

**River Corridor/Remediation of 100-K Area  
Tri-Party Agreement Milestone Review  
Meeting Minutes  
June 18, 2009**

**0082574**

Approval: *J. Hedges* Date: 7/16/09  
**J. Hedges** (H0-57)  
*Ecology IAMIT Representative*

Approval: *M.S. McCormick* Date: 7/2/09  
**M.S. McCormick** (A5-11)  
*DOE IAMIT Representative*

Approval: *Craig Einar* Date: 7/20/09  
**D.R. Einar** (B1-46)  
*EPA IAMIT Representative, Chairperson*

Minutes Prepared by: *T.W. Noland* Date: 7/21/09  
**T.W. Noland** (H8-12)  
*Fluor Federal Services, Inc.*

Arnold, L.D. FH  
 Balone, S.N.\* RL  
 Bignell, D.T.\* WCH  
 Blackburn J.E.\* WCH  
 Bond, R.\* Ecology  
 Bohnee, G. NPT  
 Buelow, L.C. EPA  
 Call, P.K. RL  
 Cameron, C.E. EPA  
 Cimon, S.\* ODE  
 Crocker, J.W.\* PAC  
 Dagan, E.B.\* RL  
 Donnelly, J.W.\* WCH  
 Einar, D.R.\* EPA  
 Engelmann, R.H. CHPRC  
 Faulk, D.A. EPA  
 Franco, J.R. RL  
 French, M.S.\* RL  
 Gadbois, L.E. EPA  
 Glossbrenner, E.T.\* RL  
 Guercia, R.F. RL  
 Harris, S. CTUIR  
 Hedges, J. Ecology  
 Henry, D. OOE  
 Jim, R. Yakama  
 Johnson, W.F.\* WCH  
 Jones, M.E.\* Ecology

Knox, K.E.\* KCR  
 LaRue, D.N. WCH  
 Lobos, R.A. EPA  
 McCormick, M.S. RL  
 Morrison, R.D.\* YAH  
 Niles, K. OOE  
 Noland, T.W.\* FFS  
 Piippo, R.E.\* CHPRC  
 Post, T.C. RL  
 Price, J.B.\* Ecology  
 Rasmussen, J.E.\* YAH  
 Riffe, D.J.\* CHPRC  
 Russell, R.W. ORP  
 Sands, J.P. RL  
 Skinnarland, E.R.\* Ecology  
 Smith, D.C. RL  
 Spencer, C.G. WCH  
 Teynor, T.K. RL  
 Watson, D.J.\* CHPRC  
 Weil, S.R. RL  
 Whalen, C. Ecology  
 Wilkinson, R.E. CHPRC  
 Wintczak, T.M. WCH  
 Administrative Record  
 \*Attendees

**RECEIVED**  
 JUL 21 2009  
**EDMC**

M-16 M-34  
 M-89  
 M-93  
 M-94

**River Corridor/Remediation of 100-K Area  
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**River Corridor Closure Project - Milestones M-16/M-89/M-93/M-94**

DOE-RL distributed a handout on the quarterly summary for March 2009 through May 2009 which included the milestone status, accomplishments, planned actions, performance summary and issues.

**Performance Summary**

The project continues to maintain a positive cost and schedule variance.

**RCC Issues**

*Remaining Sites C.E.C.*

Ecology reported that the 100 Area Explanation of Significant Difference (ESD) is close to being finalized. CHPRC is incorporating Ecology's comments to date, and then the ESD will undergo legal review. EPA noted that there has been some discussion about adding a fact sheet language to the ESD. No decision has been made, and the subject will be reviewed with Ecology and EPA legal.

DOE-RL stated that a meeting is scheduled with Ecology today to discuss comment resolution for the 100 Area Remedial Design Report/Remedial Action Work Plan (RDR/RAWP). There are one or two remaining comments to resolve.

