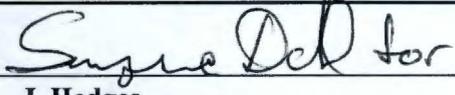
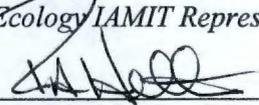


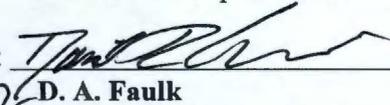
**River Corridor/Remediation of 100-K Area  
Tri-Party Agreement Milestone Review  
Meeting Minutes  
September 16, 2010**

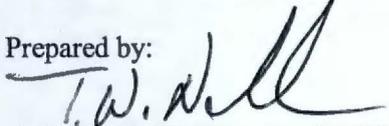
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Approval:  Date: 10/21/10  
**J. Hedges**  
*Ecology IAMIT Representative*

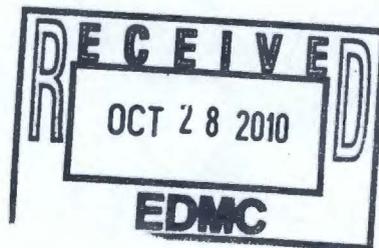
Approval:  Date: 10/25/10  
**R. A. Holten**  
*DOE IAMIT Representative*

Approval:  Date: 21 Oct 2010  
**D. A. Faulk**  
*EPA IAMIT Representative*

Minutes Prepared by:  Date: 10/28/10  
**T.W. Noland**  
*Mission Support Alliance, LLC*

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Balone, S.N. RL  
 Bignell, D.T. WCH  
 Blackburn J.E. WCH  
 Bond, R. Ecology  
 Bohnee, G. NPT  
 Buelow, L.C. EPA  
 Bryson, D.C. RL  
 Call, P.K. RL  
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 Dagan, E.B.\* RL  
 Dittmer, L.M. CHPRC  
 Donnelly, J.W. WRPS  
 Einan, D.R. EPA  
 Faulk, D.A. EPA  
 Franco, J.R. RL  
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 Gadbois, L.E.\* EPA  
 Glossbrenner, E.T. RL  
 Guercia, R.F. RL  
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Lobos, R.A. EPA  
 McCormick, M.S. RL  
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 Neath, J.P. RL  
 Niles, K. OOE  
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 Piippo, R.E.\* MSA  
 Potter, R.D. MSA  
 Price, J.B. Ecology  
 Riffe, D.J. CHPRC  
 Romine, L.D. RL  
 Russell, R.W. ORP  
 Sands, J.P. RL  
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 Smith, D.C. RL  
 Teynor, T.K.\* RL  
 Vanni, J.\* Yakama  
 Watson, D.J. CHPRC  
 Whalen, C.\* Ecology  
 Williams, J.D. CHPRC  
 Williamson, R.U. WCH  
 Wintczak, T.M. WCH  
 Wise, B.K. MSA  
 Yasek, D.M.\* WCH  
 Administrative Record  
 \*Attendees

**River Corridor/Remediation of 100-K Area  
Tri-Party Agreement Milestone Review  
Meeting Minutes  
September 16, 2010**

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

DOE-RL distributed a handout on the quarterly summary for June 2010 through August 2010, the milestone status, significant accomplishments for the last three months, significant actions planned for the next three months, performance summary, and issues.

Milestone Status

M-16-47 - DOE-RL stated that the 100-D Area issues have been resolved, and the associated three Cleanup Verification Packages (CVP) are in Ecology review (100-D-15, 1607-D-2, 116-DR-8). Ecology stated that the intent is to sign off on the three CVPs today.

Milestone M-16-55 - In the 100-N Area, D4 efforts to coordinate the buildings with the waste sites are under way to ensure the milestone is met.

Milestone M-16-145 - The three K Area waste sites (600-29, 100-K-78, 128-K-2) are confirmatory sampling sites that will become part of the WCH contract. Sampling is currently under way in these sites. DOE-RL stated that the K-2 site is a burial ground that was likely never used. The first sampling phase has been completed on K-78. A cultural review will be done, due to the sensitivity of the area, before the second sampling phase is initiated. The 600-29 waste site failed, which triggers the remove, treat and dispose (RTD) process.

Milestone M-89 - 324 Bldg Non-Permitted Mixed Waste Units Closure - Plans are under way to do core drilling underneath the 324 Building to determine whether any waste leaked out through the breached liner in the 324 B-Cell. WCH will initiate drilling during the first quarter of fiscal year 2011. The results of the drilling will determine what the impact would be on remediation.

Significant Accomplishments - For Last 3 Months

M-16 - Remedial Action/Risk Assessment - To support relocation of the export water line in the 100-K Area, two boreholes were installed to ensure relocation is not in a chromium contamination area. Results from the boreholes showed no chromium contamination. The export water lines will be relocated later this year and then remediation can be initiated. The beryllium issues have been resolved to the extent that work has restarted in the 300 Area and new requirements are being implemented. There are some contractual issues remaining, but that is not expected to have an impact from a TPA standpoint. Ecology inquired about receipt of the River Corridor Baseline Risk Assessment report. WCH indicated that an early October 2010 delivery to Ecology is anticipated. The final report for the non-intrusive characterization in the

618-10 burial grounds is expected in October 2010. The 618-10 intrusive characterization activities were completed on August 30, 2010, and early results indicate there is more clean fill over the burial ground than was expected. There appears to be less waste in the VPUs than expected, which will make the remediation effort easier.

M-93 - Reactors Final Disposition - Grouting of the Fuel Storage Basin has been completed, and it will be removed starting this fall.

