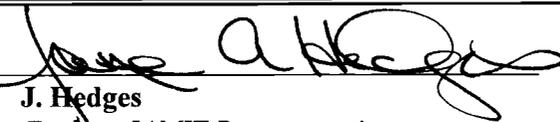


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**River Corridor/Central Plateau  
Tri-Party Agreement Milestone Review  
Meeting Minutes  
January 26, 2012**

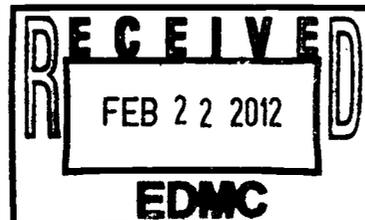
Approval:  Date: 2/16/12  
**J. Hedges**  
*Ecology IAMIT Representative*

Approval:  Date: 2.16.12  
**J.A. Dowell**  
*DOE IAMIT Representative*

Approval:  Date: 2-16-2012  
 for **D.A. Faulk**  
*EPA IAMIT Representative*

Minutes Prepared by:  Date: 2/22/2012  
**T.W. Noland**  
*Mission Support Alliance, LLC*

Blackburn, J.E.	WCH	Korenkiewicz, S.L.*	RL
Bohnee, G.	NPT	Knox, K.E.*	KCR
Bond, F.W.*	Ecology	Lobos, R.A.*	EPA
Brown, M.J.	Ecology	Louie, C.S.*	RL
Bryson, D.C.	RL	Lynch, J.J.*	ORP
Butler, D.H.*	MSA	Mattlin, E.M.*	RL
Cameron, C.E.*	EPA	McKarns, T.C.*	RL
Charboneau, B.L	RL	Menard, N.M.*	Ecology
Cimon, S.*	ODE	Nguyen, T.L.*	RL
Collins, M.S.*	RL	Niles, K.	ODE
Cox, W.G.*	CHPRC	Noland, T.W.*	MSA
Dittmer, L.M.*	CHPRC	Ortiz, S.M.	RL
Dowell, J.A.*	RL	Peschong, J.C.	RL
Ellison, B.A.*	RL	Piippo, R.E.*	MSA
Farabee, O.A.*	RL	Popielarczyk, R.S.*	CHPRC
Faulk, D.A.*	EPA	Price, J.B.*	Ecology
Foley, B. L.*	RL	Russell, R.W.	ORP
French, M.S.*	RL	Shoemake, J.*	CHPRC
Gadbois, L.E.*	EPA	Singleton, D.G.*	Ecology
Goswami, D.	Ecology	Skinnarland, E.R.*	Ecology
Harris, S.	CTUIR	Teimouri, A.E.	HQ
Hedges, J.*	Ecology	Teynor, T.K.*	RL
Henry, D.	ODE	Vanni, J.	Yakama
Hildebrand, D.R.*	RL	Whalen, C.	Ecology
Jim, R.	Yakama	Yasek, D.M.*	WCH
Johnson, W.F.	WCH	Administrative Record	
Kaldor, R.A.*	MSA		
Killoy, S.E.	WRPS		



\*Attendees

**River Corridor/Central Plateau  
Tri-Party Agreement Milestone Review  
Meeting Minutes  
January 26, 2012**

**River Corridor Closure Project - Milestones M-16/M-89/M-92/M-93/M-94**

DOE-RL provided an update on the recent accident when an ERDF truck rolled over on Route 3N. The truck did not roll over due to icy roads but veered off the road and overcorrected. The driver did not sustain serious injuries, and was kept overnight at the hospital for observation and then released. The excavated material that was dumped in the accident was lead-contaminated soil from the 100-D area. A fixative was placed on the soil, and it will be removed and sent to ERDF today or tomorrow (DOE-RL noted that there had been snow and rain when the soil was spilled). The soil will be sampled for closeout of the spill area. The truck and its container were to be moved out of the way today. DOE-RL stated that this was the first ERDF truck accident since the contractor (WCH) started its contract, and WCH has gone over nine million miles driven without an accident. The last ERDF truck accident occurred in 2002 under a different contractor.

Quarterly Summary October - December 2011 - DOE-RL stated that the two change requests that were approved (M-16-11-21 and M-16-11-22) will allow for more efficient cleanup due to stockpiles and ongoing remediation in the area. It will also allow some time to resolve the issues associated with the 126-H-2 and 128-H-1 waste sites.

Milestone Status:

M-16-55/M-16-00A - DOE-RL stated that the interim remedial actions (RA) for the 100-N Area will be completed by the due date of 12/31/12. The at risk portion of the milestone is associated with completing the closure documents. DOE-RL will be holding discussions with Ecology regarding the document quality and issues.

M-89-00 - DOE-RL is reviewing WCH's report that was submitted about ten days ago on the technical approach for removal of the highly contaminated soil underneath B-Cell (approx. 8,000 rad per hour). WCH will be providing a briefing on its recommended path forward to DOE-RL. The plan is to send out a Request for Proposal (RFP) this spring and initiate the work later this year. DOE-RL will initiate discussions to revise the milestone due date as soon as a better time line is in place.

Significant Accomplishments - For Last 3 Months:

M-16 - Remedial Action/Risk Assessment - DOE-RL reported that during excavation of 100-C-7, which is one of the two deep chrome waste sites, remediation was done down to 75 feet and sampling was conducted down to 50 feet. The samples have come back clean, meeting the RA objective. Sampling is now being done from 50 feet down to the bottom of the excavation.

Excavation is down to about 75 feet at 100-C-7:1, which is the larger deep chrome waste site. The power lines will be moved on the west side of the excavation where the sidewall staining was noted at about 45 feet, which will allow excavation to the west and completion of the remediation. DOE-RL stated that in December 2011, the transfer of the fuel found in the 100 Area burial grounds was completed and moved from F Area over to K Basins. All of the fuel found during remediation in the 100 Area has now been transferred over to K Basins.

WCH has been conducting demonstrations of the vertical pipe unit (VPU) remediation for the 618-10/11 burial ground. WCH is now turning its attention to the process for removing the caissons, which will present more of a challenge. The expectation is that the waste coming out of the caissons will be remote-handled transuranic (TRU). Ecology asked if the waste will be dealt with at the site versus moving it for treatment elsewhere. DOE-RL responded that the first piece in the Expression of Interest that has been issued will be for the demonstration of technology, and the ultimate goal will be to package the waste at the site. If the waste designates as TRU, it will have to go through the WIPP certification process. Ecology stated that the caisson waste should be tracked in conjunction with M-91 remote-handled TRU waste. EPA ~~noted that if the caissons are designated as TRU waste, it will fall under M-91.~~ EPA added that the intent is for all the waste to be characterized and removed from the waste site to either ERDF or WRAP for a waste count. Ecology noted the possibility of a separate facility under M-91-01A to deal with the remote-handled TRU waste, and whether the waste could be sent to WIPP without this separate facility. DOE-RL responded that the facility is under a project program and is subject to some evaluation and change.

DOE-RL provided an update on 100-F-57 chrome plume (not listed on today's handout), which is the last waste site at F Area. The plume is mostly in single digits and located around the facility where the chrome was handled. Remediation of the chrome plume is expected to be completed in the next month.

M-93-Reactors Final Disposition - DOE-RL reported that the closeout of the 105N reactor enclosure has been completed, and the interim safe storage (ISS) of the reactor is expected to be completed this quarter. The ISS will be done after the removal of the fuel storage basin, which is under way.

#### Significant Actions Planned - For Next Six Months:

M-16 - Remedial Action/Risk Assessment - EPA asked what triggered the occurrence report associated with the NaK (sodium potassium) test specimens in the 100-D Area. DOE-RL responded that there wasn't actually a violation, but WCH had an issue with tracking the staging piles and ensuring that all of the requirements were understood. As a result, the report was filed as a management concern. Ecology asked how the NaK will be treated. DOE-RL stated that the NaK is a small amount (12 cc's of material), and it will be placed in a pressure chamber that will be filled with steam via holes that are drilled into the chamber. The process will be monitored for temperature and pressure. Once the process is completed, the material will be placed into a glovebox and cut open to ensure all the NaK has been reacted. Water will be sprayed on the

material so that if there is anything else left, the cladding can be taken off. Ecology suggested the possibility of using a pressure chamber to treat some components that are sitting in the 400 Area. The components are at issue as a result of a compliance inspection, and they are in an area that is not being monitored.

Performance Summary - DOE-RL reported that the project continues with positive cost and schedule variances, which are expected to be maintained through the remainder of the contract. Ecology asked about the \$120 million over target cost total under the EAC (estimated completion) column. DOE-RL responded that the difference is accounted for in the budgets. The EAC reflects additional scope, and some of it has already been completed. All four of the American Recovery and Reinvestment Act (ARRA) projects were completed, and there are two buy-back projects with the remaining ARRA funding. One was for ERDF operations, which was completed at the end of October 2011. The second buy-back project of about \$19 million is for continuing remediation of the 618-10 burial grounds.

Issues - DOE-RL noted that at the request of Ecology, the description of the issues provides more detail. Regarding the third bulleted issue, DOE-RL noted that the closure packages have been sent to Ecology, and the understanding is that Ecology will reject the packages. Resolution will be attempted at the project manager level.

### **Biennial Assessment of Information and Data Access Needs - M-35**

DOE-RL provided an update on the effort to improve data access for Ecology and EPA. DOE-RL has received input from Ecology and EPA regarding their issues with getting access. DOE-RL has been working with MSA and LMSI to resolve the issues, and the majority of them have been resolved. DOE-RL stated that by the end of March 2012 there will be better access mechanisms in place. PNNL has also developed a system that provides the ability to pull up groundwater data in addition to DOE-RL's information system.

### **Lifecycle Report - M-36-01**

DOE-RL reported that the 2012 lifecycle report was produced and delivered early to EPA and Ecology. The 2012 report is in the process of being published on the Hanford website, and it will be available within a week. The fact sheet for the 2012 report is also complete. The 2013 lifecycle report is currently in process, and no major issues are expected with producing the report to meet the milestone. The funding profiles are being developed in order to be compliant. Ecology asked about the process for disposition and incorporation of comments into the 2013 report. DOE-RL responded that a wide variety of comments have been received, and all of the comments will be taken into consideration and an effort will be made to determine the best path forward.

### **TPA Milestone M-26-01 - Land Disposal Restrictions Report**

DOE-RL reported that the annual LDR report is on schedule to be issued in April 2012. The

LDR report will be a summary report this year.

### **TPA Quarterly Milestone Review M-91 Series**

DOE-RL distributed a summary for the M-91 milestones. Currently there is very little activity, due to no funding for retrieval, treatment or shipment of waste. There was some discussion regarding the hold on M-91 activities and getting recertification for startup of repackaging and shipping waste to WIPP in 2014. Ecology stated that one of the features of M-91 is the annual project management plan (PMP), which looks at treatment requirements for site waste and integrating those requirements. Ecology noted that there has been discussion today -- i.e., the 618 caissons potentially designating as TRU waste and disposition of the NaK -- that provides an opportunity for integration. DOE-RL took an action to follow up today's discussion regarding integration of the various site waste.

### **Hanford 100-K Remediation for Applicable M-16 and M-93 Milestones**

#### Accomplishments - 1st Quarter:

D4 - All of the goals for demolition with ARRA funding were met.

KE Reactor - DOE-RL reported that the conceptual design for Safe Storage Enclosure (SSE) has been completed, and the final design will be completed in two months. The SSE will be a full enclosure of the reactor and will be built with structural steel and steel siding, with a design life of 75 years. For future core removal, the south wall of the safe enclosure will be structured so that it can be removed without disturbing the load-bearing walls. The steel siding will be able to be removed and the annex will be built right next to the wall. DOE-RL stated that it believes the SSE is the best option to go forward. The SSE was found to be safer to construct from an industrial worker and nuclear safety aspect than the traditional Interim Safe Storage (ISS), and there would also be schedule and cost savings. The SSE eliminates the need for scaffolding to do the high concrete pourbacks at the 100-foot level. From a nuclear safety aspect, the reactor walls do not have to be touched, precluding any additional penetration to the reactor block. Prepping for below-grade penetrations is being done. From the surface down, all the penetrations will have cement pourbacks to prevent animals, etc., from getting inside the reactor building. DOE-RL is employing lessons learned from the N Reactor ISS. DOE-RL stated that the soils that are disturbed around the building will be compacted in layers, and it has been working with EPA to resolve the issue of contamination in a few places near the reactor building.

EPA stated its opinion that since the SSE is not close to the proposal for a traditional ISS that was sent out to the public, DOE-RL would need to solicit public comment for the SSE. EPA added that if DOE-RL does not solicit public comment, that EPA would not be willing to sign the new action memorandum for the SSE. EPA noted that DOE-RL is already authorized to do the SSE work, and EPA is not required to sign the action memo. DOE-RL responded that there is a difference of opinion on what the change to the action memo encompasses with regard to the original ISS, and the differences will be worked through with EPA. DOE-RL noted that it believes the only difference between the ISS as described in the remedial action work plan

(RAWP) and the SSE is that the RAWP calls out for touching or attaching to the reactor structure walls.

Waste Sites - DOE-RL reported that approval was received from the Indian Nations for the seed mix to do interim revegetation on K-63. Work on the K-64 waste site has been held up for 2 ½ years while working with the Indian Nations to get a memorandum of agreement (MOA) in place. DOE-RL met with the Yakama Indian Nation last week to answer questions on the MOA, and the Indian Nations removed their demand to be signatories on the MOA for MOA 64. There are several other issues that remain to be resolved with the Indian Nations, and until all the issues are resolved and questions are answered, work on K-64 will not start. The original start date on K-64 was scheduled for this month.

Sludge Treatment Project (STP) - Removal of KOP Material (M-016-172) - DOE-RL reported that this milestone is on track to be completed by the 9/30/12 due date. The last remaining fuel multicanister overpacks (MCOs) are on track to be removed, and the basin will be declared fuel-free. Immediately following that, the knockout pot (KOP) material will be transferred using the MCO method and sent to the canister storage building (CSB) for long-term storage in the Central Plateau.