DOE-RL stated there are two issues associated with the 128-H-2, 128-H-3 and 132-H-3 sites. In 2007, an action was submitted to reject the 128-H-2 and 128-H-3 waste sites. Ecology requested additional sampling, and the sampling has been completed and comments received on the new RSVP. DOE-RL believes there is sufficient evidence to demonstrate these sites were borrow pits and were never used for burning. A waste site reclassification to reject the two sites will be presented to Ecology.

DOE-RL provided background regarding the issue with 132-H-3. The 132-H-3 effluent pump station goes down to about 35 feet, which is close to the water table. Ecology requested sampling below the foundation, but because of the way the concrete was placed in the pit and covered over, DOE-RL believes there is no way to sample below the foundation. DOE-RL met with Ecology to demonstrate there was no sludge left. The inspection on the bottom revealed no cracks or significant leaks. DOE-RL recently met with Ecology and described the three groundwater monitoring wells that are located in close proximity to 132-H-3. The contaminants of concern would be lead phosphate, and the three groundwater wells demonstrate no detection of that contaminant. DOE-RL considered core drilling beside the foundation as an option, but

this would be very expensive and would probably yield no additional data than they already have. DOE-RL will be sending Ecology and EPA a letter with a reclassification form for 132-H-3.

### **Remediation of 100-K Area - Milestones M-16, M-34, and M-93**

DOE-RL distributed a handout which included TPA milestone status, significant accomplishments, upcoming activities, project risk status and project baseline performance.

#### K West Basin / Cold Vacuum Drying Facility

ODOE inquired about the number of legacy waste drums. CHPRC indicated there were around 96 drums, but the exact number of legacy waste drums and boxes will be provided. EPA inquired about the schedule for shipping the legacy ion exchange modules (IXMs), noting that the campaign was supposed to start two months ago. CHPRC responded that there was an issue regarding approval of the tie-down analysis that is close to being resolved.

#### Sludge Treatment Project

EPA inquired about the Integrated Water Treatment System out of service issue. CHPRC responded that there were some nuclear safety issues with respect to the settler tubes that are in the process of being resolved.

#### ARRA Activities

EPA noted that it has been required to track separately the hours on projects that are funded by the American Recovery and Reinvestment Act (ARRA). DOE-RL/CHPRC responded that the designation of ARRA funds has not been finalized. DOE-RL will provide EPA the appropriate time to start tracking ARRA hours.



**June 18, 2009**

**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-34-00 Remediation of 100-K Area  
M-16-52  
M-16-57  
M-16-58  
M-93-22

11:00 am Adjourn Milestone Review

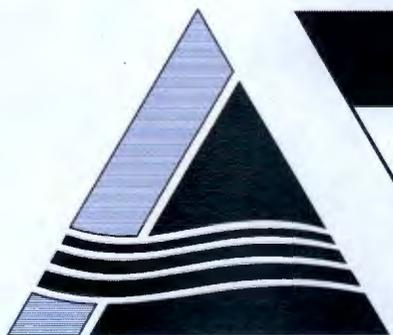
Tri-Party Agreement Major Milestone Management Review  
June 18, 2009

Name	Organization	Mail Stop	Phone
Terry Noland	FBG/TPA Integration		376-6574
Kathy Knox	Knox Court Reporting		946-5535
Jack Donnelly	WCH		372-2043
John Neaton	DOE/RL		372-0649
Steve Balme	DOE/RL		376-0236
John Price	Ecology		372-7921
Shelley Simon	ODOE		(541) 903-0853
Ron Skinnerland	Ecology		372-7924
Mandy Jones	Ecology		372-7916
Ellen Glassbromer	DOE/RL		
Dave Einar	EPA		376-3883
Mark French	DOE-RL		373-9863
Wayne Johnson	WCH		372-9664
Ellen Dagan	DOE-RL		376-3811
David J. Riffe	CHPRC		376-0149
JAMES CROCKER	DOE/PAC		372-3604
Jeb Blackburn	WCH		372-9958
RON MORRISON	YAHSGS		376-2994
Rick Bond	ECY		372-7885
Dale Bignell	WCH		372-9834
Jim Rasmussen	YAHSGS		376-0304
Bob Riffe	CHPRC		373-3285
David Watson	CHPRC		373-3250