M-94 - 300 Area Surplus Facilities Disposition - Three of the 327 hot cells have been shipped to ERDF, and the remaining hot cells are scheduled for shipment to ERDF by the end of next week. Road closures are implemented during shipping. The hot cells are being grouted at ERDF.

ERDF - Disposal at ERDF continues at about 500 containers per day. Between 1.2 and 1.4 million tons of waste are projected for disposal this year, compared to 850,000 tons last year. About 2 million tons are projected for disposal in 2011.

#### Significant Actions Planned - For Next 3 Months

M-16 - Remediation of the 118-K-1 silos will involve removing the top ten feet off each one of the silos. DOE-RL noted that Silo 6 has the higher dose rate, but the rest of the silos are expected to be fairly benign.

M-89 - The readiness review has been completed, and DOE-RL is approving the final grout pours into the hot cells before turning off the ventilation. The above-grade portions of the 324 Building are being remediated in order to take the building down to access the hot cells for removal.

#### Performance Summary

The project continues ahead of schedule and under cost. DOE-RL noted that the positive schedule variance has trended down over the last quarter, which is due to completing work ahead of schedule. The current time frame reflects when that work was scheduled, so no credit is allocated. The schedule variance will continue to trend downward, but when the work is completed the schedule variance will maintain a positive 1.0. The cost variance is anticipated to remain positive. ARRA work also continues at a positive cost and schedule variance.

#### RCC Issues

Three of the 100-D closure documents are anticipated for approval by Ecology today. The three-part test issue has been resolved, which will allow the remaining closure documents to proceed with approval.

DOE-RL stated that pending the condition around the breached 324 B-Cell sump liner, the Tri-Parties may want to consider revising the M-89 milestone.

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

A summary of the TPA milestone status, 100K project risk status, and PBS RL-12 and PBS RL-41 project performance was provided. DOE-RL stated that all of the milestones are currently on schedule. DOE-RL noted that under TPA milestone status, the comment that existing documentation is sufficient means that current RD/RA work plans are in place that cover work scope.

### M-16-140, Submit Revised RD/RA Work Plans for 100K Area RODs as Primary Document(s) per HFFACO 11.6 with New Proposed Milestones Including the Following: (Due March 31, 2011)

DOE-RL stated that the decision was to break this milestone into RD/RA work plan segments, Phase 1 and Phase 2. Internal discussions are ongoing to determine a final approach.

### M-16-53 and M-16-143 Facilities Status

DOE-RL stated that of removal of the clear well (M-16-53) will be started next fiscal year and completed. There is discussion whether to do the K East river pump house before the K West river pump house, but one of the two structures will be completed to meet the milestone. DOE-RL and WCH met with the tribes yesterday to present the path forward for removal of the pump house.

DOE-RL stated that clearance was received to proceed with waste site K-63, and it is currently being remediated. Waste site K-64 is a culturally sensitive area, and will require further discussion with the tribes before remediation can proceed. Waste site K-57 is also affected by K-64. DOE-RL noted that all of the 49 waste sites that were originally designated as confirmatory sampling have failed, including K-63 and 64.

DOE-RL provided color sides depicting removal of structures and buildings. DOE-RL's overall philosophy is to remove facilities and structures first, and then perform soil remediation to avoid the potential of cross-contaminating.

### M-93-22 Status

The recent Record of Decision (ROD) amendment approved by DOE Headquarters allows DOE-RL a second option for near-term core removal of the 105KE Reactor. DOE-RL has permission to go forward to Critical Decision 2 (CD-2), which is preliminary design or 60% design. If DOE-RL goes forward beyond the engineering, a commitment will be needed to fund a four- or five-year profile. Until a decision is made, all possible interim safe storage actions are being carried out, such as asbestos abatement, soils removal, and removing parts of the facility that are no longer necessary. By the end of 2011, the facility will be in interim safe storage, with the exception of putting on a new roof.

### 100K Project Risk Status

DOE-RL stated that there has been no change in project risk status since the last quarterly report. The one risk that has been realized is waste site remediation where all the confirmatory sampling sites failed. All of the waste sites that were RTD were deeper or more extensive or more contaminated than originally believed. The schedule is being reviewed to ensure the priority waste sites are completed first.

### Project Performance

RL-12 - The sludge treatment project is about three percent behind schedule. However, there is no risk in being deficient because of sufficient management reserve, which was put back into the project. The main schedule variance was due to delays in letting the multi-canister overpacks (MCO) contract. The contract has been placed, and three more MCOs are being purchased.

RL-41 - A significant amount of overtime has been worked to recover the schedule, and currently soils and facility D4 are on schedule. The positive cost variance will be applied to soil remediation work, which will bring the cost variance down to zero.





**September 16, 2010**

**River Corridor/Remediation of 100-K Area Milestone Review**

Place: EPA Conference Room, 309 Bradley Boulevard, Suite 115, Richland, WA  
Time: 10:00 am - 11:00 am  
Chairperson: Dave Einan

**Agenda**

10:00 am M-16-00 Complete Remedial Actions  
M-93-00 Disposition of Surplus Reactors  
M-94-00 300 Area Surplus Facilities  
M-89-00 324 Bldg. Closure of MW Units

10:30 am M-16-00C Remediation of 100-K Area  
M-16-53  
M-16-140  
M-16-143  
M-93-22  
M-15-116