STP Phase 1 Removal of Containerized Sludge (M-016-174) - DOE-RL reported that this milestone is on track to be completed by the 9/30/13 due date. All of the necessary testing for a technical readiness level 6 has been completed, which supports a Critical Decision-2/3 (CD-2/3). DOE-Headquarters will conduct a technology readiness assessment in June 2012, and DOE-RL is confident it will pass. The schedule is for DOE-RL to approve CD-2/3 by February 2013, but the goal is to reach approval by the end of December 2012. Following approval of CD-2/3, final design will be initiated and construction will begin.

STP Phase 2 Sludge Treatment & Packaging Technology Evaluation (M-016-171) The technology evaluation report has been reviewed and approved by DOE-RL, and DOE-RL is developing a technology maturation plan. When the plan has been finalized, two interim milestones will be proposed to tie in to the next milestone for Phase 2, which is due in 2015. In 2015, DOE-RL is obligated to provide EPA and Ecology another set of milestones that go through the treatment and packaging of the remaining material.

Quarterly Milestone Summary - EPA noted that the first milestone description should be corrected to read M-016-173 instead of 73. EPA suggested that the milestone summary should include the status of the milestones (i.e. on schedule, at risk). DOE-RL noted that milestone M-016-143 is at risk, but is holding off on declaring it at risk until further discussions on the MOA are held with the Indian Nations. All of the facilities under M-016-143 have been removed, but the 100-K-64 waste site and the 100-K-57 (contained within 100-K-64) are being held up by the MOA with the Indian Nations. Another waste site that is delayed is 100-KE-1, which is a deep condensate crib with extensive carbon-14 contamination. In order to access the waste site, due to the way it runs towards the reactor there is a potential to undermine the stability of the reactor. DOE-RL has been in discussions about the issue with EPA for some time, and it's also been part of the remedial investigation feasibility study (RI/FS) effort to resolve the issue.

Project Baseline Performance - DOE-RL reported that RL-41 is ahead of schedule and under budget, and RL-12 is on schedule and budget.

Planned Activities Next Six Months - DOE-RL noted that demolition of the 1908K outfall structure is dependent on reaching an MOA with the Indian Nations. Ecology asked about the

process if fuel/fuel scraps are found in other areas. DOE-RL responded that the intent is for WCH develop a dry storage cask method to store the fuel safely at the CSB on an outside pad.

### **PFP Closure Project - TPA Milestone M-083**

Quarterly Milestone Summary - DOE-RL reported that there are two interim milestones and one major milestone remaining, and they are on schedule.

Accomplishments - 1st Quarter - The crane in the PRF canyon has been repaired and is now operational. Another set of five pencil tanks have been removed, increasing the total to 30 pencil tanks removed.

Project Baseline Performance - PFP will continue with ARRA work through FY13 and possibly into FY14. A baseline change request is being prepared for DOE-Headquarters to approve the continuation of ARRA. DOE-RL noted that the fiscal year-to-date schedule performance number reported is not a true performance number, in large part due to the baseline change request. One of the contributors to the negative cost performance was the ventilation in 2736ZB turned out to be more contaminated than expected and some of it had to be removed, which precluded doing open-air demolition.

Planned Activities Next 6 Months - DOE-RL noted that the first six bullets listed for planned activities comprises the work scope for FY12. DOE-RL stated that there had been no removal action work plan (RAWP) for the main processing facilities, but there was an ancillary RAWP. The PFP demolition RAWP will replace the ancillary facility RAWP and include the main processing facilities, so there will be one RAWP. Ecology asked about any asbestos issues associated with the demolition RAWP. DOE-RL responded that all the asbestos is being removed on the piping and there is no asbestos in the vaults.

### **Central Plateau Remediation Project - M-016-00, M-085-00**

Accomplishments - 1st Quarter - DOE-RL noted that there were no milestones scheduled to be completed in the first quarter. The demolition of 209E Critical Mass Lab was completed. DOE-RL notified Ecology that the 209E slab would not be completely cleaned until after the remaining 13 waste sites are removed. DOE-RL stated that it coordinated with Ecology to reach that agreement.

Project Baseline Performance - DOE-RL reported that the ARRA work scope was completed under budget, and there is approximately a \$4 ½ million carryover. The work scope for that carryover has not been clearly defined at this time, but it is under evaluation.

Milestone Status - DOE-RL reported that all of the TPA milestones are on schedule. Ecology noted that milestone M-085-01 to establish a date for M-85-00 by 9/30/12 is associated with the canyons, and expressed an interest in establishing milestone schedules for the reactors as well. EPA added there is a TPA milestone to negotiate reactor schedules with a TBD date, and EPA and Ecology are interested in making the TBD the same date as M-085-01. DOE-RL acknowledged Ecology and EPA's intent to coordinate the two milestones.

## **Soil and Groundwater Remediation Project Milestone Review - M-015-00, M-016-00, M-024-00, M-037-00, M-085-00**

### Accomplishments - 1st Quarter:

Deep Vadose Zone - DOE-RL reported that the preliminary data received on the perched water removal test in mid-January 2012 is undergoing internal QA checks. The data is consistent with October 2011 data. The December 2011 data for uranium showed 71,500 micrograms per liter, and in October it was 63,600. The December 2011 data for tech-99 was 45,100 picocuries per liter, and in October it was 37,800.

100-HR-3 - DOE-RL reported that the operational test procedure for the HX pump and treat system was completed ahead of schedule in December 2011.

Milestone Summary - M-015-00 - DOE-RL noted that the target milestones are behind schedule, and it is working closely with CHPRC to establish what the revised schedules are for those milestones. DOE-RL pointed out that the forecast dates for the target milestones can move either ahead or behind schedule. DOE-RL stated that it is still on commitment for meeting the milestone at the end of December 2012 for completing the River Corridor proposed plans (PP) and RI/FS process. Ecology asked which treatability test is associated with M-015-110D. DOE-RL responded that it is the treatability test report for the soil desiccation work.

Milestone Summary - M-037 - DOE-RL noted that milestone M-037-03 is at risk for submitting the RCRA closure plans for the B-3 and S-10 ponds, and it has been working closely with Ecology on language for the TPA Change Control Form. At issue is the length of extension for submitting the closure plans.

Project Baseline Performance - DOE-RL noted that the work scope associated with ARRA components (R1.1 and R1.2) of the capital asset project (RL-0030.C) were completed by the end of September 2011. The remainder of the capital asset project work scope is behind schedule and over budget. A major contributor to the negative cost variance for the 200 West pump and treat project was due to resources expended at the end of FY11 to complete the ARRA work scope. The sludge stabilization system is behind schedule and is also a major contributor to the negative cost variance. There have been delays in the long lead equipment related to the odor control system, which is critical right now since the inoculation of the bugs has started. DOE-RL has asked the contractor to provide a recovery plan with regard to this performance on the capital asset project. The base project, contract to date, is ahead of schedule and overspent but cost and schedule performance indices are acceptable as of the end of December 2011.

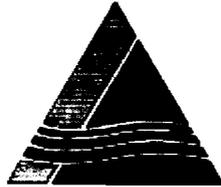
Ecology asked about the availability of funding for well installation this year. DOE-RL responded that there is no funding for well drilling this year, but there are internal discussions about some wells that need to be installed, such as accelerating work that was slipped to FY13 back into FY12 for the ZP injection system.

### Planned Activities Next 6 Months:

200-ZP-1/200-PW-1 SVE - DOE-RL reported that CHPRC's current schedule for completion of operational test procedures and turnover of pump and treat operations is mid-June 2012, but the

date is slipping. DOE-RL is working with CHPRC in an attempt to get the date pulled back to the end of May, which was the original expectation.

200-UP-1/300 Area/100 K Area - EPA stated that it has confidence regarding the issuance of the 300 Area and 200-UP-1 Rev. 0 RI/FS and PP; however, the 100 K Area RI/S and PP poses a challenge since EPA does not agree with some of DOE-RL's comment responses. EPA plans to schedule a meeting with DOE-RL within two weeks to review the responses and negotiate potential changes to some of the responses. EPA also noted an issue with DOE-RL's groundwater remedy proposal. EPA stated that the proposal for the deep contamination, which is primarily chromium, is to do a soil flushing and recapture. EPA noted that another alternative is to dig the chromium out, which is what has been done. A meeting is scheduled today to discuss the issue.



Tri-Party Agreement

**Thursday, January 26, 2012**

EPA Conference Room 309 Bradley Boulevard, Suite 115  
Richland, Washington

**Agenda**

**River Corridor/Central Plateau Milestone Review Meeting**

**Chairperson: J.D. Dowell**

<b>Time</b>	<b>Milestones</b>	<b>Subject</b>	<b>DOE Presenter</b>
8:30 a.m.	M-16, 89, 93 and 94	River Corridor Closure	Mark French
8:55 a.m.	M-16 and 93	100 K Remediation	Tom Teynor
9:15 a.m.	M-35	Biennial Assessment of Information and Data Access Needs	Ben Ellison
9:20 a.m.	M-36	Life Cycle Report	Stephen Korenkiewicz
9:25 a.m.	M-83	PFP Transition	Ellen Mattlin
9:35 a.m.	M-26	Land Disposal Restrictions Report	Mike Collins
9:40 a.m.	M-91	Acquisition of Facilities to TSD TRU/TRUM and LLMW	Mike Collins
9:50 a.m.		Break	
10:00 a.m.	M-16 and 85	Central Plateau Remediation	Al Farabee
10:10 a.m.	M-15, 16, 24, 37 and 85	Soil and Groundwater Remediation	Bryan Foley
10:35 a.m.	Adjourn Milestone Review		

Tri-Party Agreement River Corridor/Central Plateau Milestone Review  
January 26, 2012

<u>Name</u>	<u>Organization</u>
<u>Terry Noland</u>	<u>MSA-TPA</u>
<u>Kathy Knox</u>	<u>946-5535</u>
<u>ROB PIERRE</u>	<u>MSA-TPA</u>
<u>Ron Skinnarland</u>	<u>372-7924</u>
<u>JANE HEDGES</u>	<u>Ecology</u>
<u>Nina Menard</u>	<u>Ecology</u>
<u>Shelley Simon</u>	<u>ODOE</u>
<u>JONATHAN DOWELL</u>	<u>DOE-RL-AMRP</u>
<u>Mark French</u>	<u>DOE-RL</u>
<u>Larry Godbois</u>	<u>EPA</u>
<u>Donna Hasek</u>	<u>WCH</u>
<u>Tony McKeas</u>	<u>DOE</u>
<u>Reed Kaldor</u>	<u>MSA</u>
<u>JAMES LYNCH</u>	<u>DOE-ORP</u>
<u>STEPHEN KORENKIEWICZ</u>	<u>ME-RL</u>
<u>DM Butler</u>	<u>PFM MSA</u>
<u>CATHERINE LOUIE</u>	<u>DOE-RL</u>
<u>Tiffany Nguyen</u>	<u>DOE RL</u>
<u>Joy Shoemaker</u>	<u>CHPRC</u>
<u>DENNIS FAULK</u>	<u>EPA</u>

Tri-Party Agreement River Corridor/Central Plateau Milestone Review  
 January 26, 2012

<u>Name</u>	<u>Organization</u>
<u>Lorna M. Dittmer</u>	<u>CHPRC - TPA</u>
<u>Bill Cox</u>	<u>CHPRC - PFP</u>
<u>Rod Lobos</u>	<u>EPA</u>
<u>Michael Collins</u>	<u>DOE - AMRS</u>
<u>Ben Ellison</u>	<u>DOE AMMS</u>
<u>John Price</u>	<u>Ecology</u>
<u>Rick Bond</u>	<u>Ecology</u>
<u>Tom Teyner</u>	<u>RL</u>
<u>Ellen Mattlin</u>	<u>RL</u>
<u>R. Douglas Hildebrand</u>	<u>RL</u>
<u>OT Farah</u>	<u>RL</u>
<u>Bryan Foley</u>	<u>RL</u>
<u>Bob Perrotti</u>	<u>CHPRC</u>
<u>Deborah Singleton</u>	<u>Ecology</u>
<u>Steve Wozel</u>	<u>DOE - RL</u>
<u>DENNIS FALLS</u>	<u>EPA</u>
<u>Lorna Dittmer</u>	<u>CHPRC - RL</u>
<u> </u>	<u> </u>
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RIVER CORRIDOR CLOSURE PROJECT

DOE's Largest Environmental Cleanup Closure Project

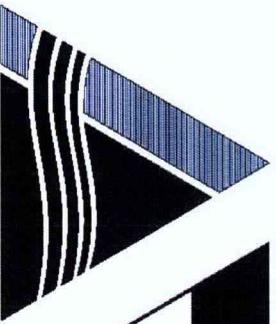
# TPA Quarterly Review

For Period: October - December 2011

## River Corridor Milestones:

M-16    M-89    M-92    M-93    M-94

*Tri-Party Agreement*



U.S. Department of Energy

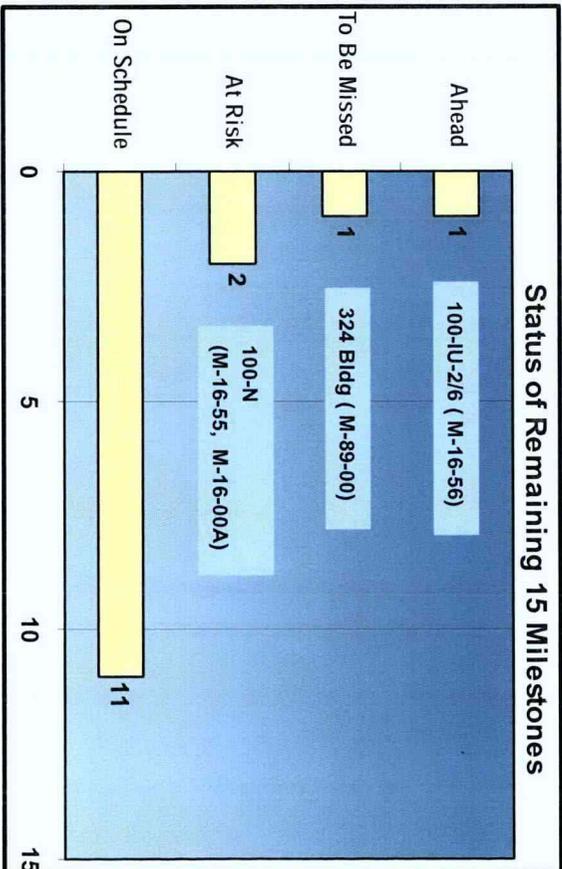
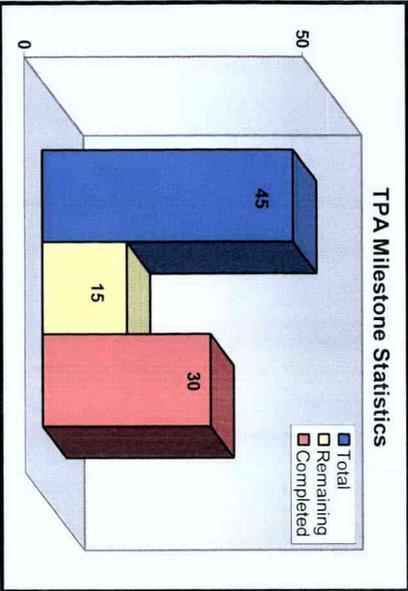
U.S. Environmental Protection Agency

