105,389	\$114,329	1.00	0.92
Dec 2010	\$64,533	\$71,852	\$73,610	1.11	0.98	\$169,691	\$177,241	\$187,939	1.04	0.94
Jan 2011	\$55,988	\$57,756	\$51,327	1.03	1.13	\$225,679	\$234,997	\$239,266	1.04	0.98
Feb 2011	\$57,941	\$60,462	\$61,199	1.04	0.99	\$283,620	\$295,459	\$300,465	1.04	0.98
Mar 2011	\$56,009	\$60,032	\$59,335	1.07	1.01	\$339,629	\$355,491	\$359,800	1.05	0.99
Apr 2011	\$54,890	\$58,438	\$56,937	1.06	1.03	\$394,519	\$413,929	\$416,737	1.05	0.99
May 2011	\$58,530	\$58,722	\$61,263	1.00	0.96	\$453,049	\$472,651	\$478,000	1.04	0.99
Jun 2011	\$61,410					\$514,459				
Jul 2011	\$91,983					\$606,442				
Aug 2011	\$73,717					\$680,159				
Sep 2011	\$75,503					\$755,662				
PTD	\$6,180,399	\$6,208,199	\$6,236,030	1.00	1.00					

## Pretreatment (PT) Facility

**D-00A-19, Complete Elevation 98' Concrete Floor Slab in PT Facility, Due: 12/31/2014, Status: On Schedule**

**D-00A-13, Complete Installation of Pretreatment Feed Separation Vessels, Due: 12/31/2015, Status: On Schedule**

**D-00A-14, PT Facility Construction Substantially Complete, Due: 12/31/2017, Status: On Schedule**

**D-00A-15, Start PT Facility Cold Commissioning, Due: 12/31/2018, Status: On Schedule**

**D-00A-16, PT Facility Hot Commissioning Complete, Due: 12/31/2019, Status: On Schedule**

### Significant Past Accomplishments:

The PT Facility will separate radioactive tank waste into High Level Waste (HLW) and Low-Activity Waste (LAW) fractions and transfer each waste type to the respective vitrification facility for immobilization. Through May 2011, overall facility percent complete is 47%, engineering is 79% complete, procurement is 44% complete, and construction is 36% complete.

In May, overall construction continues to perform well. Rebar and embed installation and fabrication of rebar wall curtains continues to support additional slab and wall placements at the 56-ft to 98-ft elevations. Construction completions for May include placement of four 5<sup>th</sup> lift (77-ft to 98-ft elevation) walls for 480 CY.

On-going work includes fabrication of piping modules, installation of drain piping, service air piping, cable trays and supports, ductwork, and sparge tubing in the hot cell. Sparge tubing welding is 50% complete in the hot cell at elevation 0', with 80% forecast to be done by July.

Engineering continues to implement changes from the technical issue resolutions into Piping and Instrumentation Design (P&ID) and piping isometric drawings. Preliminary analysis for Pretreatment Vessel Vent Process (PVP) aerosol generation has been completed which indicates a possible factor of 10x improvement. When finalized (in June), this would eliminate the biggest PVP re-design risk of the need for de-entrainment equipment. Issued calculations for ultrafiltration process (UFP) vessels 1A & 1B, and issued drawings for implementation of the vessel mixing issue resolution and other changes.

A permitting strategy for the on-site vessels modifications has been developed jointly and agreed upon between DOE and Ecology, which allows for modification work to begin in parallel with the permit review and approval process.

Procurement received seven pipe rack frames at the Marshalling Yard. They will now be sent to the Rack Integrator for installation of piping and valves later this year. The HLP-22 vessel vendor was substantially released for fabrication. The UFP VSL-1B bottom head jacket has been removed. A small team of DOE and BNI management visited vessel fabricators North West Copper and Harris Thermal in Portland, to watch and understand the status and issues with the vessel fabrications. The team noted some challenges with the fabrication, and decided that further discussions regarding the path forward were needed.

Procurement issued a Material Requisition (MR) for quotes on rotary-progressive-cavity pumps, and issued a MR for purchase of the PT chiller plant and cooling tower. Thirty five jet pump pairs, and one globe control valve, were released to ship.

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

- Completion of PEMP Milestones for re-Committed design of the CXP and FRP vessels.
- Install hot cell piping PJV header.
- Ship HLP-VSL-27A /27B Storage vessels
- Complete nineteen mechanical systems re-committed design packages
- Complete twelve process re-committed design packages
- Fab and deliver ten hot cell equipment frames
- Complete analytical results from the Low Order Accumulation Model (LOAM) validation testing for the non-Newtonian vessel configuration
- Complete planning and initiate fabrication and testing for the Large Scale testing for the validation of vessel mixing
- Issue the revised P&ID's for the PVP system and the PVV system
- Begin Control Building basement excavation in late June
- Complete placement of one 56-ft elevation slab, three 4<sup>th</sup> lift (56-ft to 77-ft) walls, twenty five 5<sup>th</sup> lift walls, three 98-ft slabs, and complete placement of the Control Building slab, totaling approximately 4,128 CY
- Complete erection of 4<sup>th</sup> tier structural steel (77-ft to 98-ft elevation)
- Award contract for High Efficiency Mist Eliminator (HEME)
- Award contract for on-site vessel modifications.

**Issues:**

- Vessel Critical Path: Fabrication of vessel HLP-22 continues to be the primary critical path for the PT Facility. The fabrication of the vessel is in progress, but the vendor completion has slipped from October to December 2012. BNI is currently working with the vendor to adjust resource levels to make up the schedule difference. Efforts are also ongoing for the analysis of the on-site vessels in order to support the vessel modifications. Initial site work and pre-modification preparation work has begun. Schedules for the vessel modifications and permit needs have been provided to Ecology. The current plan is to award the first set of vessels modifications in early July 2011. Ecology authorization is required to proceed with the vessel alteration for Waste Feed Receipt Process (FRP) vessels 2A/B/C/D. Ecology is being briefed routinely on the status of vessel design, fabrication and permitting schedule, due to the critical nature of this activity.
- LOAM Test Results: The physical benchmark testing of the LOAM for application to the 5 Non-Newtonian vessels is complete. The test report has been issued for DOE review. BNI is currently meeting with DOE to discuss Volume 3 vessel assessment impacts based on the LOAM results, and conclusions on whether Newtonian conditions represent a bounding assessment. BNI will revise the Risk Evaluation for installing Heads on the five Non-Newtonian Vessels, to reflect these conclusions, prior to vessel head placement.
- PVP/PVV System Upgrades: The PVP/PVV systems were upgraded from passive to active safety systems to maintain negative pressure during all normal, off-normal, and seismic

conditions. Changes in the requirement of the Entrainment factor caused the postulated aerosol loading to increase by several orders of magnitude. This affected PVP/PVVs ability to meet functional requirements during off-normal condition. The execution strategy issued identifies the following actions to ensure that the system design meets the functional criteria:

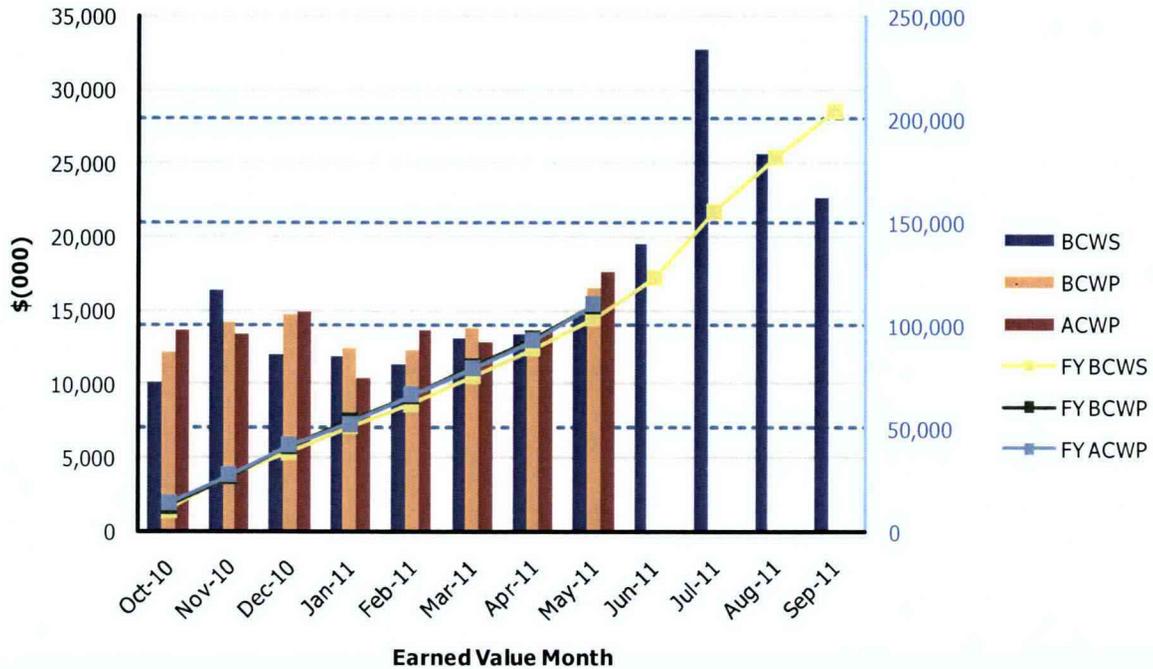
1. Develop an improved aerosol model based on testing that is aligned with the physical plant configuration. Preliminary indications are that this would lower the aerosol loading significantly.
  - a. An aerosol testing strategy has been issued, and a draft test specification is in review.
2. Evaluate alternative operating scenarios to reduce aerosol generation.
3. Procure the long-lead equipment (Scrubber and HEME) as SC-1 to mitigate schedule constraint.

Data Set: FY 2011 Earned Value Data

Data as of: May 2011

**River Protection  
01-D-16E - Pretreatment Facility**

Facility Specific (unallocated) Monthly and Fiscal-Year-to-Date (FY-TD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2010	\$10,196	\$12,179	\$13,730	1.19	0.89	\$10,196	\$12,179	\$13,730	1.19	0.89
Nov 2010	\$16,462	\$14,257	\$13,360	0.87	1.07	\$26,658	\$26,436	\$27,090	0.99	0.98
Dec 2010	\$12,060	\$14,788	\$14,869	1.23	0.99	\$38,718	\$41,224	\$41,959	1.06	0.98
Jan 2011	\$11,902	\$12,449	\$10,403	1.05	1.20	\$50,620	\$53,673	\$52,362	1.06	1.03
Feb 2011	\$11,428	\$12,373	\$13,692	1.08	0.90	\$62,048	\$66,046	\$66,054	1.06	1.00
Mar 2011	\$13,145	\$13,809	\$12,923	1.05	1.07	\$75,193	\$79,855	\$78,977	1.06	1.01
Apr 2011	\$13,444	\$13,497	\$13,533	1.00	1.00	\$88,637	\$93,352	\$92,510	1.05	1.01
May 2011	\$14,789	\$16,506	\$17,668	1.12	0.93	\$103,426	\$109,858	\$110,178	1.06	1.00
Jun 2011	\$19,477					\$122,903				
Jul 2011	\$32,706					\$155,609				
Aug 2011	\$25,646					\$181,255				
Sep 2011	\$22,683					\$203,938				
PTD	\$1,159,330	\$1,174,897	\$1,143,659	1.01	1.03					

## High-Level Waste (HLW) Facility

**D-00A-21, Complete Construction of Structural Steel to 37' in HLW Facility, Due:** 12/31/2012, Status: On Schedule

**D-00A-02, HLW Facility Construction Substantially Complete, Due:** 12/31/2016, Status: On Schedule

**D-00A-03, Start HLW Facility Cold Commissioning, Due:** 6/30/2018, Status: On Schedule

**D-00A-04, HLW Facility Hot Commissioning Complete, Due:** 12/31/2019, Status: On Schedule

The HLW Facility will receive the separated high-level waste from the Pretreatment (PT) Facility. The concentrate is 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 are sealed and decontaminated prior to shipment to interim storage. Overall facility percent complete is 54%, with engineering design 87% complete, procurement 66% complete, and construction 34% complete.

### Significant Past Accomplishments:

The majority of HLW Filter Cave activities have transitioned from procurement to the installation phase. Installation of the C5V supply header and exhaust headers are complete. Additional activities include the installation of support steel to the +8ft elevation and installation of construction support steel for installation of the 42" C5V Vertical Riser. Installation of steel and piping will continue to the +14ft elevation to coordinate with upcoming filter housing installations.