11:00 am Adjourn Milestone Review

RIVER CORRIDOR CLOSURE PROJECT

# TPA Quarterly Review

For Period: June - August 2010



## *River Corridor Milestones:*

M-16

M-93

M-89

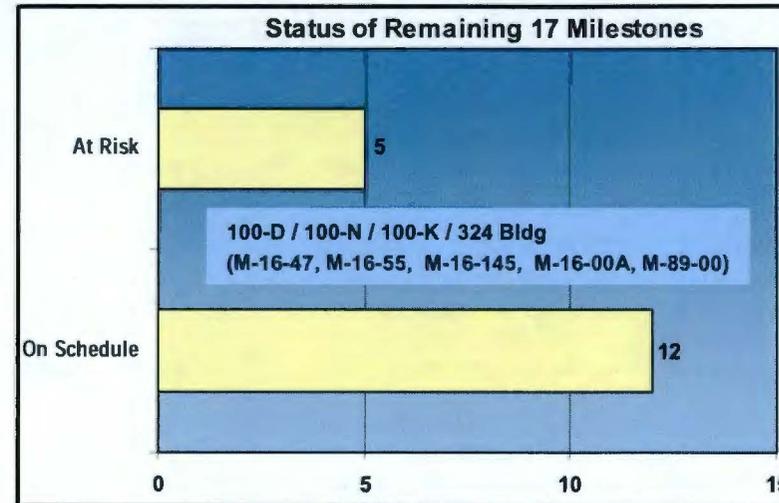
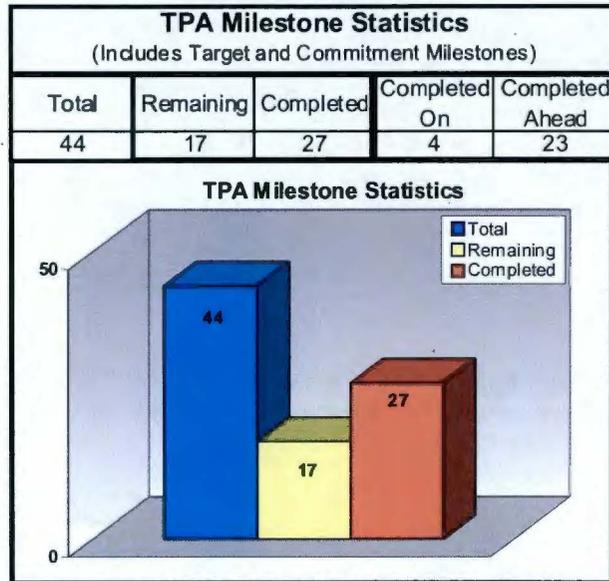
M-94

*Tri-Party Agreement*

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

**September 16, 2010**

*Protecting the Columbia River*



**Quarterly Summary (June – August 2010)**

- Completed one TPA target milestone:
  - M-16-51-T02 - Complete Excavation of a Total of 3 of 5 100-H Burial Grounds (118-H-1,-2,-3,-4, or -5) (due 12/31/10) - 7/8/10
- No TPA change requests were approved during the past quarter. TPA change request M-16-09-06 (proposes removal 100-D-31:11 and 100-D-31:12 from milestone scope) is awaiting Ecology signature.

TPA MS No.	Compliance Date	Title	Status	Comments
<b>M-16 Milestones - Remedial Action (milestones through 12/31/2011 and "at risk")</b>				
M-16-64	09/30/10	Complete Interim RA, Except Revegetation, for Following 300-FF-2 Waste Sites (300-259, 303-M SA, 303-M UOF, UPR-300-46, UPR-300-17, and 618-1)	On schedule	
M-16-51	12/31/11	Complete Interim RA for 100-H Area	On schedule	
M-16-47	12/31/11	Complete Interim RA for 100-D Area	At risk	Delays in obtaining regulatory approval of closeout documents and its impact on backfill put milestone at risk. Additionally, TPA CR M-16-09-06 proposes removal of several 100-D-31 segments.
M-16-55	12/31/12	Complete Interim RA for 100-N Area	At risk	Remediation started in August 2010. Remediation of some sites under buildings and reactor footprint require further negotiation and places milestone at risk, as well as completion definition/requirements for in-situ bioremediation.
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	At risk	Sites in this milestone are those listed in IROD prior to August 2009. Three sites (600-29, 100-K-78, 128-K-2) included in this milestone are currently not in WCH contract for remediation, and require an approved REA prior to performing design and another REA for remediation.
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	Milestone at risk due to M-16-55 and M-16-145; RL has started preparation of change package M-16-10-03 to clarify scope.

RIVER CORRIDOR CLOSURE PROJECT

For Period: June – August 2010

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	At risk	Breached 324 B-Cell liner could impact facility removal design and delay completion of milestone.
<b>M-93 Milestone - Reactors Final Disposition</b>				
M-93-20	09/30/12	Complete 105N Reactor ISS	On schedule	ISS in progress.
<b>M-94 Milestone - 300 Area Surplus Facilities Disposition (milestones through 12/31/2011)</b>				
M-94-08	12/30/11	Complete Removal and/or RA for 11 of Following Facilities: 305B, 306E, 306W, 307 Retention Basins, 308, 309, 321, 323, 324, 324B, 327, 333, 340, 3706, and 3720	On schedule	305B, 306E, 333 completed under M-94-06 (March 2008). 3706, 306W, 3720 completed under M-94-07 (March 2009).

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

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

- Continued concrete demolition work at 100-C-7.
- Awarded 100-D/100-H Areas remaining sites subcontract.
- Completed trenching and potholing at 100-K-2 Burial Ground.
- Initiated remediation at 100-N Area.
- Completed backfill at 618-1 Burial Ground.
- Continued planning to address potential beryllium concerns, particularly for investigating and remediating 300 Area process sewer lines.
- Continued development of River Corridor Baseline Risk Assessment report.
- Supported RI/FS field investigation borehole and well drilling activities in 100-B/C, 100-K, 100-D/H, 100-F, and 300 Areas of the river corridor.
- Working with MSA, submitted draft integrated Segment 1 turnover package outline to RL.
- Received approval of 16 waste site closure documents during this reporting period.
- American Recovery and Reinvestment Act (ARRA) – Awarded subcontract for 100-F Area remediation.
- ARRA – 618-10 non-intrusive characterization report in final preparation.
- ARRA – Commenced 618-10 intrusive characterization activities.