Washington State Department of Ecology

**January 19, 2012**

*Protecting the Columbia River*

TPA Milestone Statistics (Includes Target and Commitment Milestones)				
Total	Remaining	Completed	Completed On	Completed Ahead
45	15	30	4	26



### Quarterly Summary (October - December 2011)

- **Completed TPA Milestones:**
  - M-16-47 – Complete Interim Remedial Actions for 100-D Area (due 12/31/11) - 12/8/11
  - M-16-51 – Complete Interim Remedial Actions for 100-H Area (due 12/31/11) - 12/8/11
- **Approved 2 Change Requests:**
  - M-16-11-21 approved on 11/10/11 removed 3 waste sites from M-16-51 due to additional time needed to address closure technical issues
  - M-16-11-22 approved on 11/10/11 removed 1 waste site from M-16-47 to allow for additional waste site remediation to be performed (Waste site closure for removed sites will be completed under M-16-00A)

RIVER CORRIDOR CLOSURE PROJECT

For Period: October – December 2011

TPA MS No.	Compliance Date	Title	Status	Comments
<b>M-16 Milestones - Remedial Action (milestones through 12/31/2013)</b>				
M-16-47	12/31/11	Complete Interim RA for 100-D Area	Completed	Completed 12/8/11.
M-16-51	12/31/11	Complete Interim RA for 100-H Area	Completed	Completed 12/8/11.
M-16-56	02/28/12	Complete Interim RA for 100-IU-2 / 100-IU-6 Waste Sites Listed in 1999 100 Area Remaining Sites ROD (32 sites) as Described in RDR/RAWP	Ahead	Milestone anticipated to be completed early January.
M-16-74	09/30/12	Complete Interim Remediation (to include excavation, loadout, closeout sampling, backfill) for all 300 Area "Inside the Fence" Waste Sites North of Apple Street. Except that the 300-268 and 300-123 Waste Sites Remediation Need Only Be Completed Through Excavation and Loadout	On schedule	Waste sites 300-4, 300-15, 300 RRLWS, 300-265, 300-257, 300-214, and 300 RLWS are impacted by 300 Area building retentions and are addressed in M-16-00B. Revegetation of M-16-74 waste sites will be completed under M-16-139.
M-16-55	12/31/12	Complete Interim RA for 100-N Area	At risk	Waste site cleanup and facility demolition are affected by delays. Project schedules are being reviewed to determine how best to recover the milestone.
M-16-145	12/31/12	Complete Interim RA for 100-K Area Facilities and Waste Sites not Included as Phase 1,2, or 3 Work	On schedule	Sites in this milestone are those listed in IRDOD prior to August 2009.
M-16-00A	12/31/12	Complete All Interim RA for 100 Area Units, with Exception of 100-K Area, by Specified Due Date as Approved in a RDR/RAWP	At risk	At risk due to M-16-55.
M-16-139	03/31/13	Complete Revegetation of 300-FF-2 Waste Sites Governed by M-16-62, M-16-64, M-16-74	On schedule	
M-16-75	09/30/13	Initiate Substantial and Continuous Remediation on 309 Facility Dedicated Radioactive Liquid Waste Sewer ( 300 RLWS) and 300 Area Process Sewer (300-15) Systems	On schedule	PNL building retentions and utilities require potential modification/discussions of 300 Area out/year milestones due to changed conditions.

RIVER CORRIDOR CLOSURE PROJECT

For Period: October – December 2011

TPA MS No.	Compliance Date	Title	Status	Comments
<b>M-89 Milestone - 324 Bldg Non-Permitted MW Units Closure</b>				
M-89-00	09/30/12	Complete Closure of Non-Permitted Mixed Waste Units in 324 Bldg REC B-Cell, REC D-Cell, and High Level Vault	To Be Missed	Soil contamination encountered under 324 B-Cell. This is a differing condition and will result in cost and schedule impacts. Change package will be submitted after new demolition strategy has been developed.
<b>M-92 Milestone - 300 Area Special Case Waste</b>				
M-92-16	09/30/15	Complete Removal and Transfer, and Initiate Storage of Phase III 300 Area Special Case Waste and Materials	On schedule	
<b>M-93 Milestone - Reactors Final Disposition</b>				
M-93-20	09/30/12	Complete 105N Reactor ISS	On schedule	
<b>M-94 Milestones - 300 Area Surplus Facilities Disposition</b>				
M-94-08	06/30/12	Complete Removal and/or RA for 11 of Following Facilities: 305B, 306E, 306W, 307 Retention Basins, 308, 309, 321, 323, 324, 324B, 327, 333, 340B, 3706, and 3720	On schedule	
M-94-09	09/30/13	Complete Removal and/or RA for 13 of Following Facilities: 305B, 306E, 306W, 307 Retention Basins, 308, 309, 321, 323, 324, 324B, 326, 327, 329, 333, 340, 340B, 3706, and 3720; to include 323 Facility	On schedule	

**Significant Accomplishments – For Last 3 Months:**

**M-16 – Remedial Action / Risk Assessment:**

- Completed excavation at 100-C-7; continued excavation at 100-C-7:1.
- Completed backfill/revegetation of 100-D/H Areas TPA milestone sites.
- Completed excavation/loadout of 118-K-1 Burial Ground.
- Completed backfill; continued revegetation at 100-IU-2/6 TPA milestone sites.
- Issued request for Expression of Interest to potential bidders for 618-10/11 vertical pipe unit remediation.
- Received approval of 25 waste site closure documents during this reporting period.
- Issued Draft A screening level ecological risk assessment report (Releases to Columbia River Vol. 1) to regulators for review and received comments.
- Issued Draft A human health risk assessment report (Releases to Columbia River Vol. II) to RL for review and completed comment resolution process.
- Issued Orphan Sites Evaluation Report Rev. 0 for 100-F/IU-2/IU-6 – Segment 4 and 100-F/IU-2/IU-6 – Segment 5.
- Received RL approval for WCH input to Segment 2 long-term stewardship transition and turnover package; preparing Segment 3 package.

**M-89 – 324 Bldg Non-Permitted MW Units Closure:**

- Continued planning for remediation of new waste site 300-296 under B-Cell; completed remediation methodology selection report.

**M-93 – Reactors Final Disposition:**

- Completed 105N safe storage enclosure (SSE) construction and monitoring system acceptance testing.

**M-94 – 300 Area Surplus Facilities Disposition:**

- Completed 309 Plutonium Recycle Test Reactor dome demolition/loadout.
- Completed 340B Waste Loading Building below-grade demolition/loadout.
- Completed 340 Waste Neutralization Facility above-grade demolition.
- Completed removal of 337B CRCTA tank.
- Initiated 327 Phase II below-grade demolition/loadout.



100-C-7 Excavation



309 Dome Demolition

## Significant Accomplishments – For Last 3 Months (cont'd):

### ERDF

- For period October-December, disposed ~ 334,000 tons of waste; bringing total to ~ 6,746,000 tons disposed since WCH assumed River Corridor cleanup responsibilities 8/27/05.
- Coordinating ERDF performance assessment (PA) with Tank Closure and Waste Management Environmental Impact Statement. Estimating draft PA to be issued in August 2012.



Disposing 337B CRCTA Tank in ERDF

## Significant Actions Planned – For Next 3 Months:

### M-16 – Remedial Action / Risk Assessment:

- Complete remediation of 100-C-7.
- Complete treatment of Nak test specimens and close out staging pile in 100-D Area.
- Complete backfill/revegetation of 100-F waste sites.
- Complete revegetation of 100-IU-2/6 TPA sites.
- Perform 300 Area confirmatory sampling.
- Commence loadout of 618-10 Burial Ground material to ERDF (ARRA).

### M-89 – 324 Bldg Non-Permitted Mixed Waste Units Closure:

- Select remediation methodology for site 300-296 under B-Cell.

### M-93 – Reactors Final Disposition:

- Complete demolition/loadout of 105N Fuel Storage Basin.
- Award subcontract for 105N/109N deferred SSE workscope

### M-94 – 300 Area Surplus Facilities Disposition:

- Complete Phase II of 327 below-grade demolition/loadout.
- Complete 310 (TEDF) above-grade demolition/loadout.
- Complete 308 HEPA filters/ductwork shipments to Perma-Fix; commence demolition of 308 Fuels Development Laboratory.

### ERDF

- Complete treatment of 100-C-7 land disposal restriction (LDR) waste.

**RIVER CORRIDOR CLOSURE PROJECT**

For Period: October – December 2011

**PERFORMANCE SUMMARY** (includes ARRA)  
 Contract Inception (8/27/05) through December 2011  
 (\$K)

	IPB		CUMULATIVE				Previous Quarter Comparison			
	BAC	EAC	BCWS	BCWP	ACWP	SCHEDULE VAR (\$)		COST VAR (\$)		
						Sep	Dec	Sep	Dec	
D4	562,138	531,539	402,824	458,616	369,244	56,295	55,792	91,647	89,372	
Reactor ISS	88,191	89,869	76,911	73,707	72,411	-2,496	-3,204	1,451	1,296	
Field Remediation	638,939	771,522	499,556	484,556	458,556	-8,471	-15,000	29,625	26,000	
Waste Operations	449,832	427,320	319,953	422,443	330,311	93,232	102,490	86,267	92,132	
ESFC	71,867	68,248	61,573	60,371	51,516	-948	-1,202	8,153	8,855	
Mission/General Support	297,139	340,655	268,318	268,318	242,759	0	0	12,855	25,559	
Transition	3,979	3,747	3,979	3,979	3,747	0	0	232	232	
Contingency	47,638	47,638								
<b>TARGET COST TOTAL</b>	<b>2,159,723</b>	<b>2,280,538</b>	<b>1,633,114</b>	<b>1,771,990</b>	<b>1,528,544</b>	<b>137,613</b>	<b>138,876</b>	<b>230,230</b>	<b>243,446</b>	

**Schedule Variance (PMB): \$138,876K**

- Acceleration of 300 Area and 100-N Area building demolitions.
- Remediation delays at 100-D, 100-K, 100-N and waste sites around 309 building. Partially offset by accelerated work at 100-B/C.
- Earned value method for waste treatment changed via change control in April 2011 from percentage actual tons treated to apportioned effort of actual tons disposed (also applies to cost variance).
- ERDF transportation, treatment, and disposal support to accelerated work in FR and D4 Projects.

**Cost Variance (PMB): \$243,446K**

- Significant underruns experienced in 300 Area building characterization, deactivation, and demolition activities.
- 100-D, 100-F, and 100-IU-2/6 remediation underruns. Partially offset by significant project support costs at all active dig sites, particularly in the 300 Area; as well as additional 100-C-7 excavation and concrete demolition costs; and unplanned costs in project management and support.
- Costs have been less than planned due to Waste Operations efficiencies achieved in waste treatment, transportation, and construction. These efficiencies and increased waste volumes have more than offset cost overruns in direct project support.

**ARRA - Performance Summary**  
 April 2009 through December 2011  
 (\$K)

	IPB			CUMULATIVE			Previous Quarter Comparison			
	BAC	EAC	BCWS	BCWP	ACWP	SCHEDULE VAR (\$)		COST VAR (\$)		
						Sep	Dec	Sep	Dec	
RL0041.R1.2 - Cell 9 / ERDF	51,361	44,459	51,361	51,361	44,459	0	0	7,058	6,902	
RL0041.R1.3 - Acc Rem / ERDF	59,737	44,025	59,737	59,737	43,953	0	0	16,456	15,784	
RL0041.R1.4 - Cell 10	37,672	26,806	37,672	37,672	26,806	0	0	10,883	10,866	
RL0041.R1.5 - Waste Ops	31,690	28,522	31,176	31,690	28,522	1,952	514	415	3,168	
RL0041.R2 - 618-10	62,988	52,108	62,988	62,988	52,108	-4,635	0	10,687	10,880	
RL0041.R3 - 618-10 Buyback	16,997	18,284	8,078	4,392	5,190		-3,686		-798	
Contingency	1,018	1,018								
<b>TARGET COST TOTAL</b>	<b>261,463</b>	<b>215,222</b>	<b>251,013</b>	<b>247,840</b>	<b>201,038</b>	<b>-2,683</b>	<b>-3,173</b>	<b>45,498</b>	<b>46,802</b>	

**Schedule Variance (PMB): (\$3,173K)**

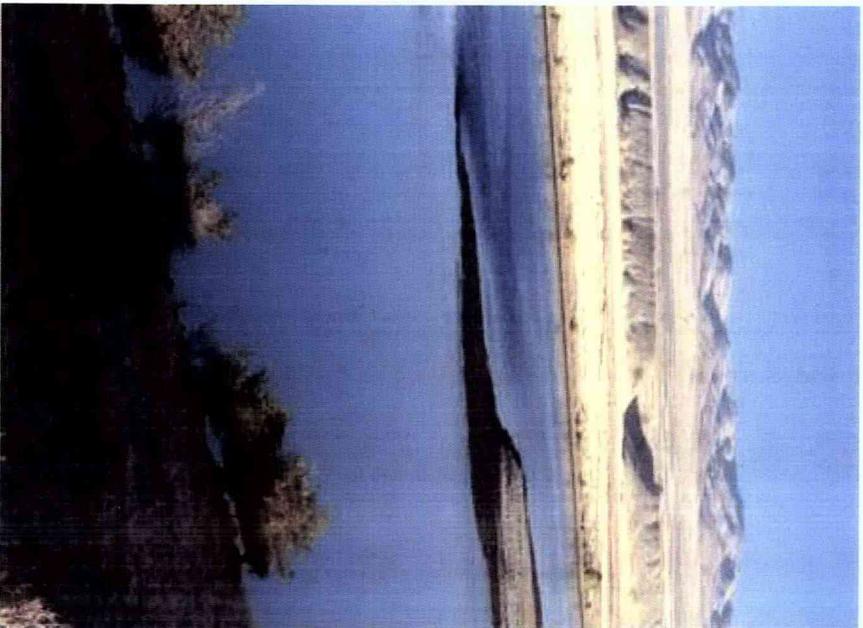
- Purchase of 618-10 High Energy Real-Time Radiography (RTR) Machine later than planned; held 618-10 stand-down in December to review industrial hygiene and respiratory program.