Fabrication of the final C5V filter housing is complete and all of the units have been delivered to the site. The vendor is continuing fabrication of the HOP and PJV filter housings and progressing as planned. Despite early material supply issues, fabrication of the C5V remote-operated dampers has been accelerated to maintain the original scheduled delivery of the first units in late-July. Electrical and piping commodities are progressing throughout the -21 ft elevation including cooling water, cable trays and supports, and fire protection piping.

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

- Receive Canister Decontamination Vessels and Canister Rinse Vessel
- Set Shielded Personnel Access Door RWH-DOOR-20 in the Waste Drum Swabbing and Monitoring Area
- Complete Fabrication and Delivery of C5V Dampers
- Complete Siding of Annex
- Receipt of Melter Cave 1 and 2 Feed and Feed Prep vessels
- C5V housing and remote-operated damper installations

### Issues:

The fabrication and delivery of HLW vessels is being monitored closely due to long lead times and construction acceleration. Vessel status and progress is reported weekly to ensure completion and delivery prior to the scheduled installation dates.

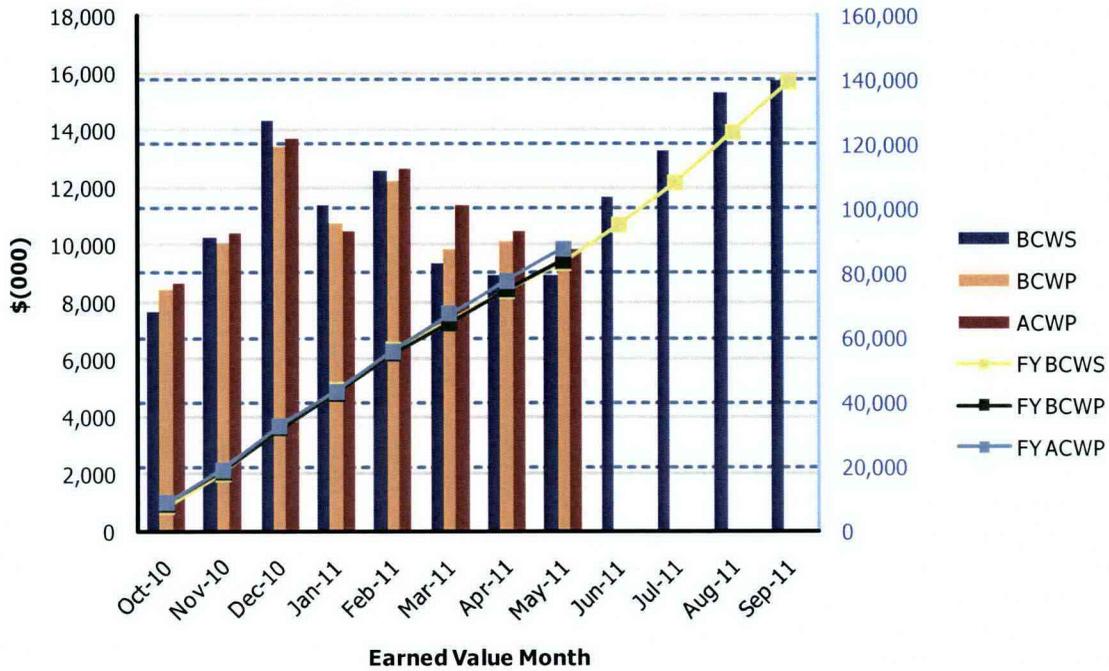
Wall complexity for the #2 Melter Cave is impacting unit rates and adding duration to schedule activities. The Filter Cave still remains on the critical path; however, melter cave build-out is being closely monitored. Lessons learned are being incorporated into #1 Melter Cave walls' activities to ensure a more efficient construction sequence.

Data Set: FY 2011 Earned Value Data

Data as of: May 2011

**River Protection**  
**01-D-16D - High-Level Waste Facility**

Facility Specific (unallocated) Monthly and Fiscal-Year-to-Date (FY-TD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2010	\$7,653	\$8,413	\$8,615	1.10	0.98	\$7,653	\$8,413	\$8,615	1.10	0.98
Nov 2010	\$10,239	\$10,032	\$10,434	0.98	0.96	\$17,892	\$18,445	\$19,049	1.03	0.97
Dec 2010	\$14,364	\$13,384	\$13,697	0.93	0.98	\$32,256	\$31,829	\$32,746	0.99	0.97
Jan 2011	\$11,360	\$10,767	\$10,461	0.95	1.03	\$43,616	\$42,596	\$43,207	0.98	0.99
Feb 2011	\$12,550	\$12,224	\$12,651	0.97	0.97	\$56,166	\$54,820	\$55,858	0.98	0.98
Mar 2011	\$9,376	\$9,860	\$11,369	1.05	0.87	\$65,542	\$64,680	\$67,227	0.99	0.96
Apr 2011	\$8,930	\$10,154	\$10,445	1.14	0.97	\$74,472	\$74,834	\$77,672	1.00	0.96
May 2011	\$8,919	\$9,075	\$9,806	1.02	0.93	\$83,391	\$83,909	\$87,478	1.01	0.96
Jun 2011	\$11,663					\$95,054				
Jul 2011	\$13,285					\$108,339				
Aug 2011	\$15,296					\$123,635				
Sep 2011	\$15,743					\$139,378				
PTD	\$777,811	\$783,133	\$776,605	1.01	1.01					

## Low-Activity Waste (LAW) Facility

**D-00A-07, LAW Facility Construction Substantially Complete, Due: 12/31/2014, Status: On Schedule**

**D-00A-08, Start LAW Facility Cold Commissioning, Due: 12/31/2018, Status: On Schedule**

**D-00A-09, LAW Facility Hot Commissioning Complete, Due: 12/31/2019, Status: On Schedule**

### Significant Past Accomplishments:

The LAW Facility will vitrify low-activity waste from the PT Facility. Waste will be mixed with glass formers, vitrified into glass at an average daily rate of 30 metric tons, and placed in stainless-steel canisters that will be disposed on site in the Integrated Disposal Facility. Overall facility percent complete is 66%, engineering is 90% complete, procurement is 83% complete, and construction is 64% complete.

LAW secondary offgas treatment system component procurement activities continued. Vendor activities are progressing as scheduled for all offgas system components. Other procurement activities included issuance of a purchase memorandum for bid on the LAW/LAW Annex architectural specialties subcontract and release for shipment of 14 flow-indicator rotameters.

Isometric drawings were issued for multiple systems within the LAW facility including the Breathing Service Air (BSA) system, the Radioactive Liquid Waste Disposal (RLD) system, as well as piping isometrics for the Secondary Offgas/Vessel Vent Process (LVP), Steam Condensate Water (SCW), High-Pressure Steam (HPS), Low-Pressure Steam (LPS), Sodium Hydroxide Reagent (SHR), Concentrate Receipt Process (LCP), Melter Feed Process (LFP), and Autosampling (ASX) systems. Several drawing revisions were also issued to incorporate vendor information and for equipment modifications. General arrangement data sheets were issued for instrument racks for the LVP system, as well as instrument data sheets for radar instruments, transmitters, and switches. The anchorage design for the Heating, Ventilation, and Air-Conditioning (HVAC) humidifier was completed.

BNI completed installation of the glove box and two hatches for the container finishing handling (LFH) system, the electrical components and fusible links for six doors in the cask handling area, placement of concrete for the Medium-Voltage Electrical (MVE) equipment foundations, and application of floor coatings in the bogie maintenance room. Construction started on installation of support arms in the process cells and Q-rated partition walls. Thermite welding of rails in the finishing line continued, as well as installation of the fire alarm system, Low-Voltage Electrical (LVE) system equipment, piping for the air-handling unit, fan-coil units and humidifiers for the C2V ventilation system, liner in the pour caves, and container finishing line hoists. Other normal activities continued, including installation of piping for the Non-Radioactive Liquid Waste Disposal (NLD), RLD, and Plant Cooling Water (PCW) systems within the LAW, as well as installation of cable tray, pipe hangers, conduit and wiring, instrument enclosures, lighting fixtures, partition walls, and coatings.

Revised control logic diagrams were issued for the RLD system to support software development and testing. Integrated Control Network (ICN) development continued with the review of software for the primary offgas process system. Commissioning Operations personnel continued working with BNI Engineering to resolve issues associated with freeze protection strategies for sprinkler piping in stagnant air spaces, the need for container decontamination equipment, and

location of computer servers that will provide phone and PA communications capabilities. A recommendation was made to Engineering to consider requiring a better carbon bed adsorber carbon media replacement system design prior to any relaxation of media life requirements.

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

- Complete vendor fabrication of the Carbon Bed Adsorber (CBA)
- Complete installation of container handling line shield doors
- Complete installation of the ASX system

**Issues:**

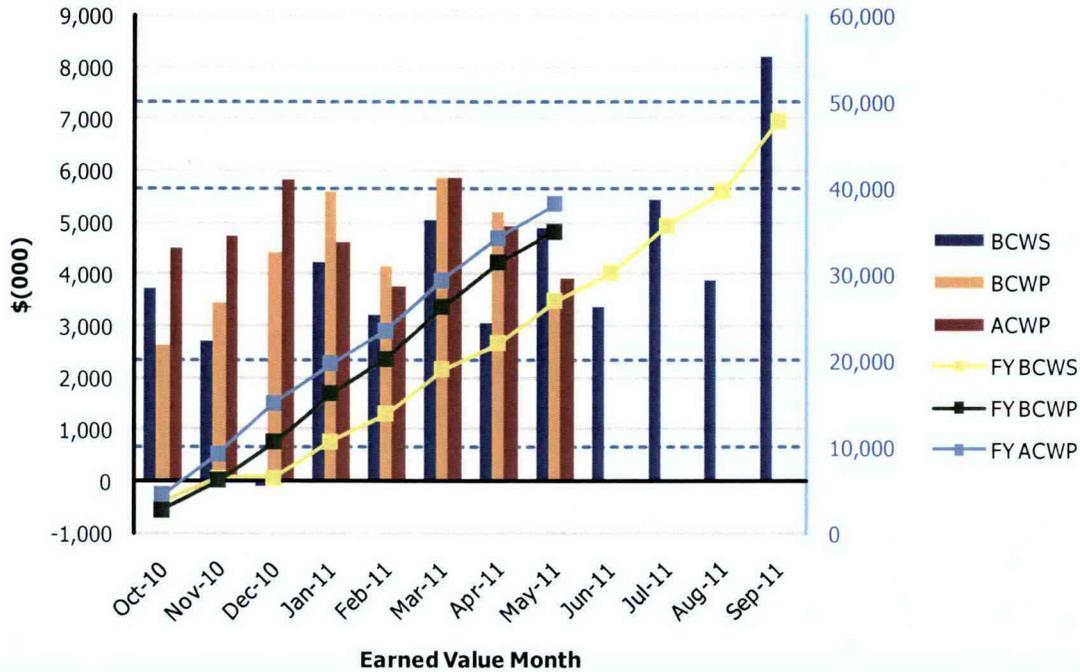
CBA fabrication difficulties were encountered related to warpage due to welding. Bechtel personnel deployed to the vendor facility, including welding engineers, have revised the assembly techniques to successfully resolve the issue and help preserve the schedule.

Data Set: FY 2011 Earned Value Data

Data as of: May 2011

**River Protection**  
**01-D-16A - Low-Activity Waste Facility**

Facility Specific (unallocated) Monthly and Fiscal-Year-to-Date (FY-TD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2010	\$3,743	\$2,654	\$4,511	0.71	0.59	\$3,743	\$2,654	\$4,511	0.71	0.59
Nov 2010	\$2,732	\$3,462	\$4,752	1.27	0.73	\$6,475	\$6,116	\$9,263	0.94	0.66
Dec 2010	(\$84)	\$4,424	\$5,823	-52.67	0.76	\$6,391	\$10,540	\$15,086	1.65	0.70
Jan 2011	\$4,232	\$5,597	\$4,606	1.32	1.22	\$10,623	\$16,137	\$19,692	1.52	0.82
Feb 2011	\$3,222	\$4,153	\$3,778	1.29	1.10	\$13,845	\$20,290	\$23,470	1.47	0.86
Mar 2011	\$5,054	\$5,862	\$5,857	1.16	1.00	\$18,899	\$26,152	\$29,327	1.38	0.89
Apr 2011	\$3,062	\$5,210	\$4,930	1.70	1.06	\$21,961	\$31,362	\$34,257	1.43	0.92
May 2011	\$4,895	\$3,600	\$3,919	0.74	0.92	\$26,856	\$34,962	\$38,176	1.30	0.92
Jun 2011	\$3,364					\$30,220				
Jul 2011	\$5,443					\$35,663				
Aug 2011	\$3,895					\$39,558				
Sep 2011	\$8,214					\$47,772				
PTD	\$615,326	\$615,900	\$661,272	1.00	0.93					

## Analytical Laboratory

**D-00A-05, LAB Construction Substantially Complete**, Due: 12/31/2012, Status: On Schedule

### Significant Past Accomplishments:

The LAB will support WTP operations by analyzing feed, vitrified waste, and effluent streams. Overall facility complete for LAB is 46%, engineering is 81% complete, procurement is 74% complete, and construction is 63% complete.