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

- Completed loadout activities to dispose of waste from B-Cell sump; final shipment sent to Central Waste Complex.
- Continued asbestos abatement activities.

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

- Continued 109N safe storage enclosure (SSE) structural steel erection.
- Continued 105N above/below-grade demolition and loadout; continued SSE design.

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

- Began 327 hot cell shipments to ERDF for disposal.
- Initiated demolition of 327 building.
- Completed below-grade demolition of 315 complex.



100-C-7 Excavation Waste Site



109N Safe Storage Enclosure Erection

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

**ERDF:**

- For period of June through August 2010, disposed nearly 480,000 tons of waste in ERDF.
- Started disposal of 327 hot cell special shipments.
- ARRA – Construction of Super Cell 9 is ~ 86% complete; Super Cell 10 is ~ 78% complete.
- ARRA – Started construction of fueling station.
- ARRA – Mobilized for construction of equipment, container, and truck maintenance buildings.
- ARRA – Issued work order to PNNL for container GPS units.



Super Cells 9/10 Liner Installation

**Significant Actions Planned – For Next 3 Months:**

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

- Begin 100-D remaining sites remediation.
- Initiate 118-K-1 Trench I silo remediation.
- Begin 100-N bioremediation activities.
- ARRA – Begin 100-F remediation.
- Deliver Draft B of the RCBRA report ecological and human health volumes to RL/regulators for review.

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

- Complete drilling platform, and initiate horizontal drilling to obtain dose profiles under B-Cell.
- Continue hazardous waste and asbestos removal.

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

- Begin 105N Fuel Storage Basin above-grade demolition.
- Begin installing 109N SSE roof panels.

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

- Complete 327 above-grade demolition.
- Continue shipping gloveboxes from 308 laboratory to Perma-Fix.
- Complete explosive above-grade demolition of 309 stack, and 337 Technical Management Center/337B High Bay Wing.
- Accept transfer of 307 Basins, 310 TEDF, and 340 facilities for disposition.

**ERDF:**

- ARRA – Start placement of operations layer in Super Cell 9.
- ARRA – Start placement of primary drain rock in Super Cell 10..

**PERFORMANCE SUMMARY** (includes ARRA)  
**Contract Inception (8/25/05) through August 2010**  
 (\$K)

	IPB		CUMULATIVE			Previous Quarter Comparison			
	BAC	EAC	BCWS	BCWP	ACWP	SCHEDULE VAR (\$)		COST VAR (\$)	
						May	Aug	May	Aug
D4	663,906	565,623	320,623	367,916	254,736	64,573	47,293	122,998	113,180
Reactor ISS	120,767	127,333	77,163	55,276	53,845	-19,633	-21,887	3,048	1,431
Field Remediation	625,448	632,236	347,698	330,053	288,749	-3,220	-17,645	37,998	41,304
Waste Operations	423,295	395,751	211,522	274,463	231,915	52,864	62,941	21,505	42,548
ESFC	53,905	65,573	39,047	39,806	36,719	1,124	759	3,635	3,087
Mission/General Support	325,781	417,760	199,413	199,413	198,350	0	0	-1,772	1,063
Transition	3,979	3,747	3,979	3,979	3,747	0	0	232	232
Contingency	135,772	135,772							
<b>TARGET COST TOTAL</b>	<b>2,352,853</b>	<b>2,343,794</b>	<b>1,199,445</b>	<b>1,270,907</b>	<b>1,068,060</b>	<b>95,708</b>	<b>71,462</b>	<b>187,644</b>	<b>202,847</b>

**Schedule Variance (PMB): \$71,462K**

- Acceleration of 300 Area and 100-N Area building demolitions.
- Stop-work at KE/KW Reactor ISS (RL direction).
- Accelerated remediation work at 100-B/C, 100-D, 100-H Areas; offset by negative variances associated with CLIN 3 and 100-K/300 Area descope, as well as delays of miscellaneous restoration and 100-IU-2/6 waste sites.
- ERDF Super Cells 9/10 construction ahead of schedule.
- ERDF transportation, treatment, and disposal support to accelerated work in FR and D4 Projects.

**Cost Variance (PMB): \$202,847K**

- Significant underruns experienced in 300 Area building characterization, deactivation, and demolition activities.
- 100-D/F/K and 100-IU-2/6 remediation underruns. Partially offset by significant project support costs at all active dig sites, particularly in the 300 Area.
- 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 August 2010**  
 (\$K)

	IPB		CUMULATIVE			Previous Quarter Comparison			
	BAC	EAC	BCWS	BCWP	ACWP	SCHEDULE VAR (\$)		COST VAR (\$)	
						May *	Aug *	May *	Aug *
RL0041.R1.2 - Cell 9 / ERDF	51,361	45,275	35,985	43,984	37,451		7,999		6,533
RL0041.R1.3 - Acc Rem / ERDF	55,321	45,128	19,233	17,600	9,239		-1,633		8,361
RL0041.R1.4 - Cell 10	35,045	26,925	10,186	27,239	17,946		17,053		9,293
RL0041.R2 - 618-10	66,340	66,340	17,637	21,283	24,907		3,646		-3,624
Contingency	11,115	11,115							
<b>TARGET COST TOTAL</b>	<b>219,181</b>	<b>194,783</b>	<b>83,042</b>	<b>110,106</b>	<b>89,543</b>		<b>27,064</b>		<b>20,563</b>

\* RL0041.R1.2, R1.3, and R1.4 were realigned for reporting purposes beginning in June 2010.