**Cost Variance (PMB): \$46,802K**

- ERDF Cells 9/10 construction and ERDF operations realized efficiencies.
- ERDF equipment and facility upgrade costs less than budgeted.
- Field Remediation project support requirements less than planned.
- Fewer comments received and streamlining the confirmatory sampling process (e.g., use of fewer sub-sites than originally planned) resulted in significantly lower analytical costs.
- Fewer 618-10 anomaly samples processed and cost of in-process samples less than estimated, less support used to-date for neutron detector than planned, one drum punch was fabricated instead of two, and well installation and overall infrastructure upgrades were under budget.
- 618-10 excavation proceeded slower than planned due to encountering numerous drums.

## **RCC Issues**

- **Issue:** The radiological contamination encountered under the 324 facility will affect the schedule for demolition of the 324 complex and completion of the M-89-00 milestone.  
**Status:** A new remediation/demolition strategy is under development. Proposed changes to the M-89-00 milestone will reflect the new strategies.
- **Issue:** Regulator approval of closure/completion for approximately 60 waste sites and 40 facilities, within the next 12 months, is required to meet the requirements of M-16-55.  
**Status:** Working closely with Ecology to develop schedules and strategies to support review and approval of these closure and completion documents.
- **Issue:** Ecology has identified contamination in the periodic rewetted zone for two waste sites in the 100-H Area that potentially could impact groundwater and surface water. Evaluation of this contamination is not covered in the RDR/RAWP. DOE's evaluation of the contamination has determined the sites are protective of groundwater as determined by modeling and groundwater samples which Ecology has rejected. Ecology presented to DOE a method to evaluate this potential impact on December 6, 2011. DOE doesn't accept Ecology's proposed method that results in cleanup levels more conservative than the RAG.  
**Status:** On December 21, 2011, DOE submitted the Rev. 0 waste site closure documentation to Ecology for approval. Ecology response is due February 3, 2012.
- **Issue:** Closure of the 126-H-2 waste site was based on the removal of waste stored on the concrete floor of the clearwell and samples of the remaining structural concrete. DOE's testing of the concrete established that site specific Kd for the residual contaminants in the concrete are protective. Ecology's position is that transport modeling was not in compliance with the regulations for establishing these Kds and therefore, the proposed Kds may not be used to demonstrate protectiveness. Ecology presented to DOE a method to repeat the testing used to establish the concrete Kds on December 6, 2011. In addition, Ecology asked that soil sampling be conducted beneath the structure to determine if contamination leached through the concrete. DOE's position is that the low levels of residuals and lack of any groundwater contamination from this site don't warrant additional sampling.  
**Status:** On December 21, 2011, DOE submitted the Rev. 0 waste site closure documentation to Ecology for approval. Ecology response is due February 3, 2012. Issue:



# 100-K Remediation

TPA Milestones: M-016 and M-093

U.S. Department of Energy  
U.S. Environmental Protection Agency  
State of Washington, Department of Ecology

First Quarter FY2012  
January 19, 2012



# Accomplishments – 1<sup>st</sup> Quarter 2012

**Completed TPA Milestones:** None this period

## **D4**

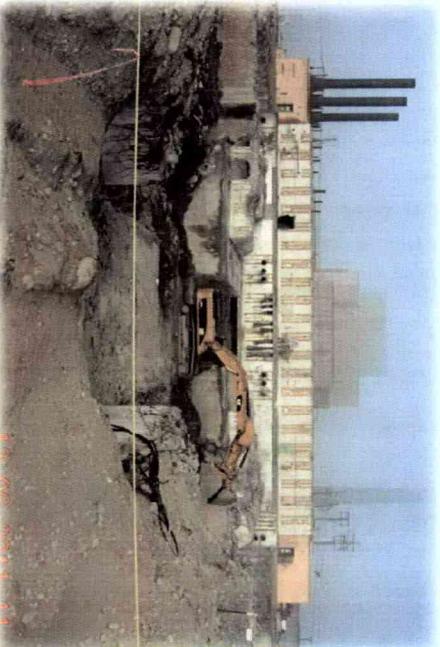
- Continued 105-KE Interim Safe Storage (ISS) activities
- Continued demolition of the 183.2KE Sedimentation Basin
- Completed asbestos abatement of the 105KE Tunnel
- Started demolition preparation activities for the 183.7 Pipe Tunnel



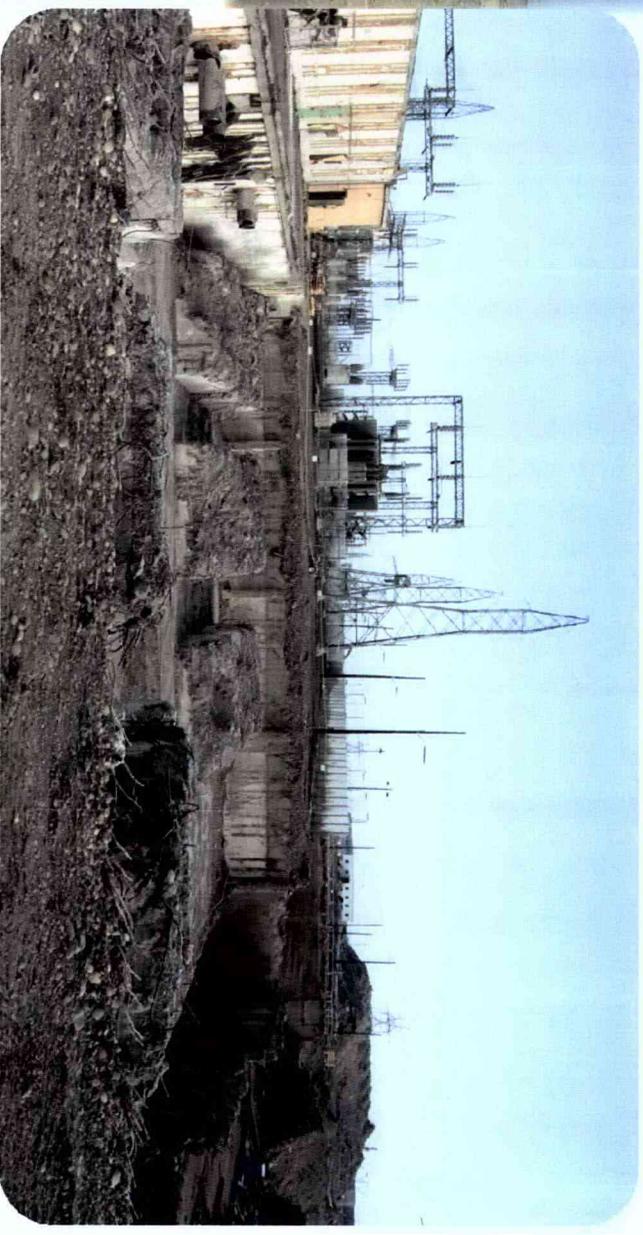
# Accomplishments – 1st Quarter 2012

## D4 (con't)

- Demolished 190KW Pump House for a total of 27 buildings with American Recovery & Reinvestment Act (ARRA) funds



190KW Pump House **DURING** demo



190KW Pump House **AFTER** demo



# Accomplishments – 1st Quarter



## KE Reactor Interim Safe Storage

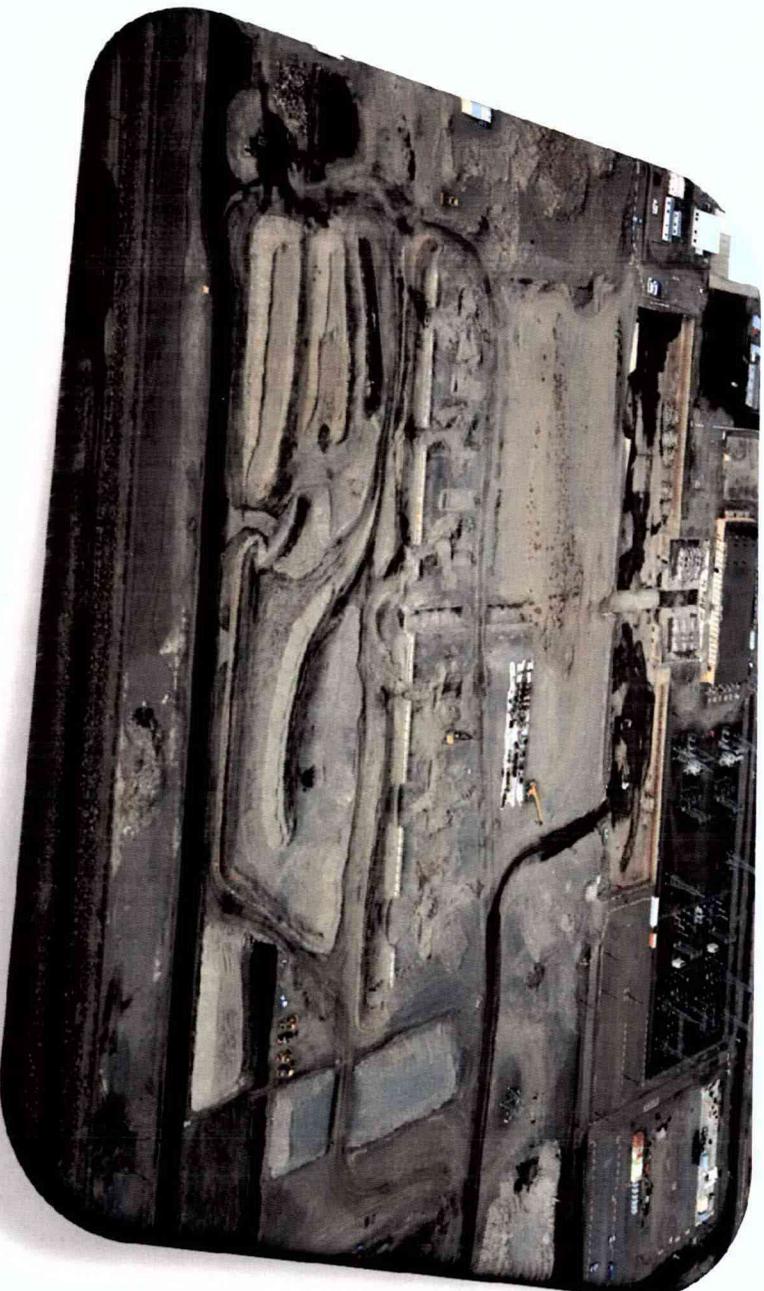
- Conducted 30% Conceptual Design Review of the Safe Storage Enclosure (SSE) conceptual design package and review of the Conceptual Design Report
- Prepared Statement of Work/Request for Services and work package for the repair of the Reactor building openings
- Revised the Documented Safety Analysis (DSA) Hazard Analysis and Facility Hazard Categorization (FHC)



# Accomplishments – 1<sup>st</sup> Quarter

## Waste Sites

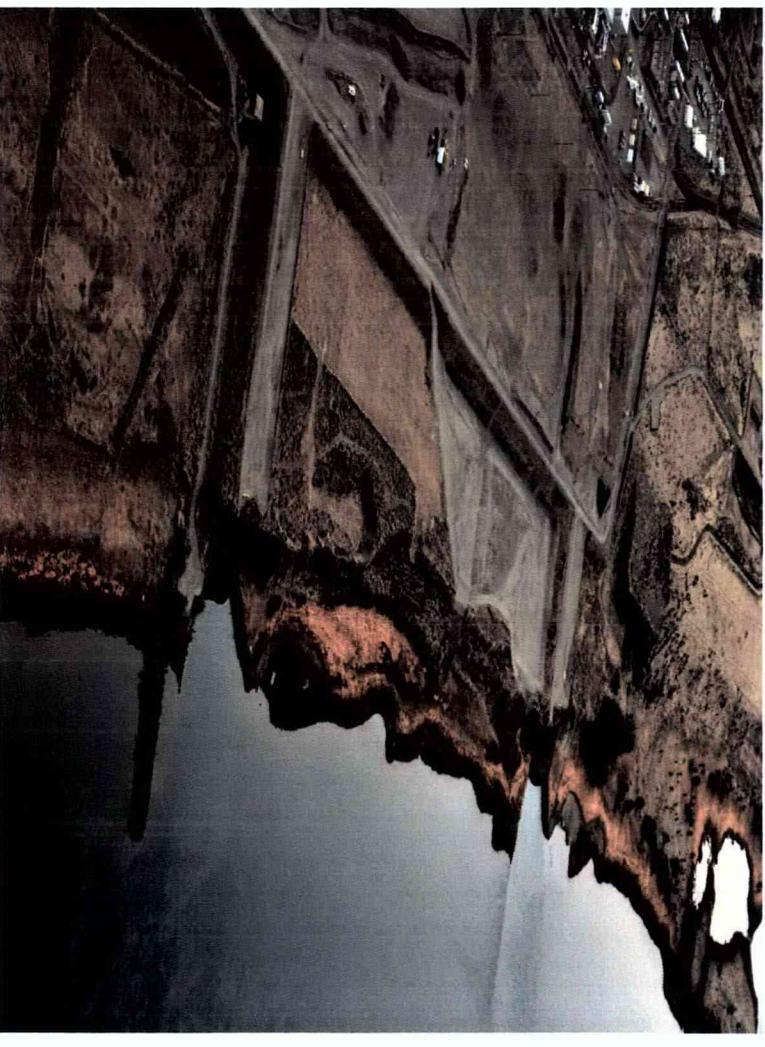
- Waste Site Reclassification forms approved for: 120-KW-1, 120-KW-2, 120-KW-3, 120-KW-4 and 100-K-109 Waste Sites as interim closed out
- Completed interim backfill activities at these waste sites