RIVER CORRIDOR CLOSURE PROJECT

# TPA Quarterly Review

For Period: March - May 2009



*Tri-Party Agreement*

## *River Corridor Milestones:*

M-16

M-93

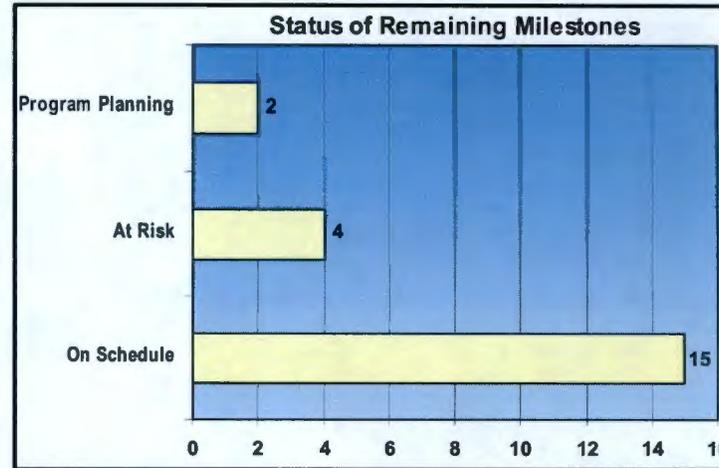
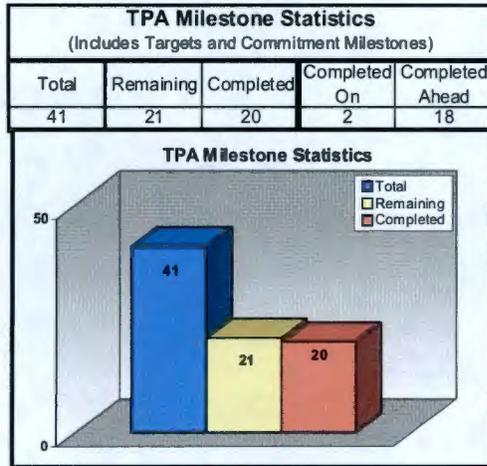
M-89

M-94

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

**June 18, 2009**

*Protecting the Columbia River*



## Quarterly Summary (March – May 2009)

- Completed one TPA milestone:
  - M-94-07 - Complete 6 of 19 High Priority 300 Area Facilities (due 12/30/09) - 3/23/09
- Approved TPA change requests:
  - No change requests were approved during this reporting quarter.
- Pending TPA change requests:
  - M-16-09-04 - Modify milestones M-16-69, M-16-74, M-16-00B to support long-term mission of PNNL.
  - M-89-09-01 - Modify milestone M-89-00 to support long-term mission of PNNL.
  - M-94-09-01 - Modify milestones M-94-00, M-94-03, M-94-08, and M-94-09 to support long-term mission of PNNL.
  - C-08-06 – Change designation of Appendix C groundwater operable units and river corridor source operable units as CERCLA past practice.

TPA Milestone Status Report

Status as of: May 31, 2009

TPA MS No.	Compliance Date	Milestone Title	Status	Comments	
<b>M-16 Milestones - Remedial Action (milestones through 12/31/2011)</b>					
1	M-16-51-T01	12/31/2009	Complete Excavation of 1 of 5 100-H Burial Grounds (118-H-1, 118-H-2, 118-H-3, 118-H-4, or 118-H-5)	Ahead	Completion of 118-H-5 is planned to meet this milestone; current forecast 9/30/09.
2	M-16-64	09/30/2010	Complete Interim Remedial Actions for the Following 300-FF-2 Waste Sites (300-259, 303-M SA, 303-M UOF, UPR-300-46, UPR-300-17, and 618-1) (see Table 2 in TPA CR M-16-01-06)	On Schedule	
3	M-16-94	11/30/2010	Complete Interim Remedial Actions at 100-B-11, 100-B-14, 100-B-16, 118-B-9, 100-C-9, 600-232, 100-B-18, 100-B-19, 100-B-20, 100-B-21, 100-B-22, 100-B-23, 100-B-24, 100-B-25, 100-B-26, 100-B-27, 100-B-28, 118-C-3:3, 126-B-2, 600-230, 100-B-17, 600-233	Ahead	Current forecast 4/30/10.
4	M-16-51-T02	12/31/2010	Complete Excavation of a Total of 3 of 5 100-H Burial Grounds (118-H-1, 118-H-2, 118-H-3, 118-H-4, or 118-H-5)	Ahead	Completion of 118-H-5, 118-H-4, and 118-H-3 are planned to meet this milestone; current forecast 3/31/10.
5	M-16-51	12/31/2011	Complete Interim Remedial Actions for 100-H Area	Ahead	Current forecast 5/31/10.
6	M-16-47	12/31/2011	Complete Interim Remedial Actions for 100-D Area	On Schedule	