On-going construction work includes: the installation of piping in the C2V/C3V system pits, autosampler equipment above the hot cells, trolleys in the hot cells, bulk piping/hanger installation, and conduit in various planning areas. Construction completed installation of the grout covers in the area of the hot cells.

Engineering completed scoping of 15 medium-voltage electrical drawings, all mechanical handling, "M7", drawings for in-cell handling and radioactive solid waste handling, and system block diagram, "J1", drawings for all lab systems. Material requisitions for jet-pump-pair fluidic devices were issued.

As construction and engineering continue, commissioning personnel are diligently working on procedure development for caustic and/or oxidative leach during the batch processing of the feed slurry, as well incorporating comments to the Waste Acceptance Criteria Data Quality Objective Report. The operations team is inquiring about the date the LAB will have its environmental permits to allow for methods validation. The operations staff accepted proposed vendor cost savings measures to replace drawer slides and counter top fixtures, other suggestions were either denied or referred to the design authority.

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

- Install fume hoods
- Install LAB waste drum bogie transfer port
- Install Autosampler HEPA filter housings
- Install hot cell monorail airlocks
- Complete installation of Autosampler System

### Issues:

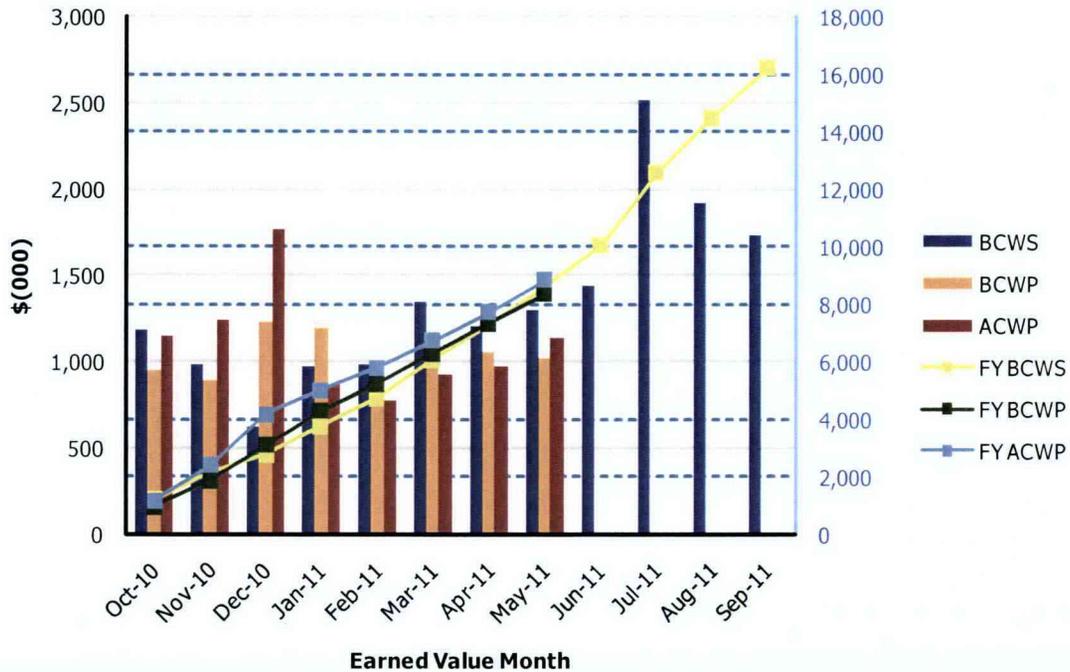
No major issues.

Data Set: FY 2011 Earned Value Data

Data as of: May 2011

**River Protection  
01-D-16B - Analytical Laboratory**

Facility Specific (unallocated) Monthly and Fiscal-Year-to-Date (FY-TD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2010	\$1,180	\$954	\$1,152	0.81	0.83	\$1,180	\$954	\$1,152	0.81	0.83
Nov 2010	\$984	\$893	\$1,245	0.91	0.72	\$2,164	\$1,847	\$2,397	0.85	0.77
Dec 2010	\$621	\$1,236	\$1,768	1.99	0.70	\$2,785	\$3,083	\$4,165	1.11	0.74
Jan 2011	\$971	\$1,198	\$869	1.23	1.38	\$3,756	\$4,281	\$5,034	1.14	0.85
Feb 2011	\$982	\$949	\$770	0.97	1.23	\$4,738	\$5,230	\$5,804	1.10	0.90
Mar 2011	\$1,350	\$1,039	\$924	0.77	1.12	\$6,088	\$6,269	\$6,728	1.03	0.93
Apr 2011	\$1,210	\$1,059	\$974	0.88	1.09	\$7,298	\$7,328	\$7,702	1.00	0.95
May 2011	\$1,299	\$1,018	\$1,133	0.78	0.90	\$8,597	\$8,346	\$8,835	0.97	0.94
Jun 2011	\$1,445					\$10,042				
Jul 2011	\$2,516					\$12,558				
Aug 2011	\$1,925					\$14,483				
Sep 2011	\$1,735					\$16,218				
PTD	\$161,810	\$160,732	\$173,513	0.99	0.93					

## **Balance of Facilities (BOF)**

**D-00A-12, Steam Plant Construction Complete, Due: 12/31/2012, Status: On Schedule**

### **Significant Past Accomplishments:**

BOF provides services and utilities to support operation of the main production facilities – PT, HLW, LAW, and LAB. Overall facility percent complete for BOF is 47%, engineering is 78% complete, procurement is 46% complete, and construction is 61% complete.

Construction of BOF is progressing, and systems are being completed as demonstrated by the completion of the water treatment facility. Progress continues in the areas of plant service air for the glass former facility, fire detection equipment for the T-52 building, and cable, electrical terminations, and pressure safety valve instrumentation for the plant cooling water system in the chiller compressor plant.

The operations staff continues to evaluate facilities as they are constructed and turned over, and proposed a field change to add low point drains to the domestic water system, and concerns with the fact that the glass former facility does not have a redundant air dryer. They are also actively involved in evaluating the requirements of the emergency turbine generators.

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

- Complete construction of cooling tower
- Complete construction of fuel oil pumphouse
- Substantially complete construction of main switchgear building
- Complete construction of BOF switchgear building
- Install structural steel for anhydrous ammonia facility
- Emergency turbine generator supplier selection and notice to proceed
- Award hi-purity gas subcontract

### **Issues:**

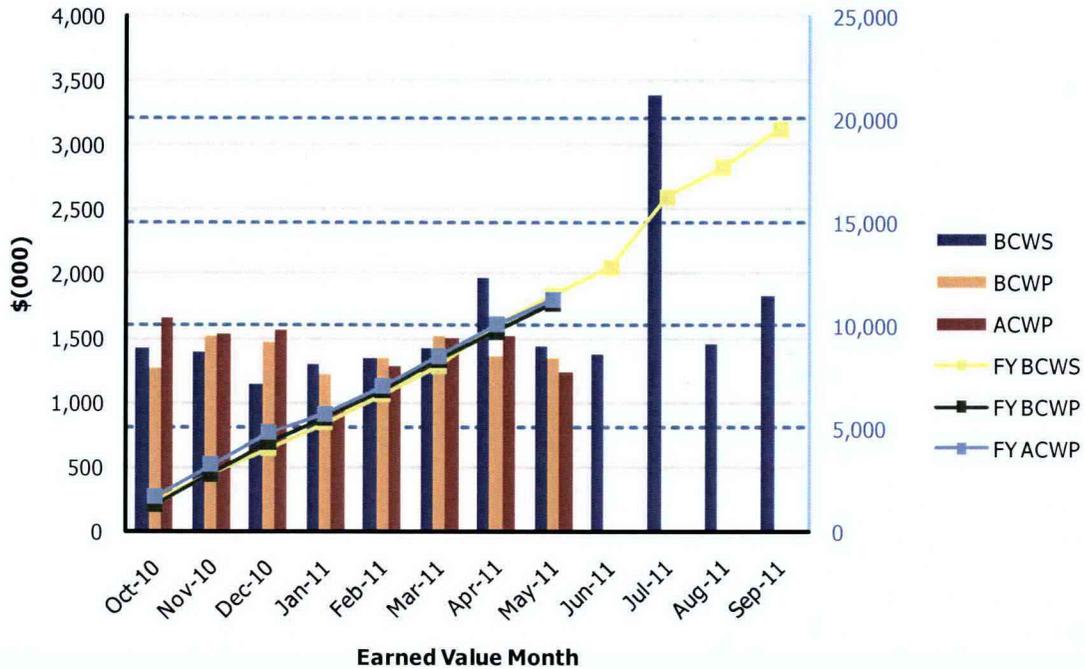
- Welding of anhydrous ammonia vessel
- Evaluation, selection, and procurement of emergency turbine generator

Data Set: FY 2011 Earned Value Data

Data as of: May 2011

**River Protection  
01-D-16C - Balance of Facilities**

Facility Specific (unallocated) Monthly and Fiscal-Year-to-Date (FY-TD) EVMS Values



Earned Value Month	BCWS	BCWP	ACWP	SPI	CPI	FY BCWS	FY BCWP	FY ACWP	FY SPI	FY CPI
Oct 2010	\$1,428	\$1,272	\$1,660	0.89	0.77	\$1,428	\$1,272	\$1,660	0.89	0.77
Nov 2010	\$1,398	\$1,520	\$1,539	1.09	0.99	\$2,826	\$2,792	\$3,199	0.99	0.87
Dec 2010	\$1,150	\$1,475	\$1,558	1.28	0.95	\$3,976	\$4,267	\$4,757	1.07	0.90
Jan 2011	\$1,302	\$1,224	\$960	0.94	1.28	\$5,278	\$5,491	\$5,717	1.04	0.96
Feb 2011	\$1,347	\$1,346	\$1,288	1.00	1.05	\$6,625	\$6,837	\$7,005	1.03	0.98
Mar 2011	\$1,429	\$1,518	\$1,505	1.06	1.01	\$8,054	\$8,355	\$8,510	1.04	0.98
Apr 2011	\$1,962	\$1,363	\$1,524	0.69	0.89	\$10,016	\$9,718	\$10,034	0.97	0.97
May 2011	\$1,442	\$1,352	\$1,237	0.94	1.09	\$11,458	\$11,070	\$11,271	0.97	0.98
Jun 2011	\$1,381					\$12,839				
Jul 2011	\$3,383					\$16,222				
Aug 2011	\$1,462					\$17,684				
Sep 2011	\$1,830					\$19,514				
PTD	\$246,651	\$245,436	\$243,186	1.00	1.01					

Waste Treatment Plant Project - Percent Complete Status

Through May 2011

(Dollars - Millions)	Overall Facility Percent Complete Unallocated Dollars			Design/Engineering Unallocated Dollars			Procurement Unallocated Dollars			Construction Unallocated Dollars			Startup & Commissioning Unallocated Dollars		
	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete	Performance Measurement Baseline (PMB)	Budgeted Cost of Work Performed (BCWP)	% Complete
Facilities															
Low-Activity Waste	938.6	615.9	66%	222.5	200.7	90%	234.9	195.6	83%	333.1	213.3	64%	148.1	6.3	4%
Analytical Lab	346.1	160.7	46%	52.2	42.3	81%	56.1	41.5	74%	102.7	65.2	63%	135.2	11.8	9%
Balance of Facilities	522.5	245.4	47%	77.3	60.3	78%	81.2	37.5	46%	227.8	138.8	61%	136.1	8.9	7%
High-Level Waste	1,460.3	783.1	54%	332.1	289.6	87%	454.1	299.9	66%	556.3	189.4	34%	117.8	4.2	4%
Pretreatment	2,475.2	1,174.9	47%	680.4	534.2	79%	714.3	312.4	44%	897.9	322.5	36%	182.6	5.8	3%
Shared Services	4,781.8	3,228.1	68%	1,093.2	881.4	81%	467.2	350.6	75%	1,417.8	1,018.6	72%	455.8	111.4	24%
<b>Total WTP w/o UB</b>	<b>10,524.4</b>	<b>6,208.2</b>	<b>59%</b>	<b>2,457.8</b>	<b>2,008.5</b>	<b>82%</b>	<b>2,007.8</b>	<b>1,237.6</b>	<b>62%</b>	<b>3,535.6</b>	<b>1,947.6</b>	<b>55%</b>	<b>1,175.5</b>	<b>148.4</b>	<b>13%</b>
Undistributed Budget	0.0	n/a	n/a	n/a	n/a	n/a									
<b>Total WTP</b>	<b>10,524.4</b>	<b>6,208.2</b>	<b>59%</b>	<b>2,457.8</b>	<b>2,008.5</b>	<b>82%</b>	<b>2,007.8</b>	<b>1,237.6</b>	<b>62%</b>	<b>3,535.6</b>	<b>1,947.6</b>	<b>55%</b>	<b>1,175.5</b>	<b>148.4</b>	<b>13%</b>

Source: WTP Contract Performance Report - Format 1, Data for May 2011

Note: Starting with the June 2009 report, facility construction percent complete values decreased significantly, and a couple of Design/Engineering facility percent complete values went down as well. The decrease in values was tied to Phase 1 of BNI's elimination of WBS 1.08, Plant Wide EPC; scope from WBS 1.08 was moved to facilities as appropriate or to WBS 1.90, Shared Services. This resulted in an increase in the facility construction budgets, which has correspondingly reduced the to-date percent complete values. In July 2010 the allocation of 1.90 to the facilities was removed to show true facility percent complete.