# Accomplishments – 1<sup>st</sup> Quarter

## Waste Sites (con't)

- Completed interim backfill of the 100-K-63 Waste Site
- Presented the second set of direct push technology gamma logging measurements near the 105-KE Reactor under the reactor block to DOE and EPA
- Continuing remediation of pipelines in the 100-K-102 waste site
  - 1,574 tons of soil/piping removed



100-K-63 backfill completed

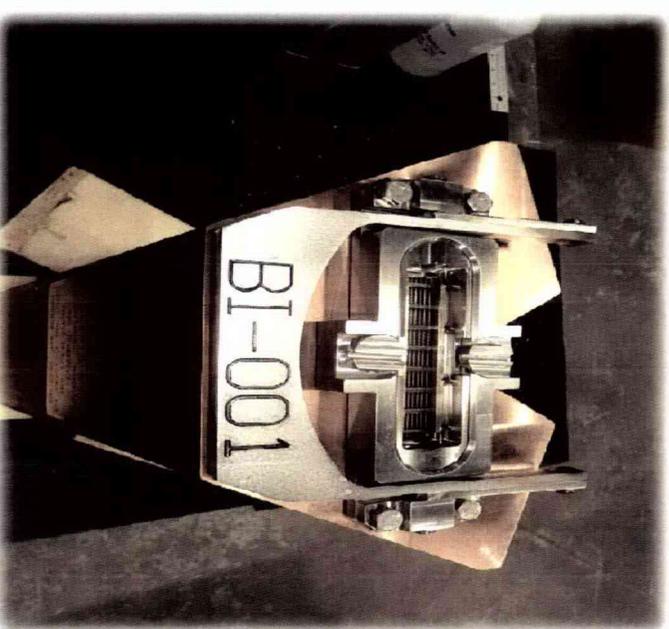


# Accomplishments – 1<sup>st</sup> Quarter

## Sludge Treatment Project – Removal of KOP Material (M-016-172)

- **Knockout Pot (KOP) Material Processing System**

- Completed fuel free determination of 105KW basin floor
- Completed final design of the KOP material processing system (KPS)
- Fabrication of KPS system components and tools underway
- Fabrication of copper inserts for placement of KOP product material into Multi-Canister Overpacks (MCOs) baskets for removal from the KW Basin in progress
- Fabrication of additional MCOs is in progress
- The Remedial Design Report and the Quality Assurance Project Plan/Sampling and Analysis Plan for the KPS has been forwarded to EPA for approval



MCO Copper Insert



# Accomplishments – 1<sup>st</sup> Quarter

## Sludge Treatment Project Phase 1- Removal of Containerized Sludge

- **Sludge retrieval and transfer system design (M-016-174)**
  - Completed formal design review of the preliminary design. Preliminary design report issued
  - Identified and initiated optimization testing on mock up systems at Maintenance and Storage Facility (MASF)
  - Completed characterization of KW floor sludge (container 210) and settler tank sludge (container 230); conducting validation and verification assessment and evaluation
  - PNNL completed testing and submitted final report on *Settling Studies of KW Basin Settler Sludge from SCS-CON-230 and Settler Sludge Simulant (230)*



# Accomplishments – 1st Quarter

## KW Annex Facility and Support Systems

- Completed 90% design of annex structure and building support systems
- Released initial Request for Proposal for annex construction contract
- Completed modifications to the existing annex and constructed the fire wall



# Accomplishments – 1<sup>st</sup> Quarter

## STP Phase 2:

### Sludge Treatment and Packaging Technology Evaluation

(M-016-171)

- Selected warm water oxidation as the technical baseline for sludge treatment.
- Identified size reduction and Fenton's Reagent processes as potential enhancements.
- Conducted workshop to identify sludge treatment and packaging critical technology elements for further testing.



# Milestone Status

TPA Number	Due Date	Description
M-016-171	3/31/12	Complete K Basin Sludge Treatment and Packaging Technology Evaluation Report and a Submit a Schedule including proposed new interim milestones for bench scale or identified testing in order to meet M-016-73.
M-016-172	9/30/12	Complete KOP Material Removal From 105-KW Fuel Storage Basin
M-016-053	12/31/12	Complete Interim Response Actions for the 100 K Area Within the Perimeter boundary and to the River for Phase 1 Actions
M-016-174	09/30/13	Complete Final Design of Sludge Retrieval and Transfer System
M-093-22	07/31/14	Complete 105KE Reactor Interim Safe Storage in Accordance with Remedial Design/Remedial Action Work Plan
M-016-175	09/30/14	Begin Sludge Removal from 105-KW Fuel Storage Basin
M-016-173	03/31/15	Select K Basin Sludge Treatment and Packaging Technology and Propose New Interim Sludge Treatment and Packaging Milestones
M-016-143	12/31/15	Complete the Interim Response Actions for the 100 K Area Within the Perimeter Boundary and to the River for Phase 2 Actions
M-016-176	12/31/15	Complete Sludge Removal from 105-KW Fuel Storage Basin
M-016-178	12/31/15	Initiate Deactivation for 105-KW Fuel Storage Basin
M-093-26	12/31/15	Initiate 105-KW Reactor Interim Safe Storage
M-016-181	09/30/19	Complete Deactivation, Demolition and Removal of 105-KW Fuel Storage Basin
M-016-186	12/31/19	Initiate Soil Remediation Under 105-KW Fuel Storage Basin
M-093-27	12/31/19	Complete 105-KW Reactor Interim Safe Storage
M-016-00C	12/31/20	Complete All Response Actions in the 100 K Area



# Project Baseline Performance

## Thru December 2011

ARRA RL-0041 Capital Asset	Budgeted Cost of Work		Actual Cost of Work Performed	Schedule Variance (\$)	Cost Variance (\$)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)	SPI	CPI
	Scheduled	Performed								
Base	82.4	84.0	69.5	1.6	14.5	312.8	302.4	10.4	1.02	1.21
<b>Total</b>	<b>259.5</b>	<b>261.3</b>	<b>247.5</b>	<b>1.8</b>	<b>13.9</b>	<b>492.5</b>	<b>522.7</b>	<b>7.7</b>	<b>1.02</b>	<b>1.06</b>

RL-0012 Nuclear Material Stabilization and Disposal	Budgeted Cost of Work		Actual Cost of Work Performed	Schedule Variance (\$)	Cost Variance (\$)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)	SPI	CPI
	Scheduled	Performed								
Base Total	268.3	268.9	269.8	0.6	-0.9	625.6	624.9	0.6	1.00	1.00

Numbers are rounded to the nearest \$0.1M.



# Planned Activities

Next 6 months

## RL41: D&D / Soil Remediation

- **D4 Scope**
  - 190KW Main Pump House - Complete demobilization
  - 183.2KE Sedimentation Basin – Continue demolition and load out.
  - 1908K Outfall Structure – Complete demolition and load out
  - 183.7KE Tunnel – Complete demolition preparations
  - 105KE Water Tunnel – Commence demolition and load out
  - 165KE Power Control Building – Continue asbestos abatement
- **105KE Reactor ISS**
  - Complete 105-KE Reactor SSE Final Design
  - Issue DSA Hazard Analysis and FHC
  - Perform repair of 105KE reactor building openings
  - Begin below-grade pourbacks



Tri-Party Agreement



U.S. DEPARTMENT OF  
**ENERGY**

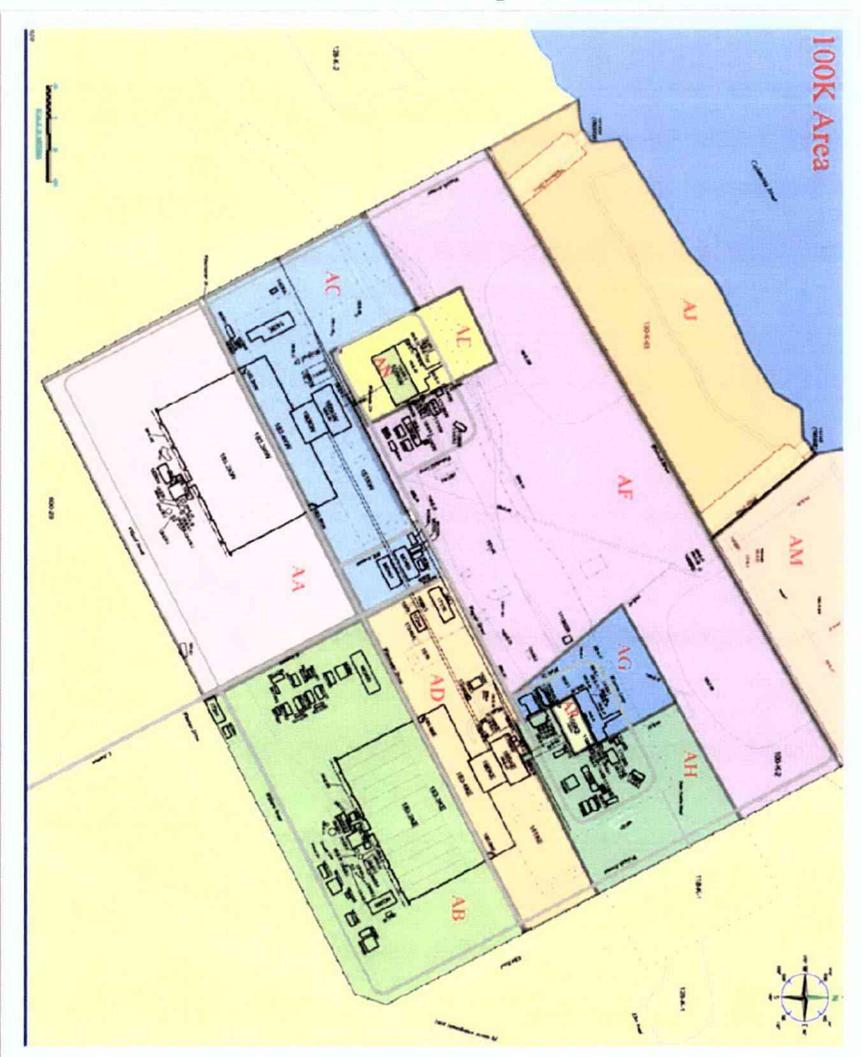


**CH2MHILL**  
Plateau Remediation Company

# Planned Activities

Next 6 months

- **Waste Site Remediation – Areas AA, AG, AH, AJ**
  - ❑ Complete Area AM Memorandum of Agreement for remediation of waste sites and commence remediation activities
  - ❑ Complete Area AG, Zone 2 sampling, waste site close outs, and interim backfilling
  - ❑ Complete Area AA, Zone 1 remediation, sampling, waste site close outs, and interim backfilling
  - ❑ Complete Area AA, Zone 2 sampling, waste site close outs, and interim backfilling



# Planned Activities

Next 6 months

## RL12: Sludge Treatment Project

- **K West Basin Annex Structure and Non-Processing Systems Design and Construction**
  - Complete final design of the K West Basin annex structure and building systems
  - Award contract for constructing the enhanced annex and initiate construction
  - Approve request for early procurement and construction (CD-3a)



# Planned Activities

Next 6 months

- **KW Basin Cold Vacuum Drying Facility**
  - Process the last spent nuclear fuel/fuel scrap MCCOs.
  - Start processing KOP material
- **ECRTS System Design, Testing, and Procurement**
  - Prepare decisional draft of the Remedial Design Report for the Engineered Container Retrieval and Transfer System (ECRTS)
  - Continue testing of the retrieval, transport, and storage systems at MASF
  - Continue with final design associated with the sludge retrieval and transfer system
  - Perform the second Technology Readiness Assessment for a combined critical decision (CD-2/3)
- **Sludge Treatment and Solidification Technology Evaluation**
  - Submit technology evaluation report and testing schedule to complete M-016-171





U.S. DEPARTMENT OF  
**ENERGY**

**TPA M-036-01**  
**Quarterly Performance Report**  
October-December, 2011



January 19, 2012  
Stephen Korenkiewicz, DOE-RL  
Lifecycle Report Project Manager



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**ENERGY**

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# U.S. DEPARTMENT OF **ENERGY**

## **MILESTONE DESCRIPTION AND DELIVERABLE**

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The USDOE shall prepare and submit to EPA and Ecology a report setting out the lifecycle scope, schedule and cost for completion of the Hanford Site cleanup mission.

The initial 2011 Hanford Lifecycle Scope, Schedule and Cost Report (Lifecycle Report) was due no sooner than July 25, 2011, and follow-on reports are due January 31 of each year thereafter.

The 2012 Lifecycle Report is due January 31, 2012.

## **RL PROGRAM MANAGER'S ASSESSMENT OF CONTRACTOR PERFORMANCE**

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The contractor responsible for preparation of the Lifecycle Report is Mission Support Alliance, Portfolio Management.

There are no performance issues at this time.

## **SIGNIFICANT ACCOMPLISHMENTS FOR THE LAST THREE MONTHS**

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1. The 2011 Lifecycle Report was completed and submitted to EPA and Ecology on July 21, 2011 and was posted on [www.Hanford.gov](http://www.Hanford.gov) on August 4, 2011. The feedback period concluded on November 10, 2011.
2. The Tribal Nations were briefed on the 2011 Lifecycle Report on August 16, 2011 and the Oregon Hanford Cleanup Board was briefed on October 28, 2011. The Hanford Advisory Board (HAB) was briefed at their September 9, 2011 meeting. The HAB Budgets and Contracts Committee also received a detailed briefing on October 5, 2011 where they reviewed and discussed the assumptions used in the report including 200-SW-2 burial ground, tank closure and waste form. The HAB issued Consensus Advice No. 252 on the 2011 Lifecycle Report on November 4, 2011 and DOE responded to the HAB on December 8, 2011.
3. The 2012 Lifecycle Report has been prepared and the alternatives analysis included in this report utilizes the River Protection Project System Plan, Revision 6, base case and nine scenarios.