TPA Milestone Status Report

Status as of: May 31, 2009

TPA MS No.	Compliance Date	Milestone Title	Status	Comments	
<b>M-89 Milestone - 324 Bldg Non-Permitted MW Units Closure</b>					
1	M-89-00	09/30/2010	Complete Closure of Non-Permitted Mixed Waste Units in 324 Building REC B-Cell, REC D-Cell, and High Level Vault	On Schedule	Proposed TPA change package M-89-09-01 pending. (See referenced milestone change package listed on page 1.)
<b>M-93 Milestone - Reactors Final Disposition</b>					
1	M-93-20	09/30/2012	Complete 105-N Reactor Interim Safe Storage (ISS)	On Schedule	ISS in progress.
<b>M-94 Milestones - 300 Area Surplus Facilities Disposition (milestones through 12/31/2011)</b>					
1	M-94-07	12/30/2009	Complete the Selected Removal and/or Remedial Actions that are Selected for 6 of the Following 19 High Priority Facilities: 305B, 306E, 306W, 307 Retention Basins, 308, 309, 321, 323, 324, 324B, 325, 326, 327, 329, 333, 340, 3706, 307 Trench, and 3720; to include the 306E, 306W, 3720, and 305B Facilities	Completed	Bldgs 305B, 306E, 333 completed under M-94-06 (March 2008). Bldgs 3706, 306W, 3720 completed under M-94-07 on March 23, 2009.
2	M-94-03	09/30/2010	Complete Disposition of Following Surplus Facilities: 303M, 332, 333, 334, 334A, 3221, 3222, 3223, 3224, 3225, 324, 324B, 327 (see TPA CH M-94-01-01, Table 1)	On Schedule	3221, 3222, 3223, 3224 demolished May 2002 by Fluor Hanford. WCH completion: 334 and 3225 (Nov 2005), 334A (Dec 2005), 333 (Feb 2008), 303M below-grade (Jan 2009). (See referenced milestone change package listed on page 1.)
3	M-94-08	12/31/2011	Complete the Selected Removal and/or Remedial Actions that are Selected for 12 of the Following 19 High Priority Facilities: 305B, 306E, 306W, 307 Retention Basins, 308, 309, 321, 323, 324, 324B, 325, 326, 327, 329, 333, 340, 3706, 307 Trench, and 3720	On Schedule	See M-94-07 status. (See referenced milestone change package listed on page 1.)

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

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

- Collected nearly 200 gallons of liquid chromium from 100-B-28.
- Initiated bulk excavation and loadout at 100-H-37 (mud dauber area).
- Initiated bid evaluation for 118-K-1 remediation.
- Completed pre-bid meeting and tour for 100-IU-2/6 remediation.
- Received Ecology approval of 116-N-1 Waste Site Reclassification Form.
- Completed potholing of 618-1 Burial Ground Segment 4 and completed excavation of adjacent sites.
- Completed sediment core sample collection activities and also initiated planning for Work Plan Phase IIb (indicator contaminant screening) for groundwater upwelling surveys using the Trident Probe technology (in support of remedial investigation of Hanford Site releases to Columbia River).
- Began work to run DOE Tribal use scenario and integrate results into the *River Corridor Baseline Risk Assessment Report, Draft B*.
- Issued Rev. 0 Orphan Sites Evaluations Reports for 100-D, 100-IU-2/6, 100-H, and 100-K Areas.
- Approved 5 waste site closure documents during this reporting period.