1 Note: EVMS data is through May 2011.

**WORKING ORP Key Documents List  
For June 28, 2011**

Milestone Title	Milestone Number	Document	TPA Milestone Due Date (if applicable) <sup>1</sup>	ORP Delivery to Regulators Date <sup>2</sup>	Anticipated Regulatory Review Completion Date <sup>3</sup>	Final Completion Date <sup>4</sup>	DOE-ORP Lead	Contractor Lead	Ecology Lead	Comments/Issues
Submit to Ecology for Review and Approval as an Agreement Primary Document, a Phase 2 RCRA Facility Investigation/Corrective Measure Study Report for WMA C	Supports M-045-61	WMA C PA Ecological Risk Assessment Data Package, RPP-RPT-49425, Rev 0		04/19/11			B. Lober	S. Eberlein	J. Lyon	<ul style="list-style-type: none"> <li>Feeds input for M-045-61 and all Closure Plans</li> <li>Document was posted on the working group website with email notification on 04/19/11</li> </ul>
	Supports M-045-61	WMA C Characterization Summary 2011		09/30/11			B. Lober	S. Eberlein	J. Lyon	<ul style="list-style-type: none"> <li>Feeds input for M-045-61 and all Closure Plans</li> </ul>
	Supports M-045-61	WMA C PA Initial Model Run Data Package		05/31/12			C. Kemp	S. Eberlein	J. Lyon	<ul style="list-style-type: none"> <li>Feeds input for M-045-61 and all Closure Plans</li> </ul>
	Supports M-045-61	PA Data Package--Numeric Codes		12/31/10			C. Kemp	S. Eberlein	J. Lyon	<ul style="list-style-type: none"> <li>Feeds input for M-045-61 and all Closure Plans</li> <li>RPP-RPT-48490, Rev. 1 addressed this item, signed Rev. 1 RCR on 05/09/11.</li> </ul>
	Supports M-045-61	WMA C PA Initial Document		08/31/12			C. Kemp	S. Eberlein	J. Lyon	<ul style="list-style-type: none"> <li>Feeds input for M-045-61 and all Closure Plans</li> </ul>
	Supports M-045-61	WMA C Characterization Summary 2012		09/30/12			B. Lober	S. Eberlein	J. Lyon	<ul style="list-style-type: none"> <li>Feeds input for M-045-61 and all Closure Plans</li> </ul>
	Supports M-045-61	WMA C Characterization Summary 2013		09/30/13			B. Lober	S. Eberlein	J. Lyon	<ul style="list-style-type: none"> <li>Feeds input for M-045-61 and all Closure Plans</li> </ul>
	M-045-61	Phase 2 RCRA Facility Investigation/Corrective Measures Study Report for WMA C	12/31/14	12/31/14			B. Lober	S. Eberlein	J. Lyon	
Submit to Ecology for Review and Approval as an Agreement Primary Document, a Phase 2 Corrective Measures Implementation Work Plan for WMA C.	M-045-62	Phase 2 Corrective Measures Implementation Work Plan for WMA C	06/30/15	06/30/15			B. Lober	S. Eberlein	J. Lyon	
Complete portions of the C-200 Closure Demonstration Plan necessary to complete closure plan development for the SST system.	M-045-80	Description of Radioactive Waste Determination Process	01/31/11	12/28/10	06/30/11		C. Kemp	S. Eberlein	J. Lyon	<ul style="list-style-type: none"> <li>Initial ORP letter, 10-TPD-166 sent to ECY on 12/28/10</li> <li>ECY review extension to 04/18/11 received by ORP on 02/11/11.</li> <li>ORP extension acknowledgement letter 11-TF-031 sent to ECY on 02/23/11.</li> <li>2<sup>nd</sup> ECY review extension letter 11-NWP-028 received by ORP on 04/20/11.</li> <li>3<sup>rd</sup> ECY review extension letter 11-NWP-049 received by ORP on 06/02/11.</li> </ul>
	M-045-80 (S) <sup>5</sup>	RCRA/CERCLA Integration White Paper	01/31/11	12/28/10	05/27/11		C. Kemp	S. Eberlein	J. Lyon	<ul style="list-style-type: none"> <li>Initial ORP letter, 10-TPD-166 sent to ECY on 12/28/10</li> <li>ECY review extension to 04/18/11 received by ORP on 02/11/11</li> <li>ORP extension acknowledgement letter 11-TF-031 sent to ECY on 02/23/11</li> <li>2<sup>nd</sup> ECY review extension letter 11-NWP-028 received by ORP on 04/20/11.</li> <li>ECY review comment record (RCR) letter 11-NWP-051 received by ORP on 06/02/11.</li> <li>ORP sent comment response extension letter 11-TF-067 on 06/16/11 to ECY to extend final response date to 09/25/11.</li> </ul>

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

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

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

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

<sup>5</sup> (S) = Secondary Document: Interim step in decision making; does not reflect key decisions. (P) = Primary Document: Key data and reflects decisions on how to proceed.

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

**WORKING ORP Key Documents List  
For June 28, 2011**

Milestone Title	Milestone Number	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
Complete portions of the C-200 Closure Demonstration Plan necessary to complete closure plan development for the SST system (continued).	M-045-80 (S)	Tank Removal Engineering Study	01/31/11	12/28/10	05/30/11		C. Kemp	S. Eberlein	J. Lyon	<ul style="list-style-type: none"> <li>Initial ORP letter, 10-TPD-166 sent to ECY on 12/28/10</li> <li>ECY letter for review extension to 04/18/11 received by ORP 01/13/2011</li> <li>ORP extension acknowledgement letter 11-TF-031 sent to ECY on 02/23/11</li> <li>2<sup>nd</sup> ECY review extension letter 11-NWP-028 received by ORP on 04/20/11.</li> <li>ECY RCR letter 11-NWP-047 received by ORP on 05/31/11.</li> <li>ORP sent comment response extension letter 11-TF-067 on 06/16/11 to ECY to extend final response date to 09/25/11.</li> </ul>
	M-045-80 (S)	Evaluation of Alternatives for Removal of Waste from the C-301 Catch Tank	01/31/11	12/28/10	05/30/11		C. Kemp	S. Eberlein	J. Lyon	<ul style="list-style-type: none"> <li>Initial ORP letter, 10-TPD-166 sent to ECY on 12/28/10</li> <li>ECY review extension to 04/18/11 received by ORP on 02/11/11</li> <li>ORP extension acknowledgement letter 11-TF-031 sent to ECY on 02/23/11</li> <li>2<sup>nd</sup> ECY review extension letter 11-NWP-028 received by ORP on 04/20/11.</li> <li>ECY comments letter 11-NWP-045 received by ORP on 05/27/11.</li> <li>ORP sent comment response extension letter 11-TF-067 on 06/16/11 to ECY to extend final response date to 09/25/11.</li> </ul>
Implement and Complete All Remaining Activities in the June 6, 2007 C-200 Closure Demonstration Plan (with any revisions as agreed to by Ecology and DOE).	Supports M-045-81 (S)	Pipeline Feasibility Study, RPP-RPT-45723		12/28/10	06/01/11		C. Kemp	S. Eberlein	J. Lyon	<ul style="list-style-type: none"> <li>Feeds input to M-045-81.</li> <li>Initial ORP letter 10-TPD-166 sent to ECY on 12/28/10</li> <li>ECY review extension to 04/18/11 received by ORP on 02/11/11</li> <li>ORP extension acknowledgement letter 11-TF-031 sent to ECY on 02/23/11</li> <li>2<sup>nd</sup> ECY review extension letter 11-NWP-028 received by ORP on 04/20/11.</li> <li>ECY RCR letter 11-NWP-052 received by ORP on 06/03/11.</li> <li>ORP sent comment response extension letter 11-TF-067 on 06/16/11 to ECY to extend final response date to 09/25/11.</li> </ul>
	Supports M-045-81	Update C Closure Demonstration Plan		TBD			C. Kemp	S. Eberlein	J. Lyon	<ul style="list-style-type: none"> <li>Feeds input to M-045-81</li> <li>Awaiting language decision for LDR.</li> </ul>
	M-045-81	Other Closure Demonstration Deliverables	09/30/14				C. Kemp	S. Eberlein	J. Lyon	
M-45-91 Interim Milestones and Target Dates for SSTs Implementing the Expert Panel's Recommendations (created via TPA Change Request CR M-45-10-01, approved on 01/03/2011)	<b>M-045-91G-T05</b>	<b>Provide Report of the Visual Inspection of 12 SSTs Table P3.3</b>	<b>03/31/11</b>	<b>03/11/11</b>	<b>05/12/11</b>	<b>05/12/11</b>	<b>J. Johnson</b>	<b>S. Sax</b>	<b>J. Lyon</b>	<ul style="list-style-type: none"> <li><b>ORP submitted report via letter 11-TF-039 on 03/11/11</b></li> <li><b>ECY issued approval letter 11-NWP-041 to ORP on 05/12/11.</b></li> </ul>
	M-045-91C	Implement DQO Process, Test Plan to Evaluate the Chemistries	09/30/11	09/30/11			J. Johnson	S. Sax	J. Lyon	<ul style="list-style-type: none"> <li>DQO meeting held 4/27/11. Finalizing DQO report with ECY comment incorporation. Draft Test plan on schedule to be</li> </ul>
	M-045-91G-T01	Provide AOR Final Doc. for SSTS on 530,000 Gallon Tanks	09/30/11	09/30/11			J. Johnson	S. Sax	J. Lyon	<ul style="list-style-type: none"> <li>Currently on schedule for submittal to ECY in July 2011.</li> </ul>
	M-045-91B	DOE Submit a Sampling and Analysis Plan to Ecology	12/30/11	12/30/11			J. Johnson	S. Sax	J. Lyon	<ul style="list-style-type: none"> <li>Final DQO report to ECY in June 2011 with completion of M-045-91D. SAP is on schedule to be delivered to ECY in July 2011, accelerated by 5 months.</li> </ul>
	M-045-91F-T01	Provide Report of the Liquid Leak Rate Assessments	01/31/12	01/31/12			J. Johnson	S. Sax	J. Lyon	<ul style="list-style-type: none"> <li>On-going bi-weekly meetings.</li> </ul>
	M-045-91F-T02	Provide Report of Liner Failures for SSTs	07/31/13	07/31/13			J. Johnson	S. Sax	J. Lyon	<ul style="list-style-type: none"> <li>On-going bi-weekly meetings.</li> </ul>
	M-045-91G-T02	Provide AOR Final Doc. for SSTS on 750,000 Gallon Tanks	01/31/12	01/31/12			J. Johnson	S. Sax	J. Lyon	<ul style="list-style-type: none"> <li>Currently on schedule for submittal to ECY in October 2011.</li> </ul>

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**WORKING ORP Key Documents List  
For June 28, 2011**