**Schedule Variance (PMB): \$27,064K**

- ERDF cell construction, equipment purchases, and various projects are running ahead of schedule.
- Repairs of Hanford site roads, GPS tracking system, overhead line burial, and fuel station construction projects behind schedule.
- Infrastructure design completion ahead of schedule, as well as non-intrusive characterization at 618-10. Intrusive characterization work was replanned to better reflect the start due to final hazard categorization and beryllium delays.

**Cost Variance (PMB): \$20,563K**

- ERDF cell construction and disposal upgrades are realizing efficiencies.
- ERDF equipment and facility upgrade costs less than budgeted.
- Fewer comments received and streamlining the confirmatory sampling process (e.g., use of fewer sub-sites than originally planned) have resulted in positive cost variances in several accounts.
- 618-10 water line design has expended additional costs evaluating alternatives, and costs for safety documentation were significantly greater than planned. Safety documentation approval delays have resulted in change notices from subcontractor for schedule extensions.

## ***RCC Issues***

- Continued delays in obtaining approved 100-D closure documents could affect milestone completion.
- Determining impact of breached 324 B-Cell sump liner. Could affect 324 plan and schedule.

**Hanford 100-K Remediation**  
***Tri-Party Agreement Milestone Review***  
**for Applicable**  
**M-16 and M-93**  
**Milestones**

***U.S. Department of Energy***  
***Richland Operations Office (RL)***  
***River Corridor Project***

***September 16, 2010***



***EM Environmental Management***

***safety ❖ performance ❖ cleanup ❖ closure***

***www.em.doe.gov***

# **TPA Milestone Status**

## **Remaining Milestones Due Fiscal Year 2009-2010**

<b>Number</b>	<b>Milestone Title</b>	<b>Due Date</b>	<b>Status / Comments</b>
M-16-00C	COMPLETE ALL INTERIM RESPONSE ACTIONS FOR THE 100K AREA.	TBD	See M-16-140
M-16-53	COMPLETE THE INTERIM RESPONSE ACTIONS FOR THE 100K AREA WITHIN THE PERIMETER BOUNDARY AND TO THE RIVER FOR PHASE 1 ACTIONS.	12/31/2012	On Schedule
M-16-140	<p>SUBMIT REVISED RD/RA WORK PLANS FOR 100K AREA RODS AS PRIMARY DOCUMENT(S) PER HFFACO 11.6 WITH NEW PROPOSED MILESTONES INCLUDING THE FOLLOWING:</p> <ul style="list-style-type: none"> <li>• COMPLETE REMOVAL OF THE K WEST BASIN.</li> <li>• COMPLETE REMOVAL OF ALL SLUDGE (INCLUDES CONTAINER, SETTLER TANK SLUDGE) FROM K WEST BASIN EXCEPT KNOCKOUT POT CONTENTS.</li> <li>• COMPLETE REMOVAL OF KNOCKOUT POT CONTENTS.</li> <li>• COMPLETE TREATMENT AND PACKAGING OF FIRST CONTAINER OF TRU SLUDGE WASTE CERTIFIABLE FOR DISPOSAL AT WIPP.</li> <li>• COMPLETE TREATMENT AND PACKAGING OF SLUDGE FOR DISPOSAL AT WIPP.</li> <li>• BEGIN 105KW REACTOR INTERIM SAFE STORAGE.</li> <li>• COMPLETE 105KW REACTOR INTERIM SAFE STORAGE.</li> <li>• INITIATE SOIL REMEDIATION UNDER K WEST BASIN.</li> <li>• COMPLETE ALL INTERIM RESPONSE ACTIONS AT THE 100K AREA.</li> </ul>	03/31/2011	<p>On Schedule</p> <p>On Schedule</p> <p>On Schedule</p> <p>On Schedule</p> <p>On Schedule</p> <p>Existing documentation is sufficient</p> <p>Existing documentation is sufficient</p> <p>Existing documentation is sufficient</p> <p>On Schedule</p>
M-16-143	COMPLETE THE INTERIM RESPONSE ACTIONS FOR THE 100K AREA WITHIN THE PERIMETER BOUNDARY AND TO THE RIVER FOR PHASE 2 ACTIONS.	12/31/2015	On Schedule
M-93-22	COMPLETE 105KE REACTOR INTERIM SAFE STORAGE IN ACCORDANCE WITH THE REMEIAL DESIGN/REMEDIAL ACTION WORK PLAN.	07/31/2014	On Schedule



**EM Environmental Management**

safety ❖ performance ❖ cleanup ❖ closure

# M-016-140 Status

**Milestone M-016-140: Submit Revised RD/RA Work Plans for 100K Area RODS as Primary Document(s) per HFFACO 11.6 with New Proposed Milestones Including for the Following (Due: March 31, 2011):**

Milestone Item (from bulleted list of activities in the M-016-140 Milestone)	Existing RD/RA Work Plan	Recommended RD/RA Work Plan (numbers correspond to section on integrated schedule) Each color indicates a separate document.	Applicable Decision Document
Complete Removal of the K West Basin	1a) Use KE Document as basis – DOE/RL-2007-41, <i>Remedial Design Report and Remedial Action Work Plan for K Basins Interim Remedial Action 105-K East Basin Deactivation</i> 1b) Use KE Document as basis – DOE/RL-2007-48, <i>Remedial Design Report and Remedial Action Work Plan for the 100 Area Remaining Sites Interim Remedial Action 105-K East Basin Demolition</i>	1a) Develop new RD/RAWP for the KW Basin Deactivation. 1b) Develop new RD/RAWP for KW Basin Removal and Demolition	1a) 1999 Interim Action ROD for 100 KR-2 Interim Remedial Action and 2005 ROD Amendment 1b) 1999 Interim Action ROD for 100 Areas Remaining Sites, ESD, Feb. 2004 & Aug. 2009.
Complete Removal of All Sludge (Includes Container, Settler Tank Sludge) From K West Basin Except Knock Out Pot Contents	None	3) Develop new RD/RAWP for KW Basin Sludge removal, including KOP contents - Phase 1	1999 Interim Action ROD for 100 KR-2 Interim Remedial Action and 2005 ROD Amendment
Complete Removal of Knock Out Pot Contents	The current <i>RDR/RAWP for K Basins Interim Remedial Action</i> , DOE/RL-99-89 R1, describes the remedial design for SNF removal and since the KOP contents will be removed as SNF, this will be the bases upon which changes will be managed.		