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

- Continued characterization and demolition planning.

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

- Completed above-grade demolition and loadout of 105N office space.
- Continued waste removal and demolition of 109N.

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

- Continued D&D of 308 Fuels Development Laboratory, 309 Plutonium Recycle Test Reactor, 335 Sodium Test Facility, and 336 High Bay Testing Facility.
- Continued below-grade demolition and loadout of 384 Power House.
- Downgraded 327 facility to “less than Hazardous Category 3” facility.
- Awarded subcontract for 327 Hot Cell disposition (dispose 11 cells in ERDF).
- Completed demolition/loadout of 4 buildings during reporting period.



Hot Tapping and Collecting Chromium Liquid at 100-B-28



327 Hot Cell Blister Removal

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

**Other:**

- Received EPA approval of ERDF Cells 7/8 for operation.
- For period of March through May 2009, disposed nearly 175,000 tons of waste in ERDF.

**American Recovery and Reinvestment Act (ARRA):**

- Prepared for 618-10 non-intrusive characterization mobilization activities.
- Started Super Cell 9 excavation with the removal of soil stockpile material.



Relocating Stockpile in Preparation of ERDF Super Cells 9/10 Construction

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

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

- Award subcontract for 118-K-1 remediation.
- Award subcontract for 100-IU-2/6 remediation.
- Issue public notice for the 100 Area Remaining Sites and 300-FF-2 ESDs.
- Support remedial investigation for Hanford Site releases to the Columbia River by: 1) completing spring river sampling campaign, 2) completing walleye collection activities, 3) initiate collection activities for sturgeon, and 4) conducting groundwater upwelling survey (Phase IIb) activities.
- Conduct briefings on the findings of the Inter-Areas Segment 1 orphan sites evaluation.

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

- Continue hazardous material removal and planning activities.

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

- Complete waste removal and above-grade demolition of 109N.

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

- Continue D&D of 308, 308A, and 309.
- Complete D&D of 315 complex, 335, and 336.
- Complete 327 hot cell wire saw cutting and core drilling.
- Load/transport/unload 327 hot cells at ERDF.
- Initiate demolition of 324 High Bay.

**Other:**

- Complete interim cover placement on ERDF Cells 3/4.

**ARRA:**

- Initiate 618-10 non-intrusive characterization mobilization activities.
- Complete excavation of the existing stockpile over Cell 9.

## PERFORMANCE SUMMARY

Contract Inception (8/25/05) through April 2009  
(\$K)

**Note: Mod 30 baseline implementation underway.**

	IPB		CUMULATIVE			Previous Quarter Comparison			
	BCWS	EAC	BCWS	BCWP	ACWP	SCHEDULE VAR (\$)		COST VAR (\$)	
						Feb	Apr	Feb	Apr
D4	634,706	479,990	221,447	272,990	167,254	49,490	51,543	101,887	105,736
Reactor ISS	115,988	116,192	47,006	33,876	29,174	-11,729	-13,130	3,674	4,702
Field Remediation	447,932	565,179	191,257	201,885	189,564	10,618	10,628	16,056	12,321
Waste Operations	262,561	283,030	99,830	120,077	134,407	20,405	20,247	-13,381	-14,330
ESFC	62,525	58,486	28,173	36,640	24,826	9,959	8,467	13,269	11,814
Mission/General Support	329,909	355,993	144,190	144,190	149,408	0	0	-5,042	-5,218
Transition	3,979	3,747	3,979	3,979	3,747	0	0	232	232
Contingency	198,685	198,685							
<b>TARGET COST TOTAL</b>	<b>2,056,285</b>	<b>2,061,302</b>	<b>735,881</b>	<b>813,637</b>	<b>698,381</b>	<b>78,742</b>	<b>77,756</b>	<b>116,695</b>	<b>115,256</b>