Milestone Title	Milestone Number	Document	TPA Milestone Due Date (if applicable) <sup>1</sup>	ORP Delivery to Regulators Date <sup>2</sup>	Anticipated Regulatory Review Completion Date <sup>3</sup>	Final Completion Date <sup>4</sup>	DOE-ORP Lead	Contractor Lead	Ecology Lead	Comments/Issues
M-45-91 Interim Milestones and Target Dates (continued)	<b>M-045-91D</b>	<b>Submit Analytical Test Plan for Cores Removed from C-107 Plug</b>	<b>03/31/12</b>	<b>06/30/11</b>			<b>J. Johnson</b>	<b>S. Sax</b>	<b>J. Lyon</b>	<ul style="list-style-type: none"> <li>• <b>Test plan incorporating ECY comments is on schedule to be submitted for completion by June 30, 2011, accelerated by 9 months. Formal completion letter in concurrence.</b></li> </ul>
	M-045-91G-T06	Provide Report of the Visual Inspection of 12 SSTs M-045-91G-T05	03/31/12	03/31/12			J. Johnson	S. Sax	J. Lyon	
	M-045-91G-T03	Provide AOR Final Doc. for SSTS on 1,000,000 Gallon Tanks	09/31/12	09/31/12			J. Johnson	S. Sax	J. Lyon	<ul style="list-style-type: none"> <li>• Currently on schedule for submittal to ECY in February 2012.</li> </ul>
	M-045-91D-T01	Provide Report on the Concrete Dome Samples from Tank C-107 Plug	05/31/13	05/31/13			J. Johnson	S. Sax	J. Lyon	
	M-045-91F-T03	Provide Report on Testing for Ionic Conductivity of SSTs	05/31/13	05/31/13			J. Johnson	S. Sax	J. Lyon	<ul style="list-style-type: none"> <li>• Currently on schedule for submittal to ECY in July 2011.</li> </ul>
	M-045-91F-T04	Provide Report on 100-Series SSTs as having Leaked in RPP-32681	07/31/13	07/31/13			J. Johnson	S. Sax	J. Lyon	<ul style="list-style-type: none"> <li>• Ongoing meetings every other week through 2012.</li> </ul>
	M-045-91E	Provide SST Farms Dome Deflection Surveys Every Two Years	09/30/13	09/30/13			J. Johnson	S. Sax	J. Lyon	
	M-045-91G-T04	Provide AOR Final Doc. for SSTS on 55,000 Gallon Tanks	10/31/13	10/31/13			J. Johnson	S. Sax	J. Lyon	<ul style="list-style-type: none"> <li>• Currently on schedule for submittal to ECY in September 2012.</li> </ul>
	M-045-91F	Provide Summary Conclusions Report on Leak Integrity	12/31/13	12/31/13			J. Johnson	S. Sax	J. Lyon	
	M-045-91G	Provide Summary Conclusions Report of AOR for SSTs	04/30/14	04/30/14			J. Johnson	S. Sax	J. Lyon	
	M-045-91B-T01	Provide Ecology report on the Concrete Core from TankA-106 or alt	09/30/14	09/30/14			J. Johnson	S. Sax	J. Lyon	
	M-045-91H	Submit Change Pckg (if necessary) to est. Additional Milestones	07/31/15	07/31/15			J. Johnson	S. Sax	J. Lyon	
M-045-91I	Provide IQRPE Certification of SSTs Structural Integrity	09/30/18	09/30/18			J. Johnson	S. Sax	J. Lyon		
Prior to beginning construction and at least one year before construction is to be complete, DOE will submit to Ecology a final design and monitoring plan for each interim barrier.	<b>M-045-92</b>	<b>Future Barrier Design 1</b>	<b>06/30/11</b>	<b>05/19/11</b>	<b>05/19/11</b>	<b>05/19/11</b>	<b>B. Lober</b>	<b>S. Eberlein</b>	<b>J. Lyon</b>	<ul style="list-style-type: none"> <li>• <b>ECY agreed to review at 90% design completion</b></li> <li>• <b>ECY approval given via email for 1<sup>st</sup> and 2<sup>nd</sup> barriers to facilitate ET Basin Construction this year.</b></li> <li>• <b>ECY Completion Letter 11-NWP-044 dated 05/19/11</b></li> <li>• <b>ORP Final Completion Letter 11-TF-064 sent to ECY on 06/15/11.</b></li> </ul>
	<b>M-045-92</b>	<b>Future Barrier Design 2</b>	<b>06/30/12</b>	<b>05/19/11</b>	<b>05/19/11</b>	<b>05/19/11</b>	<b>B. Lober</b>	<b>S. Eberlein</b>	<b>J. Lyon</b>	
	M-045-92	Future Barrier Design 3	06/30/13	06/30/13			B. Lober	S. Eberlein	J. Lyon	
	M-045-92	Future Barrier Design 4	06/30/14	06/30/14			B. Lober	S. Eberlein	J. Lyon	
Submit to Ecology as an Agreement Primary Document a Catch Tank "assumed leak" Response Plan.	<b>M-045-100 (P)</b>	<b>Catch Tank "Assumed Leak" Response Plan (RPP-PLAN-48438)</b>	<b>12/28/10</b>	<b>12/28/10</b>	<b>05/30/11</b>		<b>C. Kemp</b>	<b>S. Eberlein</b>	<b>J. Lyon</b>	<ul style="list-style-type: none"> <li>• <b>Initial ORP letter 10-TPD-176 sent to ECY on 12/28/10</b></li> <li>• <b>ECY letter for extension to 04/18/11 received by ORP on 02/11/11</b></li> <li>• <b>ORP extension acknowledgement letter 11-TF-031 sent to ECY on 02/23/11</b></li> <li>• <b>2<sup>nd</sup> ECY review extension letter 11-NWP-028 received by ORP on 04/20/11.</b></li> <li>• <b>ECY Notice of Violation (NOV) received via letter 11-NWP-038 on 05/25/11. Included 3 criteria, 3 responses, and ECY RCR.</b></li> <li>• <b>ORP initiated dispute of NOV via letter 11-TF-065 on 06/01/11.</b></li> <li>• <b>ORP sent comment response extension letter 11-TF-067 on 06/16/11 to ECY to extend final response date to 08/31/11.</b></li> <li>• <b>Agreement to extend dispute at PM level to 08/31/11 delivered by ORP to ECY on 06/22/11. Awaiting ECY approval or non-concurrence.</b></li> </ul>

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

**WORKING ORP Key Documents List  
For June 28, 2011**

Milestone Title	Milestone Number	Document	TPA Milestone Due Date (if applicable) <sup>1</sup>	ORP Delivery to Regulators Date <sup>2</sup>	Anticipated Regulatory Review Completion Date <sup>3</sup>	Final Completion Date <sup>4</sup>	DOE-ORP Lead	Contractor Lead	Ecology Lead	Comments/Issues
Submit to Ecology as an Agreement Primary Document a report on all Catch Tanks and associated pipelines that are identified in the SST System Part A, or otherwise used in operations.	M-045-101 (P)	SST System Component Identification and Proposed Closure Strategy (RPP-PLAN-41977)	12/27/10	12/28/10	05/30/11		C. Kemp	S. Eberlein	J. Lyon	<ul style="list-style-type: none"> <li>Initial ORP letter 10-TPD-176 sent to ECY on 12/28/10</li> <li>ECY letter for extension to 04/18/11 received by ORP on 02/11/11</li> <li>ORP extension acknowledgement letter 11-TF-031 sent to ECY on 02/23/11</li> <li>2<sup>nd</sup> ECY review extension letter 11-NWP-028 received by ORP on 04/20/11.</li> <li>ECY RCR letter 11-NWP-052 received by ORP on 06/02/11.</li> <li>ORP sent comment response extension letter 11-TF-067 on 06/16/11 to ECY to extend final response date to 08/31/11.</li> </ul>
Submit a System Plan to Ecology describing the disposition of all tank waste managed by ORP, including retrieval of all tanks not addressed by the Consent Decree, and the completion of the treatment mission	M-062-40	Submit System Plan to ECY/Select Minimum 3 Scenario's	TBD	TBD			R. Koll		J. Lyon	<ul style="list-style-type: none"> <li>Created via CR M-62-09-01 and establishes System Plan milestones</li> </ul>
	M-062-40B	Submit System Plan	10/31/11	10/31/11			R. Koll	T. Crawford	J. Lyon	
	M-062-40ZZ	Submit One Time Tank Waste Supplemental Treatment Tech. Report	10/31/14	10/31/14			S. Pfaff		D. McDonald	
	M-062-45-ZZ	Technologies Selection Report	04/30/15	04/30/15			S. Pfaff		D. McDonald	
System Plan – WTP Report to Demonstrate WTP Design Meets Vitrification Efficiencies	M-062-49	Submit Report to ECY Demonstrating WTP Design Meets Vitrification Criteria	10/31/11	10/31/11			D. Noyes		D. McDonald	
Complete final design and submit RCRA Part B Permit Modification Request	M-062-31-T01	RCRA Part B Permit Modification--Final Design	04/30/16	04/30/16			D. Noyes		D. McDonald	

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**WORKING ORP Key Documents List  
For June 28, 2011**

Topic Areas	Document	ORP Delivery to Regulators Date <sup>1</sup>	Anticipated Regulatory Review Completion Date <sup>2</sup>	Final Completion Date <sup>3</sup>	DOE-ORP Lead	Contractor Lead	Regulator Lead	Comments/Issues
PERMIT DOCUMENTS	Tier 1 Framework Closure Plan Update	05/31/12			C. Kemp	S. Eberlein	J. Lyon	
	Tier 2 WMA C Closure Plan	05/31/12			C. Kemp	S. Eberlein	J. Lyon	
	WMA C Closure Conceptual Design	09/30/12			C. Kemp	S. Eberlein	J. Lyon	
	All Remaining Closure Plans for WMA C	09/30/15			C. Kemp	S. Eberlein	J. Lyon	
	Tier 3 Closure Plans for Tanks Already Received	TBD			C. Kemp	S. Eberlein	J. Lyon	• Due 120-day post EIS
	Tier 3 Closure Plans for Additional Tanks	TBD			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
	DST Exhausters Notice of Construction and HIA	09/30/11			L. Huffman	F. Miera	J. Lyon	
	Supplemental Treatment Technology Notice of Construction	09/30/13			L. Huffman	F. Miera	J. Lyon	
	Submit Part B Permit Application for Selected Supplemental Treatment Technology	09/30/13			L. Huffman	F. Miera	J. Lyon	
	Wiped Film Evaporator Notice of Construction	09/30/14			L. Huffman	F. Miera	J. Lyon	
	Submit Wiped Film Evaporator Class 3 Permit Modification or Part B Permit Application	09/30/14			L. Huffman	F. Miera	J. Lyon	
	IDF Performance Assessment (ORP/WRPS has support role to RL/CHPRC)	09/30/12			T. Fletcher	F. Miera	J. Lyon	
MISCELLANEOUS DOCUMENTS	<b>Process for Coring of an SST</b>	<b>06/30/11</b>			<b>J. Johnson</b>	<b>F. Miera</b>	<b>J. Lyon</b>	• <b>Draft shared with ECY, formal letter submittal in process.</b>
	Submit Categorical TOC HIA	09/30/11				F. Miera	J. Lyon	
	RPP-32681, Rev. 1, Process to assess tank farm leaks in support of retrieval and closure planning	03/31/11			J. Johnson	S. Sax	J. Lyon	
	Quarterly Hose-In-Hose Transfer Lines (HIHTL) Reports	Ongoing Quarterly			J. Johnson		J. Lyon	• Back-reports submitted via email to ECY, formal letter 11-TPD-024 transmitted back reports to ECY on 03/29/11 • Meeting to evaluate extension of 2 HIHTL Reports set for 05/25/11.
	<b>Waste Feed Delivery DQO Report</b>	<b>05/26/11</b>			<b>J. Johnson</b>		<b>J. Lyon</b>	• <b>ORP delivered document to ECY via email on 05/26/11.</b>
TWRPS DOCUMENTS	C-101, RPP-22520	TBD			C. Kemp	K. Smith	J. Lyon	• Pending Approval of 2 <sup>nd</sup> treatment technology
	C-105, RPP-22520	TBD			C. Kemp	K. Smith	J. Lyon	• Pending Approval of 2 <sup>nd</sup> treatment technology
	C-110, RPP-33116	TBD			C. Kemp	K. Smith	J. Lyon	• Pending Approval of 2 <sup>nd</sup> treatment technology
	C-111, RPP-37739	TBD			C. Kemp	K. Smith	J. Lyon	• Pending Approval of 2 <sup>nd</sup> treatment technology

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

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

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

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ORP Project Managers Meeting  
June 28, 2011  
2440 Stevens Ctr.  
Richland, Washington  
**Meeting Minutes Transmittal**

**Attachment D: Administrative Record Items**

**(30 pages including this coversheet)**

# Meeting Minutes for the Workshop on Selecting the Second Technology Under the Consent Decree

May 6, 2011

9:00 – 12:00

2440 Stevens/CR 1770

## Attendees

N. Uziemblo, Ecology

M. Barnes, Ecology

J. Rambo, DOE ORP

J. Vanderpol, DOE ORP

A. Olander, AREVA

J. Schofield, WRPS

M. Peloquin, WRPS



5-26-11

## Workshop goals:

1. Develop a table listing each of the C-Farm tanks, identifying first and second technologies and the rationale for selection which would be agreed to and supported by the team to their respective management.
2. Develop proposed Tank Waste Retrieval Waste Plan (TWRWP) language which will be submitted with the next revision of the TWRWP.