## **SIGNIFICANT PLANNED ACTIONS FOR THE NEXT SIX MONTHS**

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1. The 2012 Lifecycle Report will be submitted to EPA and Ecology by January 31, 2012. The report and a Tri-Party agencies fact sheet will be posted on



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[www.Hanford.gov](http://www.Hanford.gov) by February 13, 2012. Briefings will be provided as requested. The feedback period will extend until April 13, 2012.

2. Begin planning and preparation of the 2013 Lifecycle Report.
  - a. Meet with EPA and Ecology to reach consensus on selected alternative analysis cleanup actions and the assumptions to be used in preparing associated cost and schedule estimates.
  - b. Prepare planning case budget information.

**BUDGET/COST STATUS**

---

No issues identified.

**ISSUES**

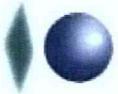
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1. The 2012 Lifecycle Report does not fully reflect the feedback process related to the 2011 Lifecycle Report due to the compressed schedule between the two initial reports. However, all feedback received on the 2011 and 2012 Lifecycle Reports will be considered for inclusion into the 2013 Lifecycle Report.

**NON-TPA REGULATORY ISSUES/POTENTIAL IMPACTS TO TPA**

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No major issues identified.



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# PFP Closure Project

TPA Milestone: M-083



Ellen Mattlin and Larry Romine,  
Federal Project Directors  
Rick Bond, Ecology Project Manager

First Quarter 2012  
January 19, 2012



U.S. DEPARTMENT OF  
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*One Culture. One Team.*

# Quarterly Milestone Summary

(October – December 2011)

TPA Milestone	Due Date	Status	Milestone Description
M-083-24	06/30/12	On Schedule	Submit a Surveillance and Maintenance (S&M) Plan as a primary document To Ecology
M-083-44	09/30/15	On Schedule	Complete transition of 234-5Z & -ZA, 243-Z, 291-Z and 291-Z-1 buildings to support PFP decommissioning deactivate and prepare for dismantlement of the above grade portions of these facilities
M-083-00A	09/30/16	On Schedule	Complete PFP Facility Transition & Selected Disposition Activities

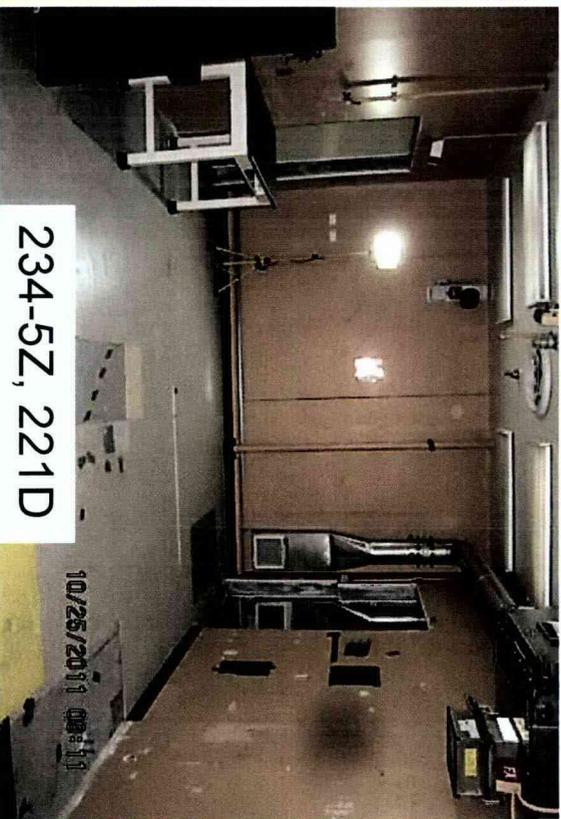


# Accomplishments – 1<sup>st</sup> Quarter

- Four additional glove boxes removed from RMA/RMC process areas
  - 72% (168 of 232) of all PFP gloveboxes and hoods removed to date
  - All glove boxes & support systems now out of Analytical Lab, Standards Lab, Process Development Lab, Radioactive Acid Digestion Test Unit process area & the PFP Vault complex



234-5Z, 221D



234-5Z, 221D

# Accomplishments – 1st Quarter

- Completed deactivation and cleanout, and initiated demolition of the PFP Vault complex & adjacent ancillary buildings (2736-Z, 2736-ZA, 2736-ZB, 2736-ZC, 2721-Z, 2731-ZA, & nitrogen generator system)

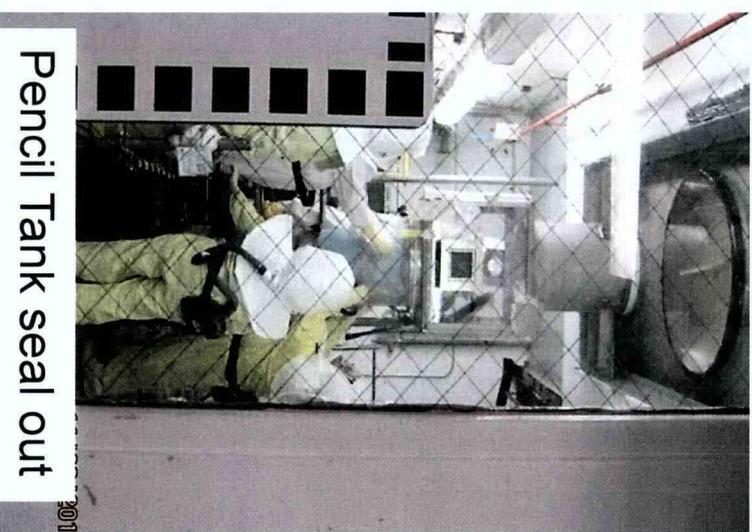


# Accomplishments – 1st Quarter

- Continued D&D on the Balance of 234-5Z building & the Plutonium Reclamation Facility (PRF)
  - Removed two additional pencil tank units (25 of 196 removed to date)



GB 14S-P Removed



Pencil Tank seal out

# Accomplishments – 1st Quarter

- Resumed mechanical & electrical isolations and waste removals from the PRF Miscellaneous Treatment (Room 41) glove boxes
- Initiated isolations for the PRF Column glove boxes
- Rebuilding & training the Balance of 234-5Z D&D field work teams following workforce restructuring
  - Asbestos removal 66% complete to date
  - Process transfer line removal 51% complete to date
  - Process vacuum piping removal 22% complete to date



# Project Baseline Performance

## Contract to-Date

RL-0011 Nuclear Material Stabilization and Disposal	Budgeted	Budgeted	Actual	Schedule	Schedule	Cost	Cost	Budget at	Estimate at	Variance at
	Cost of Work Scheduled	Cost of Work Performed	Cost of Work Performed	Variance (\$)	Variance (%)	Variance (\$)	Variance (\$)	Completion (BAC)	Completion (EAC)	Variance at Completion (VAC)
	\$445,346	\$442,076	\$452,267	(\$3,270)	(0.7%)	(\$10,191)	(2.3%)	\$889,184	\$898,157	(\$8,973)
<b>ARRA Total</b>	\$279,085	\$276,344	\$284,512	(\$2,741)	(1.0%)	(\$8,168)	(3.0%)	\$293,726	\$299,046	(\$5,320)
<b>Base Total</b>	\$166,261	\$165,732	\$167,755	(\$528)	(0.3%)	(2,023\$)	(1.2%)	\$595,458	\$599,111	(\$3,653)

Numbers are rounded to the nearest \$0.1M.



Platteau Remediation Company

# Project Baseline Performance

Fiscal year to-date

## **FYTD Schedule Performance: (\$20.3M/594.6%)**

- Resource Constraints Associated with Workforce Restructuring
- Radiological Controls Issues
- RMA/RMC Delays resulting from reassigned field work teams (i.e., bulk area cleanout, canyon crane repairs)

## **FYTD Cost Performance: (\$-3.1M/-13.0%)**

- Inefficiencies associated with 234-5Z bulk area cleanout efforts, more time required to complete removal of 2736ZB contaminated duct work, and utilization of PFP resources to support 2736ZB demolition preparation efforts as a result of unavailability of Balance of Site resources required to complete demolition of the 209E facility



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# Planned Activities

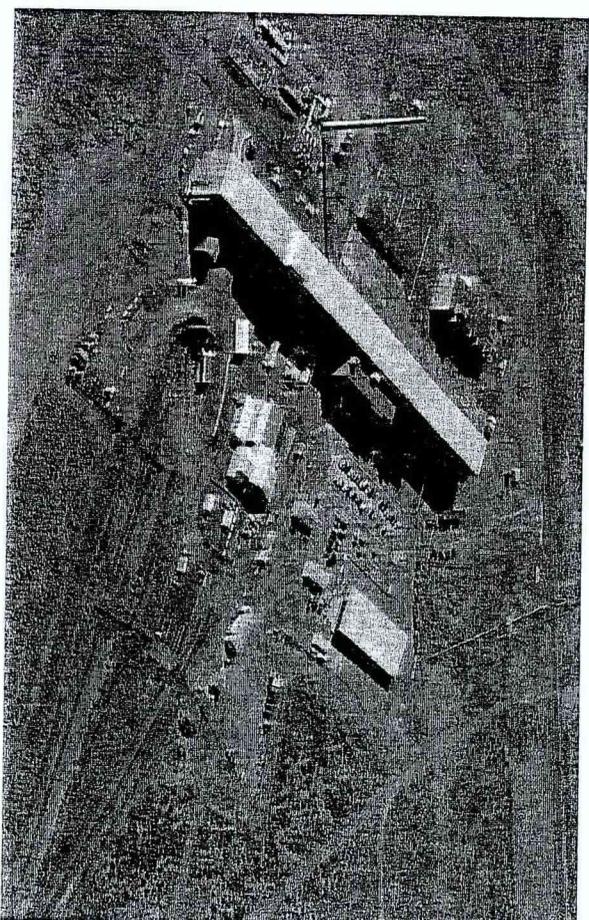
Next 6 months

- Complete demolition of PFP Vault complex
- Continue 234-5Z glovebox clean out, removal and disposition
- Continue 234-5Z process vacuum piping and transfer lines removal
- Continue 234-5Z asbestos removal
- Continue PRF Canyon pencil tank size reduction and removal
- Continue PRF glovebox cleanout and removal (Miscellaneous Treatment & Column glove boxes)
- Ecology approval of PFP Demolition RAWP
- Submit PFP S&M Plan to Ecology



**Department of Energy – Richland Operations Office**

**Tri-Party Agreement  
Quarterly Milestone Review  
M-91 Series**



January 19, 2012



[www.emm.doe.gov](http://www.emm.doe.gov)

## **Significant Accomplishments of the Last Three Months**

- M-091-40 Retrievably Stored Waste (CH) – Target: Retrieve 250 m<sup>3</sup> by 09/30/12 – No significant accomplishments
- M-091-41 Retrievably Stored Waste (RH) – Complete non-caisson retrieval by 09/30/16 – No significant accomplishments
- M-091-42 MLLW (CH, small container) – Complete treatment by 09/30/17
  - 170 m<sup>3</sup> of 171 m<sup>3</sup> that were at treatment facilities have been returned
  - 10 m<sup>3</sup> in aboveground storage
- M-091-43 MLLW (RH and large container) – Complete treatment by 09/30/17
  - All waste that was at treatment facilities has been returned
  - 58 m<sup>3</sup> in aboveground storage



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safety ✦ performance ✦ cleanup ✦ closure

[www.em.doe.gov](http://www.em.doe.gov)

## Department of Energy – Richland Operations Office

### Significant Accomplishments of the Last Three Months

- M-091-44 TRUM Waste (RH and large container) – Certify 300 m<sup>3</sup> by 09/30/18
  - No significant accomplishments
  - 9,960 m<sup>3</sup> in aboveground storage (includes M-091-46 TRUM waste and TRU waste)
- M-091-46 TRUM waste (CH, small container) – Target: Certify 300 m<sup>3</sup> by 09/30/12 – No significant accomplishments
- Non-TPA – DOE-EM 90% TRU Waste Disposition – Hanford
  - No significant accomplishments
  - Starting – 16,553 m<sup>3</sup>, remaining – 11,146 m<sup>3</sup>



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# Department of Energy -- Richland Operations Office

## Fiscal Year 2012 (through December 2011) Performance Measurement

Dollars in Thousands

Title	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance	Cost Variance
Central Waste Complex	2,492.3	2,492.3	1,615.9	0.0%	35.2%
Waste Receiving and Packaging Facility (WRAP)	641.7	641.6	723.2	0.0%	-12.7%
T Plant	2,026.3	2,026.3	1,596.1	0.0%	21.2%
MLLW Treatment	50.3	1,391.6	1,780.8	2666.6%	-28.0%
TRU Waste Retrieval	977.9	1,273.0	378.3	30.2%	70.3%
TRU Waste Repackaging	952.6	1,041.1	2,383.6	9.3%	-129.0%
TRU Waste Disposition	0.0	0.0	5.3	0.0%	0.0%
Project Management	2,789.7	2,789.7	3,183.1	0.0%	-14.1%



**E M Environmental Management**

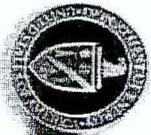
safety ✦ performance ✦ cleanup ✦ closure

[www.emr.doe.gov](http://www.emr.doe.gov)

## Variance Analysis

Variations are largely due to:

- The addition of layup work at WRAP, T Plant, and retrieval areas
- A point adjustment for MLLW Treatment reflects treatment costs for MLLW from retrieval now being funded through the MLLW Treatment “account.”