### Schedule Variance (PMB): \$77,756K

- Acceleration of 300 Area and 100-N Area building demolitions.
- Delayed approval/award of 105N/109N demolition/safe storage enclosure subcontract.
- Stop-work at KE/KW Reactor ISS (RL direction).
- 100-F, 100-D, 100-H, 100-B/C waste site accelerations/completions.
- 100/300 Area remediation delays due to discovery of chromium, anomalous waste, nuclear safety issues, and quantity growth.
- Design of ERDF Cells 7-10; procurement and construction of Cells 7/8.
- Acceleration of Inter-Area flight surveys in support of orphan sites evaluations.

### Cost Variance (PMB): \$115,256K

- Significant underruns experienced in 300 Area building characterization, deactivation, and demolition activities.
- Favorable unit rates experienced to-date in remediation of burial grounds at 100-F, 100-D, and 100-B/C Area, and in confirmatory sampling. Partially offset by increased costs associated with 118-K-1 readiness, slow production due to hard-to-detect radionuclides and anomalies, and interim shutdown costs; anomalies at 618-7; increased 618-10/11 design solution submittal support; and significant project support costs at all active dig sites.
- ERDF cost overruns in transport, treatment, and disposal of waste due to operational issues; overrun in purchase and leasing of additional equipment; and transportation and disposal subcontractor mobilization.
- Efficiencies realized during Inter-Areas sampling and flight surveys, and orphan sites evaluations.

## ***RCC Issues***

- Finalize 100 Area Explanation of Significant Difference.
- Complete comment resolution for 100 Area Remedial Design Report/Remedial Action Work Plan.
- Determine path forward for 128-H-2, 128-H-3, and 132-H-3. High potential for dispute regarding closeout of these waste sites.

**Hanford 100-K Remediation**  
***Tri-Party Agreement Milestone Review***  
for Applicable  
M-16, M-34, and M-93  
Milestones

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

***June 18, 2009***



***EM Environmental Management***

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# ***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-16-52	Initiate response actions for the remaining waste sites for the 100K Area including closure of the 1706KE Waste Treatment System in accordance with Section 5.5 of the Agreement Action Plan.	07/31/2009	On Schedule.
M-16-57	Initiate soil remediation at K East Basin. Initiate full scale remedial action of the 105KE Fuel Storage Basin Waste Site within one month of completing Milestone M-34-32.	10/31/2009	On Schedule.
M-16-58	Initiate soil remediation at K West Basin. Initiate full scale remedial action of the 105KW Fuel Storage Basin waste site within one month of completing Milestone M-34-00A.	04/30/2009	Renegotiated. Change packages M-34-08-03 and M-16-08-09 that will move the M-34 milestone series to the M-16 series to promote integration with 100K Area closure activities are in the post-public review and comment and approval phase.
M-34-00A	Complete removal of the K Basins and their contents. Unless otherwise noted, the term "K Basins" is used to denote both K East and K West Basins. Note: This milestone will be complete when both K East and K West Basins, spent nuclear fuel, sludge, debris, and water are removed.	03/31/2009	Renegotiated. Change packages M-34-08-03 and M-16-08-09 that will move the M-34 milestone series to the M-16 series to promote integration with 100K Area closure activities are in the post-public review and comment and approval phase.



# ***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-34-30	<p>Initiate Sludge Treatment</p> <p>This interim milestone will be complete following treatment and packaging of the first unit of sludge into a form that is certifiable for disposal offsite.</p>	12/31/2008	Renegotiated. Change packages M-34-08-03 and M-16-08-09 that will move the M-34 milestone series to the M-16 series to promote integration with 100K Area closure activities are in the post-public review and comment and approval phase.
M-34-31	<p>Complete Sludge Treatment</p> <p>This interim milestone will be complete following treatment and package of all sludge for disposal offsite.</p>	11/30/2009	Renegotiated. Change packages M-34-08-03 and M-16-08-09 that will move the M-34 milestone series to the M-16 series to promote integration with 100K Area closure activities are in the post-public review and comment and approval phase.
M-34-32	<p>Complete Removal of the K East Basin Structure</p> <p>This interim milestone will be complete when spent nuclear fuel, sludge, debris, and water are removed from the K East Basin and the upper building and concrete basin are removed.</p>	09/30/2009	On Schedule.
M-93-22	<p>Complete 105KE and 105KW Reactor Interim Safe Storage.</p>	09/30/2011	Renegotiated. Change package M-93-08-01 is in the post-public review and comment and approval phase. This change package, together with M-34-08-03 and M-16-08-09, will promote integration with 100K Area closure activities.