## Workshop discussion:

Reviewed the DRAFT table provided and verified the table contained all of the information needed by the separate parties to develop a useful tool.

The group worked as a team through each line of the table identifying additions and deletions to the table content. Ecology provided technical information used to support the rationale for selecting second technologies in the different tanks. Overall there was a good discussion and substantive input into the table content. The table has been updated to reflect the comments provided during the workshop and is located in Attachment 1.

The group then reviewed/developed draft language for the TWRWP which will be submitted with the next revision of the document. Attachment 2.

Ecology provided suggestions on tanks which might be considered low risk and potentially good candidates for developing the impracticality evaluation described in the consent decree after two technologies have been used to the limit of technology.

At the end of the workshop each person agreed that they thought the workshop was a positive productive process and would support the attached documents when presented to their respective management teams for review/approval.

**Actions:**

Update Table content based on workshop input	Completed, Attachment 1	J. Schofield
Update TWRWP language based on workshop input	Completed, Attachment 2	J. Schofield

**Attachment 1**

**C-Farm Tank Technology Table**

Tank	Primary Technology		Reason Selected as Primary Technology	Second Technology to Deploy if Primary Does Not Reduce Tank Residual Volume to Consent Decree Limit		Rationale for Second Technology Selection	TWRWP and Status
	Common Name	Process		Common Name	Process		
C-101	Modified Sluicing	DST supernate (or line pressure water) is directed from sluicers in tank risers onto waste sludge in the tank. The sludge is mobilized and directed to a pump in the tank. The pump removes the sludge-liquid slurry and transfers it to the DST. In the DST the sludge settles out and the supernate is pumped back to the SST to continue the process. It is currently planned to use two improved sluicer designs for this tank over the type previously deployed used in C-Farm.	Process is proven technology and it works. The only volume added to the DST system is the volume of sludge removed from the SST, plus the water for line flushes and other uses. There is no deployed process that is more effective.	Chemical Retrieval	<p>The following is an estimated process for a heel containing sodium fluoride phosphate (<math>\text{Na}_7\text{F}(\text{PO}_4)_2 \cdot 19\text{H}_2\text{O}</math>) and aluminum hydroxide agglomerates (<math>\text{Al}(\text{OH})_3 \cdot \text{XH}_2\text{O}</math>). The volumes and steps cannot be determined until heel volume is known.</p> <ol style="list-style-type: none"> <li>1. SST supernate liquid pumped to minimum</li> <li>2. Waste flushed with water to remove excess hydroxide</li> <li>3. Water added to attempt to dissolve sodium fluoride phosphate that may be present</li> <li>4. Solution pumped to minimum</li> <li>5. 19M NaOH added to break down aluminum hydroxide which has bonded together with other aluminum hydroxide molecules to form several compounds such as gibbsite or boehmite. The aluminum hydroxide compounds break down to form sodium aluminate solids.</li> <li>6. Solution sluiced to DST.</li> <li>7. Add water to dissolve remaining sodium aluminate solids.</li> <li>8. Pump solution to DST</li> </ol>	<p>Can be deployed faster and easier than an in-tank vehicle when primary technology is no longer effective and the Consent Decree tank residual waste volume is exceeded.</p> <p>A Best Basis Inventory (BBI) download on 11/10/10 indicates the sludge in this tank includes 27.7 wt% Al, 10.7 wt% <math>\text{PO}_4</math>, and 0.24 wt% F. The concentrations of these constituents may be compared to the pre-retrieval constituent concentrations in C-108, C-109, C-110 and C-111 below.</p> <p>See note at right on TWRWP status.</p>	<p>RPP-22520. TWRWP approved by Ecology currently calls for tank to be retrieved with MRS. Revised TWRWP showing primary and secondary technologies to be submitted in mid 2011.</p> <p>Note: A heel volume and physical composition is not known in advance. Should the second technology listed not be the preferred method when the primary technology has been deployed to its limits, a TWRWP change will be made to indicate a different technology.</p>
C-102	Modified Sluicing	Same as for C-101.	Same as for C-101.	Chemical Retrieval	Same as for C-101.	<p>Can be deployed faster and easier than an in-tank vehicle when primary technology is no longer effective and the Consent Decree tank residual waste volume is exceeded.</p> <p>A Best Basis Inventory (BBI) download on 11/10/10 indicates the sludge in this tank includes 41.4 wt% Al, 2.4 wt% <math>\text{PO}_4</math>, and 0.62 wt% F. The concentrations of these constituents may be compared to the pre-retrieval constituent concentrations in C-108, C-109, C-110 and C-111 below.</p> <p>See note at right on TWRWP status.</p>	<p>RPP-22393. TWRWP is approved by Ecology and already includes chemical retrieval or in-tank vehicle use. TWRWP will be revised to clarify compliance with Consent Decree.</p> <p>Note: A heel volume and physical composition is not known in advance. Should the second technology listed not be the preferred method when the primary technology has been deployed to its limits, a TWRWP change will be made to indicate a different technology.</p>

Tank	Primary Technology		Reason Selected as Primary Technology	Second Technology to Deploy if Primary Does Not Reduce Tank Residual Volume to Consent Decree Limit		Rationale for Second Technology Selection	TWRWP and Status
	Common Name	Process		Common Name	Process		
C-104	Modified Sluicing	Same as for C-101 except the current sluicer design is deployed.	Same as for C-101.	Chemical Retrieval	Same as for C-101.	<p>It is believed the estimated heel in C-104 can be reduced to below 360 ft<sup>3</sup> without causing a significant impact to the available DST space or the WTP throughput volume.</p> <p>A Best Basis Inventory (BBI) download on 01/03/10 indicates the pre-retrieval sludge in this tank contained 15.5 wt% Al, 0.6 wt% PO<sub>4</sub>, and 5.9 wt% F.</p>	RPP-22393. TWRWP is approved by Ecology and already includes chemical retrieval or in-tank vehicle use. TWRWP will be revised to clarify compliance with Consent Decree.
C-105	MARS vacuum system (MARS-V)	A mobile arm capable of rotating and extending is inserted in the tank. The head of the arm uses a vacuum to draw up waste. The head is equipped with two technologies, fluidizing nozzles and high pressure water spray nozzles to mobilize the waste for removal. The vacuumed slurry is drawn into a tank located inside the SST and pumped from there to the DST.	<p>The reference at the bottom states Ecology will not approve the use of modified sluicing for this tank. The tank is categorized as a sound tank but the data, per the reference, are indeterminate. This requires treating the tank as an assumed leaker for retrieval. The only technology available at the time of the letter (2004) was the MRS, so this was selected as the retrieval technology in the original TWRWP. Since that time the MARS vacuum system has been developed and is preferred as a retrieval process over the MRS because it is expected to be faster, result in lower exposure to personnel, use less water, have fewer safety basis concerns, have fewer radiological problems, and in general be a more rugged and useful system.</p> <p>A Best Basis Inventory (BBI) download on 11/10/10 indicates the sludge in this tank includes 54.0 wt% Al, 2.1 wt% PO<sub>4</sub>, and 0.29 wt% F.</p>	<p>See Primary.</p> <p>The MARS vacuum system has two technologies when deployed, fluidization for waste mobilization and high pressure water.</p>	NA, see at left.	NA, see at left.	RPP-22520. TWRWP approved by Ecology currently calls for tank to be retrieved with MRS. Revised TWRWP showing the MARS vacuum system which provides two separate technologies at deployment to be submitted in mid 2011.
C-107	MARS sluicing system (MARS-S)	A mobile arm capable of rotating and extending is inserted in the tank. The head of the arm is equipped with two technologies, supernate nozzles and high pressure water spray nozzles to mobilize the waste and direct it to a pump for removal. The waste slurry is pumped from there to the DST. In the DST the sludge settles out and the supernate is pumped back to the MARS to continue the process.	The MARS sluicing system is expected to be an improvement over modified sluicing because it is believed capable of reducing the residual waste volume in a tank to below the Consent Decree limit without requiring an a third technology. As deployed the MARS has two technologies. In addition, the MARS enables close access to most all the waste in a tank to improve waste mobilization over that of modified sluicing. This will be the first deployment of the system and will demonstrate the system capabilities, as well as provide time for making	<p>See Primary.</p> <p>The MARS sluicing system has two technologies when deployed, supernate sluicing and high pressure water.</p>	NA, see at left.	NA, see at left.	RPP-22393. TWRWP is approved by Ecology and already includes the MARS. The TWRWP wording states the MARS provides two separate technologies. TWRWP will otherwise be revised to clarify compliance with Consent Decree, but for MARS the two technologies are available when the equipment is deployed, and the high pressure water will be used when needed.

Tank	Primary Technology		Reason Selected as Primary Technology	Second Technology to Deploy if Primary Does Not Reduce Tank Residual Volume to Consent Decree Limit		Rationale for Second Technology Selection	TWRWP and Status
	Common Name	Process		Common Name	Process		
			improvements if necessary prior to further deployment. A Best Basis Inventory (BBI) download on 11/10/10 indicates the sludge in this tank includes 12.5 wt% Al, 12.5 wt% PO <sub>4</sub> , and 1.4 wt% F.				
C-108	Modified Sluicing	Already deployed to limits of technology.	Already deployed to limits of technology.	Chemical Retrieval	Same as for C-101.	It is believed the estimated heel in C-108 can be reduced to below 360 ft <sup>3</sup> without causing a significant impact to the available DST space or the WTP throughput volume.  A Best Basis Inventory (BBI) download on 07/28/04 indicates the pre-retrieval sludge in this tank contained 14.3 wt% Al, 22.5 wt% PO <sub>4</sub> , and 1.2 wt% F.  The C-108 heel sample analysis is reported in LAB-RPT-10-00001, Rev 0, to contain approximately 62 wt% sodium fluoride phosphate, 35 wt% gibbsite, and 3 wt% other compounds.	RPP-22393. TWRWP is approved by Ecology and already includes chemical retrieval or in-tank vehicle use. TWRWP will be revised to clarify compliance with Consent Decree.
C-109	Modified Sluicing	Already deployed to limits of technology.	Already deployed to limits of technology.	Chemical Retrieval	Same as for C-101.	It is believed the estimated heel in C-109 can be reduced to below 360 ft <sup>3</sup> without causing a significant impact to the available DST space or the WTP throughput volume.  A Best Basis Inventory (BBI) download on 07/28/04 indicates the pre-retrieval sludge in this tank contained 15.3 wt% Al, 16.3 wt% PO <sub>4</sub> , and 0.4 wt% F.  Sample results are not yet available for the C-109 heel.	RPP-21895. TWRWP is approved by Ecology and includes modified sluicing and in-tank vehicle use. TWRWP will be revised to include chemical retrieval as the second technology and updated to clarify compliance with Consent Decree.
C-110	Modified Sluicing	Already deployed to limits of technology.	Already deployed to limits of technology.	In-Tank Vehicle (ITV)	An in-tank vehicle is inserted in the tank. The vehicle will have high pressure water capability and will be remotely moved around the tank to break up waste particles and direct them to the pump where they are removed by sluicing.	An in-tank vehicle was selected because there are a lot of large waste agglomerates in the heel. These particles would have a low surface area and thus take a long time for a chemical dissolution. In addition, if chemical dissolution were selected as the second technology the estimated volume would have much more of an impact on the DST space and the WTP than either C-108 or C-109 heel dissolution would, so breaking up the particles for sluicing will be attempted.  A Best Basis Inventory (BBI) download on 08/04/08 indicates the pre-retrieval sludge in this tank contained 4.2 wt%	RPP-33116. TWRWP is approved by Ecology and includes modified sluicing, but no second technology. TWRWP will be revised to include the second technology at the left and updated to clarify compliance with Consent Decree.