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## ***M-016-140 Status - continued***

Milestone Item (from bulleted list of activities in the M-016-140 Milestone)	Existing RD/RA Work Plan	Recommended RD/RA Work Plan (numbers correspond to section on integrated schedule) Each color indicates a separate document.	Applicable Decision Document
Complete Treatment and Packaging of First Container of TRU Sludge Waste Certifiable for Disposal at WIPP	DOE/RL-2006-06 Rev 0, <i>RD/RAWP for K Basins Interim Remedial Action, Sludge Treatment and Interim Storage</i> , is obsolete as it is based on an approach that was not implemented.	4) Path forward for Phase 2 documentation and new proposed Target Dates and Milestones currently being discussed between RL and EPA	1999 Interim Action ROD for 100 KR-2 Interim Remedial Action and 2005 ROD Amendment
Complete Treatment and Packaging of Sludge for Disposal at WIPP			
Begin 105-KW Reactor Interim Safe Storage	DOE/RL-2005-26 Rev 1, <i>RAWP for KE/KW Reactor Facilities and Ancillary Facilities</i>	5) DOE/RL-2005-26 Rev 1 is sufficient for current ISS work at 105-KW.	EE/CA 2005-86 and 100-K Action Memo *New EE/CA and Action Memo will be required if Core Removal decision is made for 105-KW
Complete 105-KW Reactor Interim Safe Storage			
Initiate Soil Remediation Under K West Basin	DOE/RL-96-17 Rev 6 <i>RDR/RAWP for the 100 Area</i>	6) DOE/RL-96-17 Rev 6 may not require any further updates. TPA-CN-320 defines completion dates for 100K Area (inside the fence) soil wastes sites.	1999 Interim Action ROD for 100 Areas Remaining Sites, ESD, Feb. 2004 & Aug. 2009.
Complete All Interim Response Actions at the 100K Area		7) New Integrated Field Execution Schedule encompassing all interim response actions at 100K Area – this will be provided as an attachment to a letter.	Applicable to all Decision Documents identified above, as well as the 100 Area Interim Action Burial Grounds ROD and 100 Area Interim Action Liquid Waste Sites ROD.



# M-016-053 and M-016-143 Facilities Status

Phase 1 M-016-053: December 31, 2012	Phase 2 M-016-143: December 31, 2015	Phase 3 (to be determined)
<p>110KE Gas Storage Facility</p> <p>115KE Gas Recirculation Building</p> <p>116KE Reactor Exhaust Stack</p> <p>117KE Exhaust Air Filter Building</p> <p>118KE Horizontal Control Rod Storage Cave</p> <p>119KE Exhaust Air Sampling</p> <p>1706KE Radiation Control Counting Lab</p> <p>1706KEL Developmental Lab</p> <p>1706KER Water Studies Recirculation Bldg</p> <p>1713KE Warehouse</p> <p>1714KE Oil and Paint Storage Shed</p> <p>183.4KW Clearwell</p> <p>183.1KW Head House</p> <p>181KW River Pump House</p> <p>183.2KW Sedimentation Basin</p> <p>183.3KW Filter Basin</p> <p>MO048 Construction Lunch Trailer</p> <p>MO060 Conference Trailer</p> <p>MO872 Leased trailer</p> <p>MO873 Leased trailer</p> <p>MO969 HPT Change Trailer</p>	<p>115KW Gas Recirculation Building</p> <p>116KW Reactor Exhaust Stack</p> <p>117KW Exhaust Air Filter Building</p> <p>118KW Horizontal Control Rod Storage Cave</p> <p>119KW Exhaust Air Sampling Building</p> <p>166AKE Oil Storage Facility</p> <p>166KE Oil Storage Vault</p> <p>166KW Oil Storage Vault</p> <p>1705KE Effluent Water Treatment Pilot Plant</p> <p>1713KER Shop Building</p> <p>1713KW Warehouse</p> <p>1714KW Oil and Paint Storage Shed</p> <p>1720K Administration Office Building</p> <p>1724KB Gas Bottle Storage Facility</p> <p>182K Emergency Water Reservoir Pump House</p> <p>183.5KW Lime Feeder Building</p> <p>183.6KW Lime Feeder Building</p> <p>MO101 Administration</p> <p>MO102 Administration</p> <p>MO214 Administration</p> <p>MO382 Office</p> <p>MO401 Administration</p> <p>MO402 Administration</p> <p>MO442 Classroom/Office</p> <p>MO506 CVDF Lunch Room</p> <p>MO507 CVDF Conference Room</p> <p>MO907 Administration</p> <p>MO917 CVDF Administration</p> <p>MO928 Administration</p>	<p>105KW Water Tunnel</p> <p>142K CVDF</p> <p>1506K1 Fiber Optics Hut</p> <p>165KE Power Control Bldg</p> <p>142KA CVDF Generator Bldg</p> <p>165KW Power Control Bldg</p> <p>167K Cross-tie Tunnel Bldg</p> <p>1717K Maintenance Shop</p> <p>1724K Maintenance Shop</p> <p>1724KA Storage Shed</p> <p>181KE River Pump House</p> <p>183KE Chlorine Vault Slab</p> <p>183.2KE Sedimentation Basin</p> <p>183.3KE Filter Basin</p> <p>183.4KE Clearwell</p> <p>183.1KE Headhouse</p> <p>183.5KE Lime Feeder</p> <p>183.6KE Lime Feeder</p> <p>185K Potable Water Treatment Plant</p> <p>1908K Outfall Structure</p> <p>1908KE Outfall Structure</p> <p>190KE Main Pump House</p> <p>190KW Main Pump House</p> <p>MO054 Construction Lunch Room</p> <p>MO500 Administration</p> <p>MO236 KW Ops/HPT Change</p> <p>MO237 KW Construction Forces</p> <p>MO323 CVD Change Trailer</p> <p>MO955 Conference Room</p>