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[www.em.doe.gov](http://www.em.doe.gov)

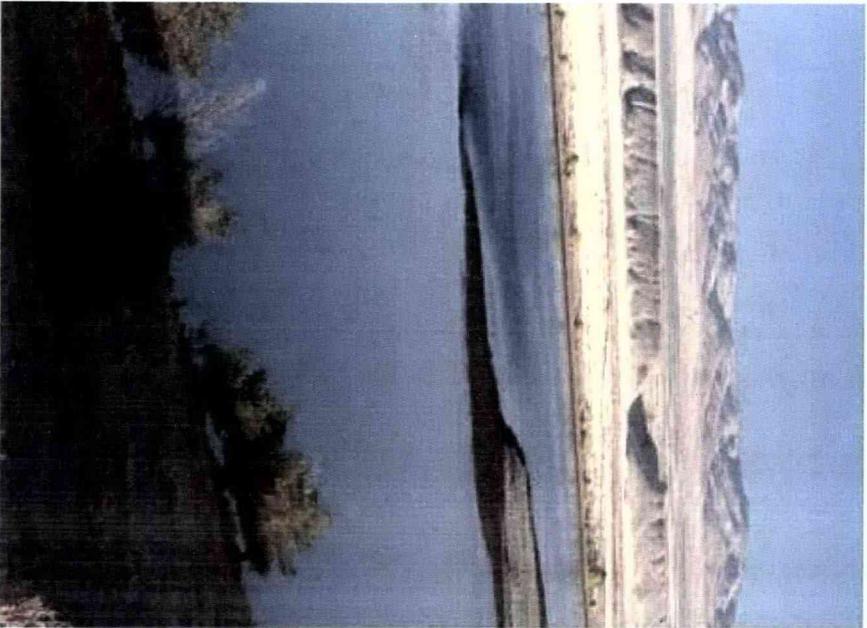
## **Actions Planned for Next Six Months**

- M-091-03 – Submit 2012 Project Management Plan
- M-091-42 – Receive remaining treated waste back from treatment vendors.
- Complete WRAP, T Plant, LLBGs lay up work (e.g., move waste to the Central Waste Complex, clean up or stabilize remaining contamination areas, move equipment and supplies to storage, maintain ventilation and fire protection, document facility conditions)



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# Central Plateau Remediation Project

(RL-40)

## Milestone Review

M-016-00, M-085-00

U.S. Department of Energy  
U.S. Environmental Protection Agency  
State of Washington, Department of Ecology

First Quarter FY2012  
January 19, 2012

# Accomplishments – 1<sup>st</sup> Quarter 2012

## Completed TPA Milestones:

- None during 1<sup>st</sup> Quarter 2012

## U Canyon Grout Fill

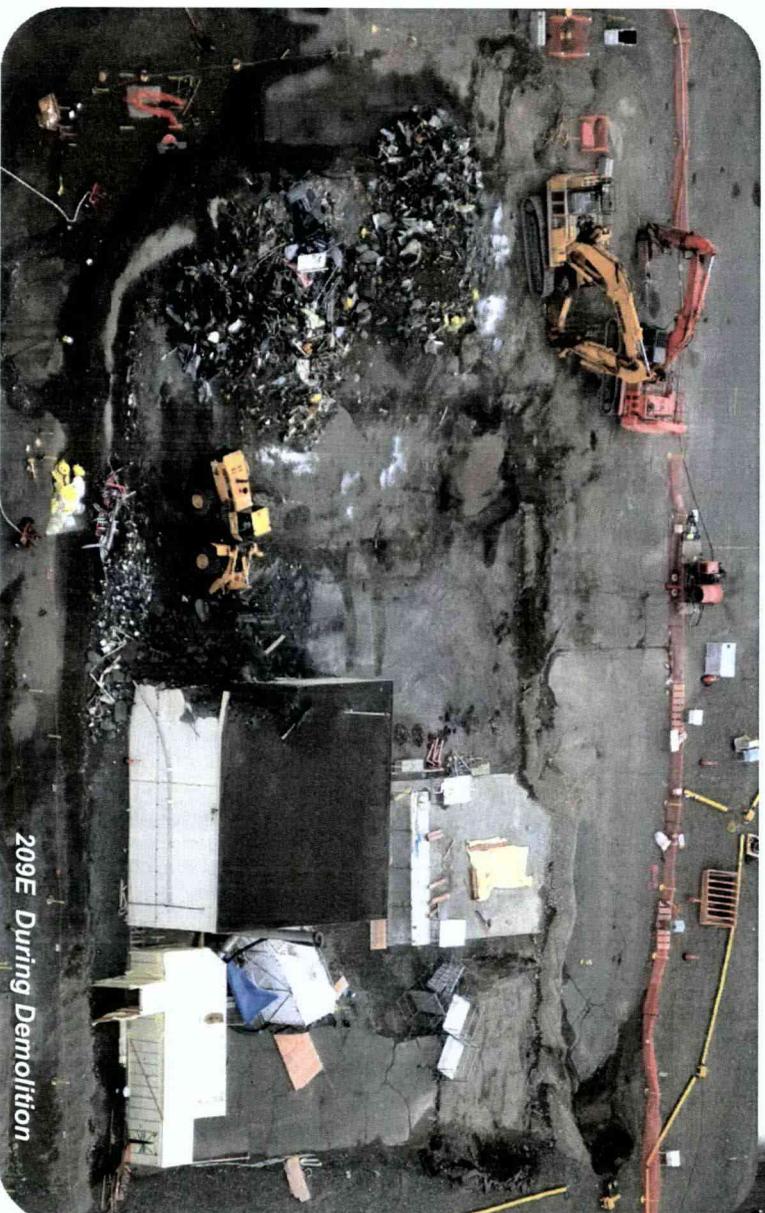
- Demobilization of the U Canyon Project was initiated



# Accomplishments – 1<sup>st</sup> Quarter

## Industrial D&D/Facilities

- 209E Critical Mass Lab disposition - 9,073 sq. ft.



# Accomplishments – 1st Quarter



# Project Baseline Performance

## Contract to date (Through December 2011)

	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)
WBS 040/ RL-0040 Nuclear Facility D&D										
U Plant/Other	199.3	199.0	191.8	(0.3)	-0.2	7.2	3.6	199.4	192.1	7.3
Outer Zone	<u>84.3</u>	<u>84.3</u>	<u>71.7</u>	<u>0.0</u>	0.0	<u>12.6</u>	15.0	<u>87.3</u>	<u>75.1</u>	<u>12.2</u>
ARRA Total	283.6	283.3	263.5	(0.3)	-0.2	19.8	7.0	286.7	267.2	19.5
Base	<u>71.1</u>	<u>71.2</u>	<u>63.4</u>	<u>0.1</u>	0.2	<u>7.8</u>	11.0	<u>683.5</u>	<u>667.9</u>	15.6
Total	354.7	354.5	326.9	(0.2)	-0.1	27.6	7.8	970.2	935.1	35.1

Numbers are rounded to the nearest \$0.1M.



# Milestone Status

TPA Number	Commitment Date	Milestone Title	Status
<b>M-085-00 RL 40 –Complete Response Actions for the Canyon Facilities/Associated Past Practice Waste Sites, other Tier 1 CP Facilities not covered by existing milestones, and Tier 2 CP Facilities</b>			

M-085-01	09/30/12	Submit Change Package to establish date for major Milestone M-85-00	On Schedule
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M-085-50	12/31/15	Submit Revised RAWP for the 224-B Concentration Facility in accordance with the Action Memo for the Non-Time Critical Removal Action for the 224-B Plutonium Concentration Facility (DOE/RL-2004-36). A change package with a completion milestone will accompany the submittal of the work plan.	On Schedule
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M-085-60	03/31/18	Complete EE/CA Report(s) for all Tier 2 Facilities listed in Appendix J	On Schedule
M-085-51	12/31/25	Submit RAWP for the 224T TRUSAF in accordance with the Action Memo for the Non-Time Critical Removal Action for the 224-T Plutonium Concentration Facility (DOE/RL-2004-68). A change package with a completion milestone will accompany the submittal of the work plan.	On Schedule

## M-016-00 RL 40 –Complete Remedial Actions for all Non-Tank Farm and Non-Canyon Operable Units

M-016-200A	9/30/17	Complete U Plant Canyon (221-U) Demolition in accordance w/ RD/RAWP	On Schedule
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M-016-200B	9/30/21	Complete U Plant Canyon (221-U) Barrier Construction in accordance w/ the RD/RAWP	On Schedule
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Tri-Party Agreement



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# Planned Activities

Next 6 months

## U Canyon

- Complete demobilization activities.

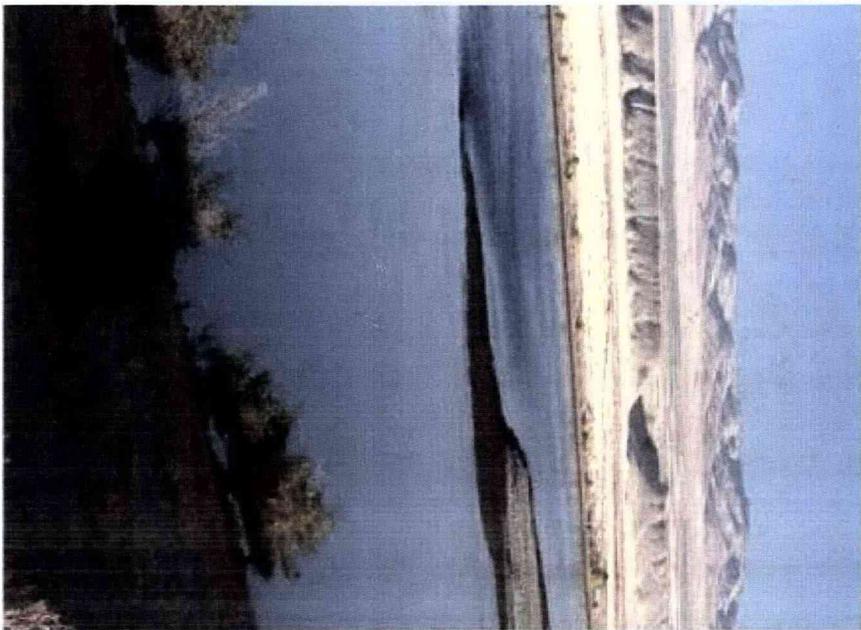
## 209E Project

- Complete demobilization activities.

## MG-1

- Priority work if funds become available.





# Soil and Groundwater Remediation Project Milestone Review

M-015-00, M-016-00, M-024-00, M-037-00, M-085-00

U.S. Department of Energy  
U.S. Environmental Protection Agency  
State of Washington, Department of Ecology

First Quarter FY2012  
January 19, 2012



# Accomplishments – 1<sup>st</sup> Quarter

## Completed TPA Milestones:

- **M-015-72-T01:** Submit CERCLA RI/FS Report and PP for 300-FF2 and 300-FF5 Operable Units for groundwater and soil.
- **M-015-90:** Submit RCRA Facility Investigation/Corrective Measures Study (RFI/CMS) and Remedial Investigation/Feasibility Study (RI/FS) work plan for 200-IS-1 OU to Ecology.
- **M-015-91A:** Submit Remedial Investigation/Feasibility Study Work Plan for the 200-WA-1 Operable Unit (200West Inner Area) to EPA.
- **M-015-93A:** Submit revised RCRA Facility Investigation/Corrective Measures Study (RFI/CMS) and Remedial Investigation/Feasibility Study (RI/FS) work plan for the 200-SW-2 OU to Ecology.
- **M-016-122:** Begin Phase 1 operation of the new 200 West pump and treat system per the RD/RAWP and the 200-ZP-1 ROD.



# Accomplishments – 1<sup>st</sup> Quarter

## Pump and Treat Operations

- Treated 303 million gallons of groundwater
- Removed 412 kg of contaminants from the groundwater

## Drilling and Decommissioning

- 5 groundwater wells installed

## Sampling

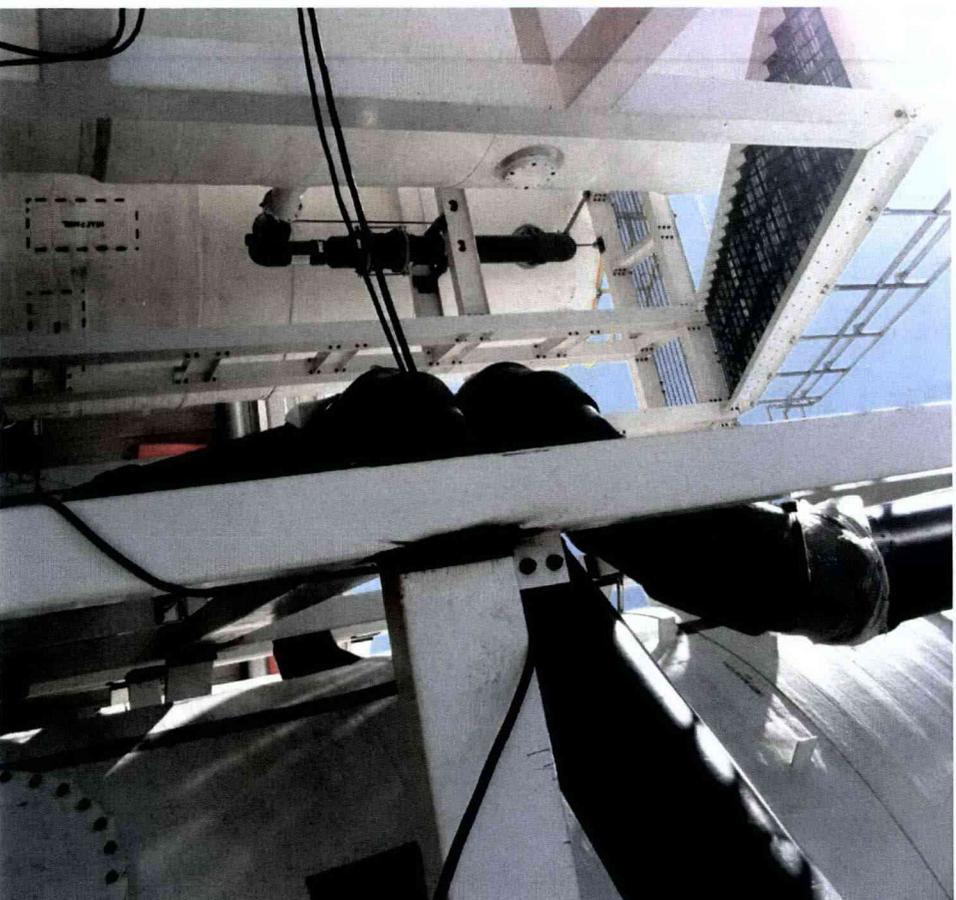
- 2,571 samples collected
- 1,390 analysis received
- 153 aquifer tubes sampled