Tank	Primary Technology		Reason Selected as Primary Technology	Second Technology to Deploy if Primary Does Not Reduce Tank Residual Volume to Consent Decree Limit		Rationale for Second Technology Selection	TWRWP and Status
	Common Name	Process		Common Name	Process		
						Al, 18.1 wt% PO <sub>4</sub> , and 2.1 wt% F. The C-110 heel sample analysis report has not yet been issued but lab results unofficially indicate the solids are about 90 wt% sodium fluoride phosphate.	
C-111	Modified Sluicing	Already deployed to limits of technology.	Already deployed to limits of technology.	In-Tank Vehicle (ITV)	Same as for C-110.	An in-tank vehicle was selected because the significant heel consists of large or monolithic pieces. The waste has a low surface area and thus a chemical dissolution would take an exceedingly long time. In addition, if chemical dissolution were selected as the second technology the estimated volume would have much more of an impact on the DST space and the WTP than either C-108 or C-109 heel dissolution would, so breaking up the particles for sluicing will be attempted.  A Best Basis Inventory (BBI) download on 01/03/10 indicates the pre-retrieval sludge in this tank contained 22.1 wt% Al, 13.6 wt% PO <sub>4</sub> , and 0.7 wt% F.	RPP-37739. TWRWP is approved by Ecology and includes modified sluicing, but no second technology. TWRWP will be revised to include the second technology at the left and updated to clarify compliance with Consent Decree.
C-112	Modified Sluicing	Same as for C-101 except it is currently planned to use one improved sluicer design for this tank over the type previously deployed used in C-Farm.	Same as for C-101.	Chemical Retrieval	Same as for C-101.	Can be deployed faster and easier than an in-tank vehicle when primary technology is no longer effective and the Consent Decree tank residual waste volume is exceeded.  A Best Basis Inventory (BBI) download on 11/10/10 indicates the sludge in this tank includes 4.7 wt% Al, 15.7 wt% PO <sub>4</sub> , and 0.48 wt% F. The concentrations of these constituents may be compared to the pre-retrieval constituent concentrations in C-108, C-109, C-110 and C-111 above.  See note at right on TWRWP status.	RPP-22393. TWRWP is approved by Ecology and already includes chemical retrieval or in-tank vehicle use. TWRWP will be revised to clarify compliance with Consent Decree.  Note: A heel volume and physical composition is not known in advance. Should the second technology listed not be the preferred method when the primary technology has been deployed to its limits, a TWRWP change will be made to indicate a different technology.

Reference: Lyon, J. J., 2004, Letter to Mr. Roy J. Schepens Office of River Protection, United States Department of Energy, July 22, Re: *Letter from R. Schepens, USDOE, to M. Wilson, Ecology, dated May 10, 2004, "Use of Double Shell Tank 241-AN-106 Supernate for Waste Retrieval from Single-Shell Tanks (SST) 241-C-103 and 241-C-105"*, Washington State Department of Ecology, Nuclear Waste Program, Richland, Washington.

**Attachment 2**

**Proposed TWRWP Language Sections 3.0 & 3.3**

### 3.0 PLANNED WASTE RETRIEVAL TECHNOLOGY

This section provides a description of the primary and secondary planned waste retrieval technologies for retrieving the waste from tanks C-102, C-104, C-107, C-108, and C-112. The rationale for selection of primary and secondary technologies is provided in Section 3.3. The primary technology is the first technology deployed for waste retrieval. The primary technologies are as follows:

- Modified sluicing for C-102, C-104, C-108, and C-112.
- MARS sluicing (MAR-S) for C-107

A second technology will be deployed for C-102, C-104, C-108, and C-112 if required to meet the tank residual waste conditions in the Decree. For C-107 the MARS is deployed with two technologies available. Therefore, and in accordance with Appendix C, Part 1 of the Decree:

“If 360 cubic feet is reached with the first retrieval technology, the first retrieval technology shall be used to the “limits of technology” and a second retrieval technology shall not be required.”

If a second technology is required for C-102, C-104, C-108 or C-112 to reach the goal of 360 cubic feet, the second technology will be:

- A chemical retrieval process for C-102. Chemical retrieval process technologies may include the following:
  - water to remove compounds insoluble in the caustic liquids found in the tanks,
  - high molarity caustic solution to break down aluminum hydroxide compounds, or
  - other chemicals to aid the retrieval of sludge.

Ecology will be informed of the pre-retrieval estimated volume of liquid to be added to the tank prior to the initial addition.

- A chemical retrieval process for C-104. Chemical retrieval process technologies may include the following:
  - water to remove compounds insoluble in the caustic liquids found in the tanks,
  - high molarity caustic solution to break down aluminum hydroxide compounds, or
  - other chemicals to aid the retrieval of sludge.

Ecology will be informed of the pre-retrieval estimated volume of liquid to be added to the tank prior to the initial addition.

- A chemical retrieval process for C-108. Chemical retrieval process technologies may include the following:
  - water to remove compounds insoluble in the caustic liquids found in the tanks,
  - high molarity caustic solution to break down aluminum hydroxide compounds, or

- other chemicals to aid the retrieval of sludge.

Ecology will be informed of the pre-retrieval estimated volume of liquid to be added to the tank prior to the initial addition.

- A chemical retrieval process for C-112. Chemical retrieval process technologies may include the following:
  - water to remove compounds insoluble in the caustic liquids found in the tanks,
  - high molarity caustic solution to break down aluminum hydroxide compounds, or
  - other chemicals to aid the retrieval of sludge.

Ecology will be informed of the pre-retrieval estimated volume of liquid to be added to the tank prior to the initial addition.

For C-107 the MARS-S unit has two established technologies deployed at the time of startup, the primary being sluicing and the secondary being a high pressure water spray available for use whenever needed.

In accordance with the Decree, Appendix C, Part 1:

“If the waste residual goal of 360 cubic feet is not achieved using the two technologies, an additional retrieval technology established in a revised TWRWP shall be deployed to the “limits of technology;” provided that DOE may request that the State agree that DOE may forego implementing a third retrieval technology if DOE believes implementing such technology is not practicable under the criteria set forth above. If DOE and Ecology are unable to reach agreement, the resolution of the issue of whether a third retrieval technology shall be deployed shall be resolved through the dispute resolution process set forth in Section IX of this Decree.”

### 3.3 TECHNOLOGIES CONSIDERED AND RATIONALE FOR SELECTION

Candidate waste retrieval technologies currently available for deployment at tanks C-102, C-104, C-107, C-108, and C-112 are (1) modified sluicing, (2) the mobile retrieval system, (3) modified sluicing with an in-tank vehicle, and (4) the MARS. Modified sluicing uses water or DST supernate to mobilize waste to a pump where it can be removed from a tank. The mobile retrieval system consists of an articulated mast system, which is a vacuum-based system deployed in the center of the tank with a crawler deployed to move sludge from the perimeter of the tank to the center of the tank where it can be removed with the vacuum system. Modified sluicing with an in-tank vehicle provides an additional retrieval process that improves the retrieval effectiveness when a hard-to-retrieve heel is reached. MARS is believed to offer an improvement over modified sluicing or modified sluicing with an in-tank vehicle because the mobilizing fluid is added closer to the waste surface and can direct the slurry better to the slurry removal pump.

Although modified sluicing and MARS could introduce more liquids to the tank than the mobile retrieval system, the modified sluicing and the MARS sluicing systems provide a higher waste retrieval rate and are much better for retrieval from sound tanks. Addition of liquid to sound tanks as identified in HNF-EP-0182 using the modified sluicing or MARS systems is acceptable. The mobile retrieval system uses vacuum to remove waste to the tank farm surface where liquid is added to enable the waste to be transferred as a slurry. Because of this difference, the mobile retrieval system or the MARS vacuum system (not described in this document) are currently the preferred waste retrieval technologies for known or suspected leaking tanks.

When modified sluicing or MARS sluicing are performed using DST supernate, the overall volume of waste requiring management (storage and/or volume reduction) in the DST system is reduced.

After considering both candidate waste retrieval technologies and designation of the tanks as being sound, modified sluicing using recycled DST supernate was selected as the preferred primary technology for deployment in tanks C-102, C-104, C-108, and C-112. The MARS sluicing system is selected for deployment on C-107. This will be the initial deployment for the MARS system. The operating experience will provide information for future deployment of the system.

The second technology alternatives, should one be required for residual waste removal following modified sluicing, are an in-tank vehicle and chemical retrieval.

Generally, an ITV is desirable for large or monolithic particles since it can break these up for sluicing, while chemical retrieval of larger aggregates may be slow or ineffective due to the small surface area for dissolution. An ITV is more preferred as the heel volume increases because chemical retrieval may take up too much DST space and, for caustic or acid dissolutions, will have proportionally more impact to the DST space. Chemical retrieval is preferable for heels where the volume is relatively low so the impact on DST space and the WTP is less. Chemical retrieval may also be preferable if the particles are small because the surface area for dissolution is greater and an ITV may just push the fine particles around the tank.

Chemical retrieval was selected as the second technology for C-104 and C-108 as it can be deployed faster and easier than an in-tank vehicle and because it is believed the estimated residual heel volume could be reduced to below 360 ft<sup>3</sup> without causing a significant impact to the available DST space or the WTP throughput volume.

Chemical retrieval was selected as the second technology for C-102 and C-112 as it can be deployed faster and easier than an in-tank vehicle when the primary technology is no longer effective and the tank residual waste volume in the Decree is exceeded.

**Meeting Minutes for the HIHTL Waiver Request**

**May 25, 2011**

**Ecology building**

**Attendees**

J. Vanderpol, DOE

J. Rambo, DOE

M. Hendrickson, Ecology

N. Uziemblo, Ecology

C. Whalen, Ecology

B. Barton, WRPS

M. Erhart, WRPS

R. Powell, Meier Eng

S. Philo, ARES

M. Dahl, ARES

M. Peloquin, WRPS



**Discussion:**

Met with Ecology personnel on the HIHTL life extension waiver for the hoses and described the evaluation process as it applied to the hoses. (Appendix W Presentation attached). Walked through the presentation with Ecology and discussed the one major change from previous waivers which was the use of the PNL Hanford Meteorological Station temperature data log. PNL has been cataloging soil temperature data at the Hanford Meteorological station for over 30 years at 15 minute intervals at different depths within the soil. The temperature calculations used the highest temperature ever recorded for each month of the year for conservatism. Ecology did not see any issues with this approach but requested additional clarification by WRPS to explain why the data is conservative, including a discussion on how differences between the sites might impact the data.

Ecology also requested a complete waiver package prior to submitting the waiver request.

WRPS explained that the final piece of the package, the system configuration evaluation, would not be completed until mid July just prior to the scheduled start of the C-107 retrieval.

A follow-up phone discussion was conducted with M. Hendrickson to further discuss the submittal process and it was agreed that upon successful completion of the leak test with IQRPE signoff that WRPS could submit a partial waiver request package. The package would include the Technical Evaluation discussed at the meeting on 5/25/11 and the IQRPE sign-off on the successful leak test. Ecology also requested an invitation to observe the leak test which is scheduled for late June.

The system configuration evaluation will be submitted when completed in July. This path forward should help facilitate a timely Ecology review and minimize any impacts to the retrieval startup.

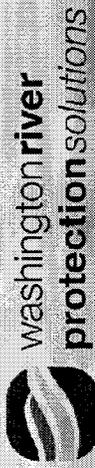
**Actions:**

Invite Ecology and DOE to the field leak test of the HIHTL's. POC M. Peloquin

Provide clarification on the soil temperature data on how it is conservative. POC M. Erhart

Submit a partial waiver request package containing at a minimum: the technical evaluation and the IQRPE approval of the leak test. POC M. Peloquin

**Attachment 1**  
**Appendix W Presentation**



# Hose-In-Hose Transfer Line Life Extension

• RPP-6711 Appendix X: HIHTL's

May 2011





# Hose-In-Hose Transfer Life Extension

- **RPP-6711 Appendix X: HIHTL's**
  - Extended HIHTL's I-68511-0-1, I-68511-002, I-19643-1, I-19643-3 & associated jumpers to their corresponding 10 year maximum end of service life.