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# ***Significant Accomplishments and Status***

## **Overall Project**

- Tentative agreement on modifications to the Hanford Federal Facility Agreement and Consent Order Modifications Regarding Accelerated Groundwater and Soils Milestones/FY2009 Funding/Waste Management/K Basins and Other Issue Solutions is in post-public review and pending approval.

## **K East Basin**

- Completed sand filter and ion exchange column removal and disposal.
- Completed Contractor Readiness Assessment and began final phase (Phase IV) substructure demolition. Substructure demolition has been completed to a level of approximately 18 feet below grade. See photo on next page.
- Continued planning for remediation of the UPR 100-K-1 waste site under the K East Basin.
- Continued the packaging and disposal of debris generated by D4 activities.



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# ***Significant Accomplishments and Status - continued***

## **1706KE/KEL/KER**

- Submitted closure plan to Ecology for review and approval.
- Preparing for asbestos abatement/removal.
- Conducting pre-isolation circuit/wire tracing.
- Installed temporary lighting.
- Demolished 1706KER penthouse.

## **K West Basin / Cold Vacuum Drying Facility**

- Completed sampling of sludge in underwater containers and shipment to the 325 Facility for analysis by PNNL.
- Continued underwater washing, inspection, and testing of Knockout Pot (KOP) sludge as preparatory work leading to the design of a separations process that will involve the packaging and removal of KOP sludge in Multi-Canister Overpacks (MCOs) for subsequent management similar to spent nuclear fuel.
- Completed grouting legacy waste drums.
- Continued KOP disassembly equipment training at the Maintenance and Storage Facility (MASF).



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# ***Significant Accomplishments and Status - continued***

## **Sludge Treatment Project (STP)**

- RL and DOE-HQ completed the independent review of the STP Alternatives Analysis Report (HNF-39744) for decision making purposes.
- A Value Engineering work shop was conducted to evaluate and recommend a location for loading the Sludge Transport and Storage Container (STSC) either at the K West Basin or Cold Vacuum Drying Facility (CVDF).
- Conceptual design is proceeding on two concepts for loading STSCs at K West Basin.
- Completed preparation of Quality Assurance Project Plan/Sampling and Analysis Plan (QAPjP/SAP) for characterization of settler tube sludge post-transfer to Container 230.
- Received EPA approval of alternative polychlorinated biphenyl (PCB) decontamination process for KOP sludge.
- Completed Phase 3 inspections of strainers containing KOP sludge and issued report.



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# ***Significant Accomplishments and Status - continued***

## **Sludge Treatment Project (STP) - continued**

- Commenced characterization analysis at PNNL of sludge samples from K West Basin.
- Completed bench scale tests at PNNL on the conceptual design for the direct loading of a STSC.
- Completed testing at MASF of system to be used for top retrieval of container sludge that was demonstrated to be effective.
- Conducted operator training at MASF on KOP Phase IV testing equipment.
- Issued contract for the design, fabrication, and testing of concepts for direct loading of small containers underwater.
- Initiated qualification testing of the settler tube retrieval system.



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**S-001 Basket**



**S-001 Sampling**



**Sludge Treatment Retrieval  
System Mockup Tank**



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## ***Upcoming Activities (Next Three Months)***

### **K East Basin**

- Complete demolition of substructure.
- Initiate full scale soil remediation at K East Basin.

### **1706KE/KEL/KER**

- Remove RCRA treatment system
- Initiate 1706KE/KEL/KER demolition.