# Accomplishments – 1st Quarter

## 200 West Area Groundwater Treatment Facility

- Completed TPA Milestone M-016-122 - *Begin Phase I operation of the new 200 west pump and treat system per the Remedial Design Remedial Action Work Plan and the ZP-1 Record of Decision (12/19/2011).*



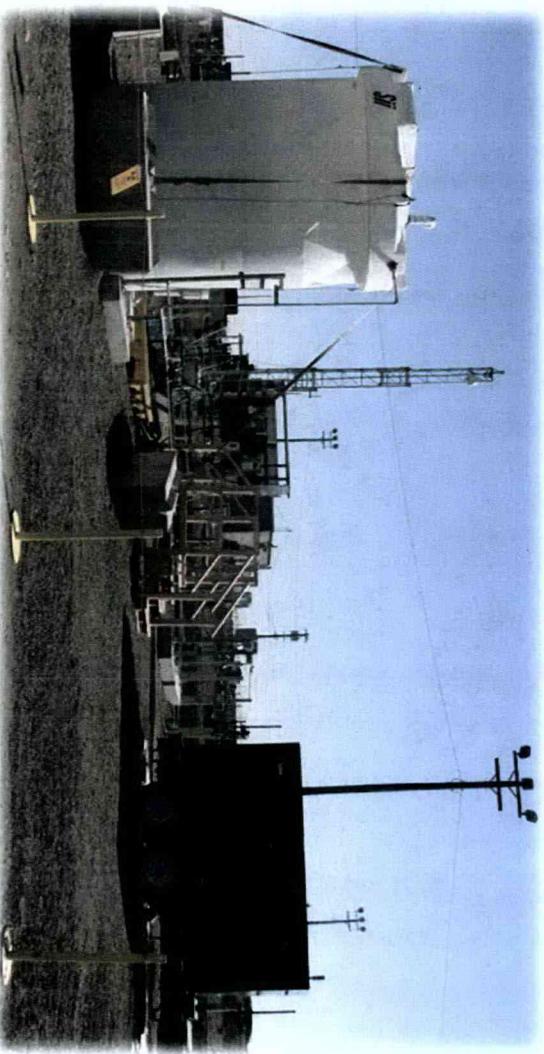
# Accomplishments – 1<sup>st</sup> Quarter

## 200-UP-1

- Transfer building acceptance test procedures were completed
- Mechanical and electrical rack construction acceptance testing was initiated
- Completed three extraction wells
- Discussed and refined remediation alternatives for the FS/PP

## Deep Vadose Zone

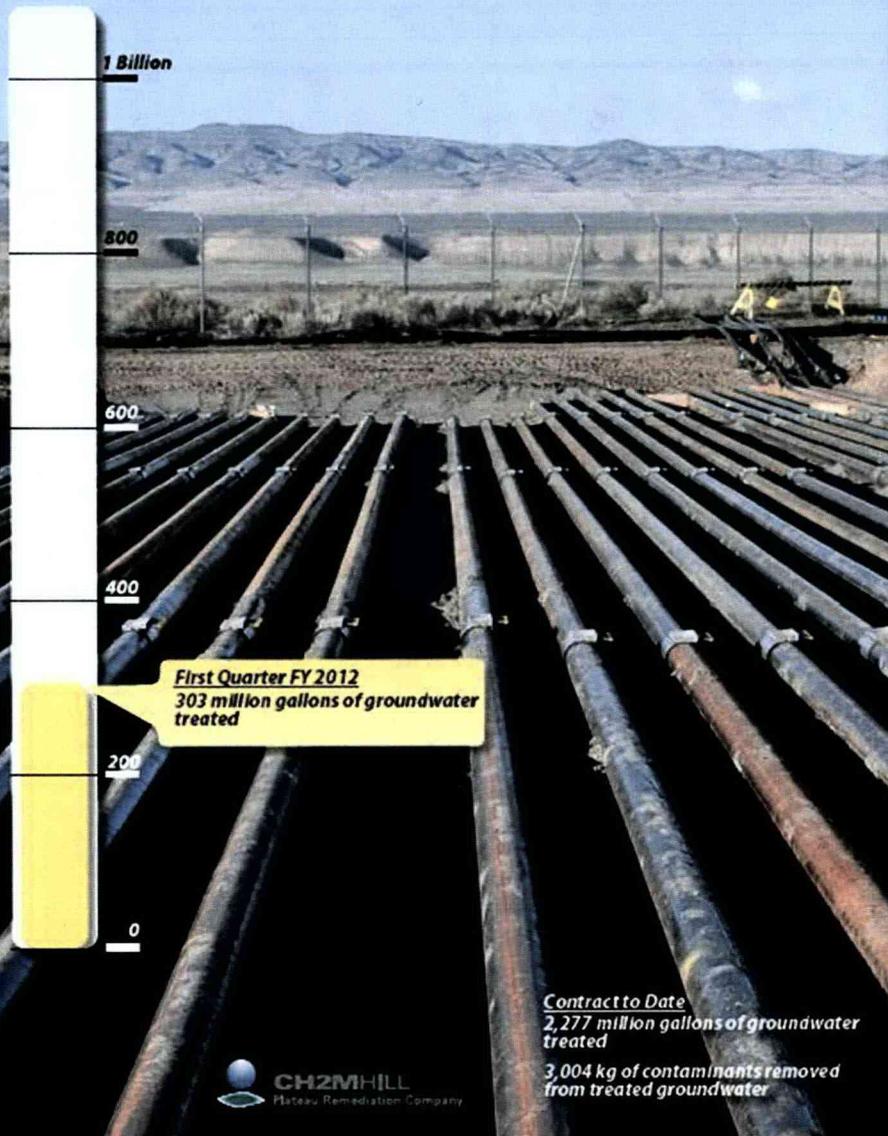
- Perched Water Removal Test (B Area)
  - Operations began in late September 2011
  - Removed 24,000 gallons of water



# FY2012 Progress

## Soil and Groundwater Treatment Progress FY2012

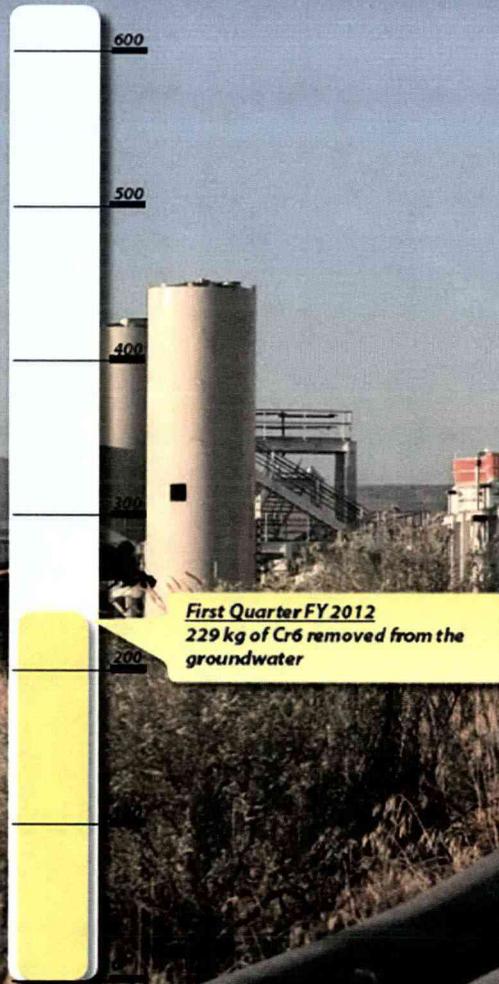
Treat a total of **ONE BILLION** gallons of groundwater in FY 2012



# FY2012 Progress

## Soil and Groundwater Treatment Progress FY2012

Remove a total of 600 kg of Hexavalent Chromium in FY 2012



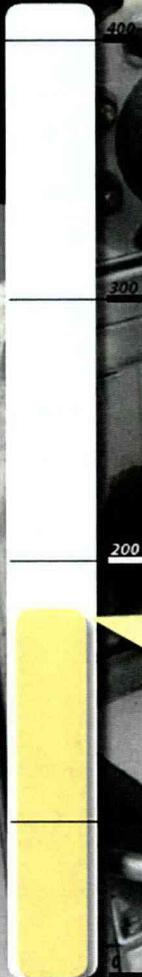
**Contract to Date**  
2,277 million gallons of groundwater treated  
3,004 kg of contaminants removed from treated groundwater



# FY2012 Progress

## Soil and Groundwater Treatment Progress FY2012

Remove a total of 400 kg of Carbon Tetrachloride in FY 2012



**First Quarter FY 2012**  
183 kg of Carbon Tet removed from the groundwater

**Contract to Date**  
2,277 million gallons of groundwater treated  
3,004 kg of contaminants removed from treated groundwater



# Milestone Summary

TPA Number	Commitment Date	Milestone Title	Status
<b>M-015-00</b>	<b>Complete RI/FS (or RI/CMS &amp; RI/FS) Process for All Non-Tank Farm Operable Units Except for Canyon/Associated Past Practice Waste Site Operable Units Covered in M-85-00</b>		
M-015-70-T01	11/24/11	(Forecast Date: 01/12/12) Submit FS Report and PP for 100-HR-1/2/3 and 100-DR-1/2 OUs	Behind Schedule
M-015-68-T01	11/30/11	(Forecast Date: 03/15/12) Submit RI/FS Report and PP for 100-BC-1/2/5 OUs for GW and Soil	Behind Schedule
M-015-64-T01	12/17/11	(Forecast Date: 05/14/12) Submit RI/FS Report and PP for 100-FR-1/2/3 and 100-IU-2/6	Behind Schedule
M-015-110D	06/30/12	Submit Tc-99 Pilot Scale Treatability Study Test Report as an element of RI for 200-WA-1 to EPA	On Schedule
M-015-62-T01	09/17/12	Submit FS/PP for 100-NR-1/2 OUs Including GW and Soil	Behind Schedule
M-015-00D	12/31/12	Submit PP for all 100 & 300 Area OUs to Complete RI/FS Process	On Schedule
<b>M-016-00 Complete Remedial Actions for all Non-Tank Farm and Non-Canyon Operable Units</b>			
M-016-120	08/31/12	Groundwater Treatment System for the Tc-99 plume at the S/SX Tank Farm	On Schedule
M-016-110-T01	12/31/12	Take Actions to Contain or Remediate Hexavalent Cr 100A GW Plumes	On Schedule



Tri-Party Agreement



U.S. DEPARTMENT OF ENERGY



CH2MHILL Plateau Remediation Company

# Milestone Summary

TPA Number	Commitment Date	Milestone Title	Status
<b>M-024-00 – Complete Well Installations with RCRA/CERCLA Requirements</b>			
M-024-58E	06/01/12	Initiate Discussions of Well Commitments	On Schedule
M-024-63-T01	08/01/12	Conclude Discussions of Well Commitments	On Schedule
M-024-63	12/31/12	DOE Shall Complete Construction of all Wells Listed	On Schedule
<b>M-037 – RCRA Closures</b>			
M-037-03	04/30/2012	Submit Revised Closure Plans to support TSD closure for two (2) TSD Units: 216-B-3 Main Pond system, and 216-S-10 Pond and Ditch.	At Risk



# Project Baseline Performance

## Through December 2011

WBS 030/ RL-0030 Soil and Groundwater Remediation	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)
Base RL-0030.C1 GW Remedy Implement	52.9	51.4	58.8	(1.6)	-3.0	(7.4)	-14.4	60.4	68.3	(7.9)
ARRA RL-0030.R1.1 Cleanup Operations	175.0	175.0	174.6	0.0	0.0	0.4	0.2	175.0	174.4	0.6
ARRA RL-0030.R1.2 Well Drilling Operations	40.7	40.7	38.4	0.0	0.0	2.4	5.8	40.7	38.3	2.4
Subtotal RL-0030.C	268.6	267.1	271.8	(1.6)	-0.6	(4.6)	-1.7	276.1	281.0	(4.9)
Base RL-0030.O1 RL 30 (Operations)	396.1	397.6	400.5	1.5	0.4	(2.9)	-0.7	1,170.8	1,175.2	(4.4)
ARRA RL-0030.R1.3 Support Operations	51.4	51.4	50.9	0.0	0.0	0.5	0.9	51.4	50.9	0.5
<b>Total</b>	<b>216.1</b>	<b>216.1</b>	<b>223.2</b>	<b>(0.1)</b>	<b>-0.0</b>	<b>(7.0)</b>	<b>-1.0</b>	<b>1,498.4</b>	<b>1,507.2</b>	<b>(8.8)</b>

Numbers are rounded to the nearest \$0.1M.



# Planned Activities

Next 6 months

## 200-ZP-1 / 200-PW-1 SVE

- Complete ZP-1 interim pump and treat operations and begin PW-1 SVE operations
- Complete simulator-based training and complete hookup of 5 interim injection wells to 200 West P&T system
- Complete acceptance testing for 200 West P&T system

## 200-UP-1

- Complete acceptance tests for S/SX groundwater extraction building.
- Issue Rev. 0 RI/FS Report and Proposed Plan, and initiate public review

## 200-BP-5

- Complete construction and initiate aquifer treatability test



# Planned Activities

Next 6 months

## 200-DV-1

- Project is on schedule to meet TPA M-015-110D, due June 30, 2012: *Submit Tc-99 Pilot Scale Treatability Study Test report as an element of remedial investigation for the 200-BC-1/200-WA-1 OUs to EPA*

## 300 Area

- Issue Rev 0 RI/FS Report and Proposed Plan, and initiate public review

## 100 K Area

- Issue Rev 0 RI/FS Report and Proposed Plan, and initiate public review

## 100 D & H Areas

- Submit Draft A RI/FS Report and Proposed Plan