HIHTL/Jumper Serial #	Current Service Life <small>Based on Appendix U of RPP-6711</small>	Proposed Service Life <small>with this extension</small> <small>(based on total of 10 years from date of manufacture)</small>	Theoretical End of Service Life
I-68511-0-01	10/2010	10/2014	> 7/2019
I-68511-0-02	10/2010	10/2014	> 7/2019
I-19643-1	10/2010	8/2012	> 7/2019
I-19643-3	10/2010	8/2012	> 7/2019
None (jumper)	10/2010	4/2013	> 7/2019
None (jumper)	10/2010	4/2013	> 7/2019
I-50935-01 (jumper)	10/2010	3/2014	> 7/2019



# Hose-In-Hose Transfer Life Extension

## RPP-6711 Appendix X: HIHTL's (cont.)

- Service life extension based on the Service Life Verification Study from National Technical Systems (NTS)
- – Appendix L of RPP-6711.
  - SL affected by the following:
    - Temperature
    - Pressure
    - Radiation Effects (cumulative Dose)
    - Chemical compatibility
    - Abrasion
  - Main Contributors are Temperature, Pressure and Radiation



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# Hose-In-Hose Transfer Life Extension

## • RPP-6711 Appendix X: HIHTL's (cont.)

Equations used to calculate SL and Dose Rate

- $DR \text{ (Rad/hr)} = 0.5 * \frac{2.12 * E_i * C_i}{\rho}$

$\rho$

Where:

$E_i$  = Energy MeV

$C_i$  = total dose  $\mu\text{Ci/cm}^3$

$\rho$  = density  $\text{g/cm}^3$

- Maximum Dose for EPDM is  $1 \times 10^7$  Rad
  - Total Dose =  $DR(\text{Rad/hr}) * \text{Time (hr)}$
  - Given the time of exposure and the estimated time of exposure for the future operations (100 Rad/hr at all times), the maximum Dose for the life of the hose is  $7.18 \times 10^6$  Rad .
  - Since  $7.18 \times 10^6$  Rad <  $1 \times 10^7$  Rad
  - SL is limited to Temperature and Pressures only



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# Hose-In-Hose Transfer Life Extension

## • RPP-6711 Appendix X: HIHTL's (cont.)

- Service Life Calculation based on Temperature and Pressure.
  - $SL \text{ (days)} = 1.3 \times 10^7 \exp[-0.0548 * T \text{ (}^\circ\text{F)} - 0.0073 * P \text{ (psig)}]$
  - Pressure during retrieval assumed to be maximum operating pressure
  - Pressure during down times assumed to be 25 psig (very conservative)
  - For conservatism, the limit of hose life is assumed to be reached when 80% of the service life, as estimated by the Appendix L methodology, is reached.
  - The extension time conservatively uses an estimated 25% efficiency rate (25% operational time, 75% down time). Typically the actual value for operation versus down time is approximately 10% as verified in Miners rule table Page X-57 of RPP-6711.



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# Hose-In-Hose Transfer Life Extension

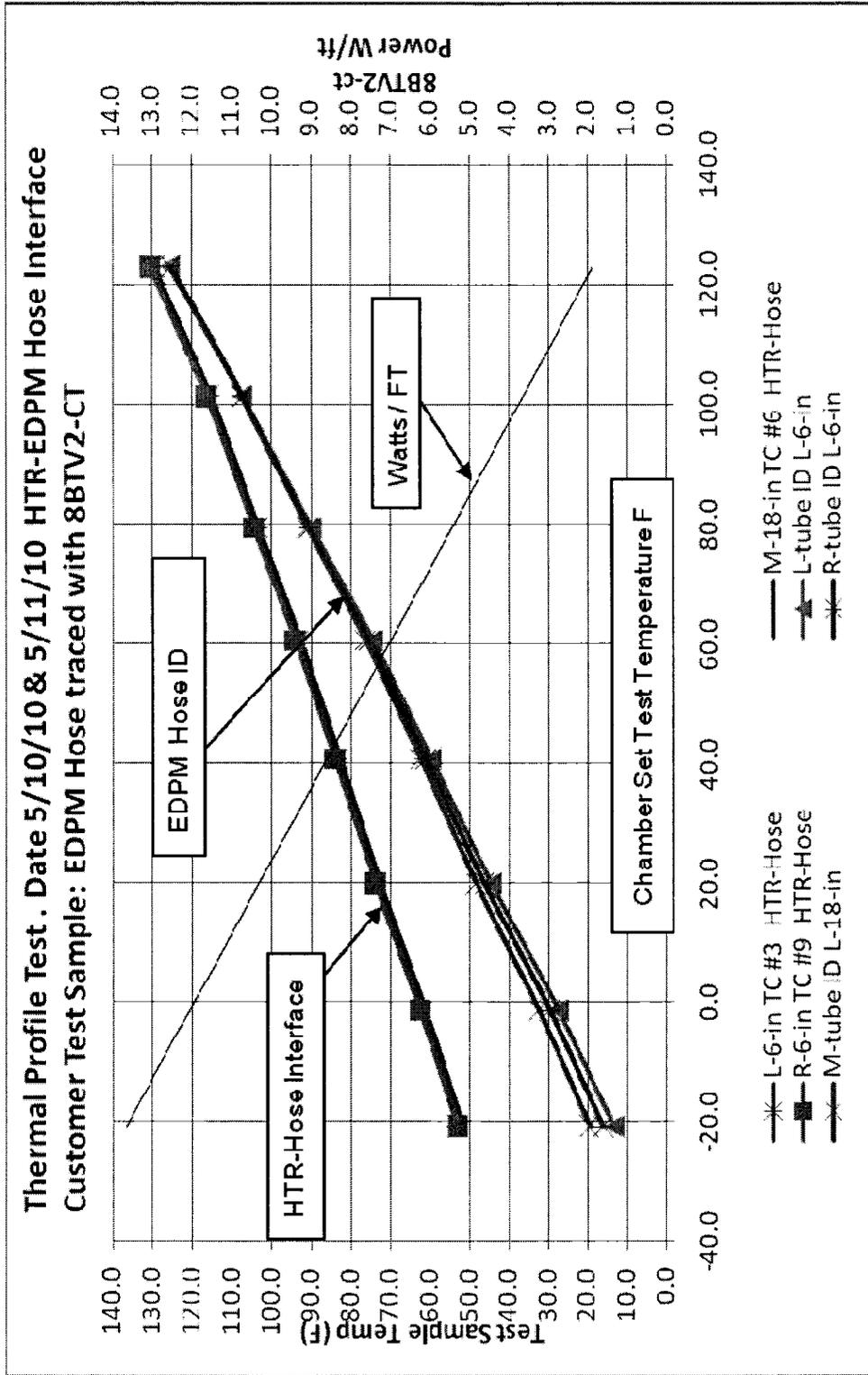
- **RPP-6711 Appendix X: HIHTL's (cont.)**
  - New Maximum Temperatures Used for SL Equation
    - Until recently, the temperature used was assumed to be 150°F from installation forward due to self regulating heat trace being active continuously.
    - Testing has been performed at the heat trace manufacture with HIHTL coupons to determine the max. temperature of the heat trace/HIHTL interface based on maximum monthly ambient soil temperatures (Appendix F of RPP-6711).
    - The results of this testing was used for Appendix W of RPP-6711 to determine the maximum temperatures the HIHTL's can be exposed to based on Monthly maximum soil temperatures (These values are conservative because the cooling effect of the fluid flowing through the hoses is not taken into consideration).



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# Hose-In-Hose Transfer Life Extension

## Tyco Thermal Test Results





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# Hose-In-Hose Transfer Life Extension

## • RPP-6711 Appendix X: HIHTL's (cont.)

- For conservatism, the calculation used the hottest soil temperatures (55 years of hourly soil temperatures data as recorded by PNNL weather station) and assumed the entire month saw this highest temperature recorded. The following table shows the new maximum heat trace temperatures based on maximum ambient temperature of the soil that the HIHTL's could be exposed to.

Month	Maximum Soil Temp. (°F)	Temperature used for Lifetime Calculation (°F)
January	62.9	130
February	77.7	130
March	91.5	130
April	113.9	130
May	128.5	130
June	132.7	133
July	141.2	142
August	136.5	137
September	126.9	130
October	106.2	130
November	78.4	130
December	65.0	130



**Topic: Tank 241-C-104 Retrieval Briefing to Ecology, June 7, 2011**

ORP has completed modified sluicing and bulk retrieval of Tank 241-C-104. ORP and WRPS provided the subject briefing to Ecology on the morning of Tuesday, June 7, 2011. In attendance were Chris Kemp (DOE), Mike Peloquin (WRPS), Kent Smith (WRPS), Jeff Lyons (Ecology), Nancy Uziemblo (Ecology), and Mike Barnes (Ecology).

This will be entered into the TPA Administrative Record at the next Office of River Protection Project Manager Meeting.

CKL 6-28-11  
Chris Kemp, date  
DOE-ORP TPA Project Manager

Nancy Uziemblo 6/28/11  
Jeff Lyon, date  
Ecology Project Manager

\_\_\_\_\_  
XXXXXXX, date  
EPA Project Manager

**WMA C CLOSURE PLANNING MEETING**  
**June 14, 2011**

**Attendees**

Chris Kemp – ORP	Michelle Hendrickon - Ecology
Lori Huffman – ORP	Mike Barnes - Ecology
Keith Quigley- WRPS	John Price - Ecology
Janet Badden –WRPS	Joe Caggiano - Ecology
Dan Parker – WRPS	Nancy Uziemblo - Ecology
Susan Eberlein - WRPS	Jeff Lyon - Ecology
Les Fort - WRPS	Reed Kaldor - MSA
Becky Wiegman – WRPS	Jeff Luke – WRPS
Phil Miller – NorthWind	

The 2019 closure schedule was handed out. Any comments should be brought to the next meeting (6/14/11) for discussion.

Phil Miller gave a presentation on the history of RPP-9937 leading from the Silver Inspection in 1995, the M-23 milestone inspection, and where we are at today.

The SST Ancillary Equipment (MUST) table developed by WRPS and ORP was presented. Ecology is going to crosscheck with other databases to ensure a complete list, and provide any missing information if/when available.

**DECISIONS**

Future meetings will be used to resolve comments on M-45-100, M-45-101, M-45-80, and M-45-81 documents. The M-45-100 document will be the priority for resolution. Schedule for comment resolution of the other documents is being determined.

**ISSUES**

None

## ACTIONS

#	ACTION	DATE	ASSIGNEE	DUE DATE	COMMENTS	Completed (X)
1.	Decision on timing of demo plan revision	2/2/10	J. Lyon/ C. Kemp	4/27/10	Janet will incorporate changes. Document will go out to Ecology for one last look, and to Chris for processing.	
2.	Closure White Paper – Ecology Review	2/12/10	Ecology	3/18/10	Discuss/incorporate Ecology's comments in 4/13 meeting. Document will be considered complete after this meeting.	X
3.	Catch Tank DQO	2/17/10	D Banning	6/15/10	Action taken in 2/17 DQO meeting	
4.	Check with attorneys on plan for completion/submittal of demo plan/white papers	3/4/10	C. Kemp	3/18/10	Keith will contact Chris	
5.	Define EE/CA plan	3/4/10	J. Badden		Add to future meeting agenda	
6.	Develop preliminary schedule for CR Vault DQO	3/4/10	K. Quigley		Keith will send out information on schedule dates	
7.	Brief Ecology on RFI development	3/4/10	M. Skorska			
8.	Brief Ecology on CMS development	3/4/10	J. Badden			
9.	Integrate with Marybeth on Section 14 of the demo plan	3/18/10	C. Kemp		Keith will contact Chris	
10.	Develop and implement a communication plan per Section 13 of the demo plan	3/18/10	C. Kemp/ J. Lyon			
11.	Provide timeline for Section 15 of the demo plan	3/18/10	K. Quigley			X
12.	Add TPA section to RCRA/CERCLA white paper, including discussion on AIP process	4/8/10	J. Badden	4/27/10		X

#	ACTION	DATE	ASSIGNEE	DUE DATE	COMMENTS	Completed (X)
13.	Find section in Site Wide Permit that addresses RCRA/CERCLA coordination and provide to Janet.	4/8/10	B. Jentzen		Discuss at 4/27 meeting	
14.	Add discussion to RCRA/CERCLA white paper on how each authority meets the others requirements.	4/8/10	J. Badden	4/27/10		X
15.	Send red-line/strike out of new changes to RCRA/CERCLA white paper prior to 4/27 meeting.	4/8/10	J. Badden			
16.	Provide Janet with comments on changes made to Demo Plan by 4/13 meeting.	4/8/10	Ecology	4/13/10	Janet sent revised Demo Plan on 3/31/10.	X
17.	Provide comments on Closure white paper by 4/13 meeting	4/8/10	J. Wallace	4/13/10		X
18.	Add C-301 removal study discussion to a future meeting agenda	4/13/10	B. Wiegman			

**Action Items - WMA C Closure Planning Meeting**

#	ACTION	DATE	ASSIGNEE	DUE DATE	COMMENTS	Completed (X)
1.	Review closure schedule and provide comments at next meeting.	6/14/11	Jeff Lyon	6/21/11		
2.	Ask MaryBeth about the relationship between the EIS and the closure schedule	6/14/11	Chris Kemp	6/21/11		
3.	Bring detailed conceptual design schedule to next meeting	6/14/11	Keith Quigley	6/21/11		
4.	Review closure schedule for permitting path by 2014.	6/14/11	Jeff Lyon	6/21/11		
5.	Add MUST table discussion to agenda once cross checking is completed.	6/14/11	Michelle Hendrickson Becky Wiegman	6/21/11		