Field Work In Progress

Demolition Complete

Closure Actions and Documentation Complete



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# M-016-53 and M-016-143 Waste Sites Status

Phase 1 M-016-053: December 31, 2012		Phase 2 M-016-143: December 31, 2015		Phase 3 (to be determined)	M-016-57 (Initiate soil remediation at K East Basin)
100-K-3	100-K-71	100-K-1	120-KE-2	100-K-35	LPR-100-K-1
100-K-6	100-K-77	100-K-4	120-KE-3	100-K-43	
100-K-18	100-K-79	100-K-5	120-KE-4	100-K-47	
100-K-19	116-KE-1	100-K-13	120-KE-5	100-K-55	
100-K-34	116-KE-3	100-K-14	120-KE-6	100-K-56	
100-K-36	116-KE-6A	100-K-25	120-KE-8	100-K-72	
100-K-37	116-KE-6B	100-K-27	120-KE-9	100-K-73	
100-K-38	116-KE-6C	100-K-48	120-KW-6	100-K-74	
100-K-46	116-KE-6D	100-K-49	126-KE-2	100-K-75	
100-K-53	116-KE-7	100-K-54	130-K-2	100-K-80	
100-K-55	120-KW-1	100-K-55	130-KE-2	100-K-81	
100-K-56	120-KW-2	100-K-56	130-KW-1	100-K-82	
100-K-57	120-KW-3	100-K-60	130-KW-2	116-K-3	
100-K-62	120-KW-4	100-K-61	132-KW-1	116-KE-2	
100-K-63	120-KW-5	100-K-66	1607-K1	116-KW-2	
100-K-64	120-KW-7	100-K-67	1607-K2	118-KW-1	
100-K-68	130-K-1	100-K-83	1607-K4	128-K-2	
100-K-69	132-KE-1	116-KW-1	1607-K5		
100-K-70	1607-K3	118-KW-2	1607-K6		
	100-K-102	120-KE-1	100-K-109		

Legend:  
 Excavation in progress  
 Failed CSNA pending Contract Action  
 Mixed Failed and RTD  
 Closure Docs in Progress  
 Closure documentation complete  
 Backfill complete  
 Revegetation complete



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## ***M-093-022 Status***

- The NEPA Supplement Analysis and an Amended ROD to the Hanford Eight Surplus Reactors EIS were completed and issued by DOE adding an option for near-term dismantlement of the 105KE Reactor. This supports near-term dismantlement of the reactor core vs. placing the reactor in interim safe storage.
- The EE/CA for 105KE Reactor dismantlement has been drafted and provided to EPA for review. Final comments from EPA are pending.
- Core boring of the reactor core and graphite sampling activities for characterization are complete.



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# 100K Project Risk Status

Risks are those factors associated with the Project, both existing and emerging, that can result in cost and schedule impacts.

Sub-project	Major Remaining Risks with "Possible" or "Likely" Likelihood of Occurrence and Risk Mitigation	Emerging Risks and Risk Mitigation
<b>K West Basin</b>	<p>Future fuel and sludge handling will have potential to deposit additional sludge on K West Basin floor.</p> <p>Mitigation: Design sludge handling system with provisions to minimize depositing additional sludge on basin floor.</p>	
<b>Facility D4</b>	<p>Drawing unavailability / errors or undocumented facility configuration modifications cause work stoppage during facility isolation.</p> <p>Mitigation: Where necessary, hand-over-hand tracing is being performed. Utility isolation project will deactivate electrical and water over wide area, minimizing risk to incomplete isolation.</p>	
<b>Sludge Treatment</b>	<p>Results from the testing program yield different outcome than expected forcing redesign and/or different technology selection.</p> <p>Mitigation: Conduct testing necessary to support Critical Decision-2/3 in a timely manner.</p>	
<b>Waste Site Remediation</b>		<p>Risks have been realized associated with radiological conditions at waste site UPR-100-K-1 requiring additional controls and increased volumes of waste to manage resulting in more time and resources than expected.</p>



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# ***PBS RL-0012 – Project Performance***

WBS & Title	Contract to Date (\$000)					BAC
	BCWS	BCWP	ACWP	SV	CV	
012.01 - Program Management	11737	11737	11078	0	659	25862
012.02 - Basin Operations & Maintenance	18783	18783	20997	0	-2214	67701
012.03 - Facility Operations	8027	8027	9036	0	-1009	42287
012.09 - Sludge & Fuel Disposition Management	3545	3545	3970	0	-425	5051
012.11 - 100K Facilities Deactivation	524	524	545	0	-21	524
012.13 - KE Basin Demolition	9220	9220	10406	0	-1186	9220
012.14 – KW Basin Decontamination & Deactivation	0	0	0	0	0	16015
012.15 0 KW Basin Demolition	0	0	0	0	0	24961
012.16 - Sludge Treatment Project	66561	62357	61663	-4204	694	267868
012.90 - Assessments - PBS RL-12	5238	5238	5934	0	-746	13276
012.98 - Transition	21768	21768	21768	0	0	21768
012.99 - PBS RL-12 G&A and Direct Distributables	18878	18878	19370	0	-492	85905
<b>TOTAL RL-0012 - SNF Stabilization and Disposal</b>	<b>164280</b>	<b>160077</b>	<b>164816</b>	<b>-4203</b>	<b>-4740</b>	<b>577437</b>



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## ***PBS RL-0012 – Project Performance - continued***

- Schedule Performance (-\$4.2M / -2.6 %)
  - The STP negative variance is due to: 1) Management decisions to hold procurement of the multi-canister overpacks (MCOs) and the Integrated Water Treatment System (IWTS)/MCO system refurbishments until engineering evaluations were conducted (-\$2.3M); 2) difficult contract negotiations with the Phase 2 technology vendors (-\$0.8M); 3) several subcontracts for the Engineered Container Retrieval, Transport, and Storage (ECRTS) were not awarded as planned (-\$0.3M); 4) Settler Tank sampling activities not starting due to the impact of the Settler Retrieval pump issues (-\$0.3M); and 5) KOP Design and Testing activities behind schedule (-\$0.5M).
- Cost Performance (-\$4.7M / -3.0%)
  - The 100K negative variance (-\$4.2M) has two main components: 1) the impact to demolition and waste shipments from the K East Basin excavation has a variance of (-\$1.2M). The effort was completed in FY2009. 2) K West Basin Operations (-\$3.0M) impacts remaining from implementation of operational controls after a potential inadequacy in the safety analysis (PISA) was declared preventing the operation of the IWTS in the K West Basin in prior months and cost to maintain aging facilities in the 100K Area.
  - The STP positive variance (+\$0.7M) is due to: 1) success of the Knockout Pot (KOP )inspection activities, which is also influencing the fact that the testing requirements are proving to be less than originally planned (+1.5M); offset by 2) negative cost variance in the Settler Tank Retrieval activities due to additional pump skids required and the Operations cost required to complete retrieval (-\$0.8M).
  - The PBS RL12 G&A and Assessments negative variance (-\$1.2M) is related to the overall cost overrun of the PBS, drawing a larger allocation of this costs to the PBS.



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# **PBS RL-0041 – Project Performance**

WBS and Title	Contract to Date (\$000)					
	BCWS	BCWP	ACWP	SV\$	CV \$	BAC
041.02.01.01 – 100K Area Planning and Integration	542	542	330	0	212	1383
041.02.02.01 – 100-K Group 1 Structures Remediation	20429	19165	17836	-1264	1330	29669
041.02.02.02 – 100-K Group 1 Remediation	22898	20501	17842	-2398	2659	40956
041.02.03.01 – 100-K Group 2 Structures Remediation	1991	1703	1081	-288	623	8947
041.02.03.02 – 100-K Group 2 Remediation	1595	4853	1125	3258	3728	27709
041.02.04.01 – 100-K Group 3 Structures Remediation	1549	645	671	-904	-26	42293
041.02.04.01 – 100-K Group 3 Remediation	7	820	0	813	820	14129
041.02.06.01 – KW Deactivation	10092	13191	9319	3099	3871	20270
041.02.07.01 – 100K Area Utilities Re-Route	21753	21162	22373	-591	-1212	21753
041.02.08.01 – 105KE Reactor Disposition - ISS	9426	8458	7847	-972	606	9494
041.02.08.02 – 105KW Reactor Disposition	0	0	19	0	-19	68342
041.02.08.03 – Site Preparation	2046	2048	1924	2	125	12355
041.02.08.04 – 105KE Obstruction Removal	2955	2785	2403	-170	383	20553
041.02.08.05 – Core Removal	5491	5232	4313	-260	918	25241
041.02.08.06 – 105KE Demolition	0	0	.0	0	0	12112
041.02.08.07 – 105 KE / KW Reactor Footprint Waste Sites	0	0	0	0	0	13227
041.02.10.01 – RL41 Transition Sub Assignments	0	0	29	0	-29	0
041.02.11.01 – 100K Project Management	8669	8432	11729	-237	-3297	67551
041.02.12.01 – 100K Bioremediation	0	0	0	0	0	4622
041.90 - PBS RL-0041 Assessments	2746	2746	3406	0	-660	27496
041.98 - WBS 041 Transition	10215	10215	9001	0	1214	13012
041.99 - PBS RL-41 PRC G & A and Direct Distributables	18725	18725	17194	0	1531	86180
Total – RL-0041 – Nuc Fac &D – RC Closure Project	141128	141217	128438	89	12779	567292



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## ***PBS RL-0041– Project Performance - continued***

- Schedule Performance (+\$0.09M /+0.1%)
  - The negative schedule variance has been recovered over the past few months. Negative schedule variance remains for some D&D work (primarily asbestos abatement due to insulator availability) and some residual utility re-route delays. This variance is offset by waste site remediation and K West Deactivation debris removal campaign acceleration.
- Cost Performance (+\$12.8M/+9.0%)
  - The positive cost performance is from waste site remediation (+\$7.2M), facility demolition (+\$1.9M), K West Deactivation debris removal campaign (+\$3.9M), G&A/direct distributables (+\$2.1M) being less than planned, K East Reactor activities (+\$2.0M) being conducted more efficiently. This variance is being offset by project management activities (-\$3.1M) where general site cleanup labor has been utilized more than planned; utility re-route (-\$1.2M) due to design changes. Additional negative cost variance is expected as all design changes are realized.



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