### **K West Basin / Cold Vacuum Drying Facility**

- Wash KOP strainer canisters in the Primary Clean Machine (PCM).
- Grout legacy waste boxes.
- Ship legacy Ion Exchange Modules (IXMs) for disposal.
- Initiate small debris removal
- Initiate MCO training run.



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## ***Upcoming Activities (Next Three Months)***

### **Sludge Treatment Project (STP)**

- Continue conceptual design of above water and under water sludge removal systems.
- Prepare for DOE-HQ Technology Readiness assessment.
- Initiate preliminary design to define mechanical and structural modifications to T Plant.
- Prepare conceptual design details for alternate storage facility.
- Prepare management assessment plan for the transfer of settler tube sludge into Container 230.
- Bring Integrated Water Treatment System (IWTS) back into service by resolving nuclear safety issues with settler tubes.
- Initiate Phase IV inspection activities on the actual KOPs.
- Prepare integrated test and development plan for KOP retrieval, sorting, and separations system.
- Prepare integrated test and development plan for MCO Basket testing for use with KOP sludge.



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# ***Upcoming Activities (Next Three Months)***

## **Sludge Treatment Project (STP) - continued**

- Perform detailed bonded water technical analysis.
- RL and EPA approval of QAPjP/SAP for settler tube sludge characterization.
- Conduct laboratory analysis on sludge samples at PNNL.
- Test sludge retrieval equipment for use with actual KOPs.
- Conduct proof of principle testing on small containers for use in under water sludge removal system.
- Perform bench scale coagulant testing.

## **ARRA Activities**

- Facility and Waste Site Remediation: Hire additional crews and initiate acceleration of facility demolition and waste site remediation.
- Reactor Removal: Initiate 105KE Reactor core removal project definition and preliminary design of removal tools / equipment.
- 100K Area Utility Reconfiguration / Minimization: Select A/E subcontractor for design of water system and electrical utility reconfiguration in the 100K Area.
- K West Basin Deactivation: Hire additional crews and initiate acceleration of debris removal and deactivation activities.



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# ***KBC Project Risk Status***

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

<b>Sub-project</b>	<b>Major Remaining Risks with "Possible" or "Likely" Likelihood of Occurrence and Risk Mitigation</b>	<b>Emerging Risks and Risk Mitigation</b>
<b>K East Basin</b>	1. Higher than planned contamination / Radiation is encountered during basin removal.	1. The basin was upgraded to HC-3 with additional hazards controls put in place. A Contractor Readiness Assessment was completed, verifying controls and training are in place. Proceeding as planned with no out of bound conditions encountered.
<b>K West Basin</b>	1. Future fuel and sludge handling will have potential to deposit additional sludge on K West Basin floor. Risk Mitigation: Design sludge handling system with provisions to minimize depositing additional sludge on basin floor.	1. Washing/sorting of the material contained in the Primary Processing Table/Primary Cleaning Machine (PPT/PCM) canisters which is a preparatory activity to Phase 3 inspection of KOP material is being impacted by flow instabilities caused by maintenance and repair efforts associated with the Integrated Water Treatment System (IWTS) Settler Tubes.
<b>Facility D4</b>	1. Drawing unavailability / errors or undocumented facility configuration modifications cause work stoppage during facility isolation.	1. Moderate impacts at 1706 isolation activities. 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.
<b>Sludge Treatment</b>	1. Results from the testing program yield different outcome than expected forcing redesign and/or different technology selection. Risk Mitigation: Conduct testing necessary to support Critical Decision-1 in a timely manner.	1. Phase 4 KOP inspection activities which require operation of the IWTS have been suspended until resolution criticality issues with the Settler Tubes associated with the discovery of non-conservative assumptions. Revise nuclear safety documentation for RL approval.

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

WBS & Title	Fiscal Year to Date					BAC
	BCWS	BCWP	ACWP	SV	CV	
012.01 - Program Management	5,562	5,726	5,111	164	614	8,022
012.02 - Basins Operations & Maintenance	7,120	7,120	7,713	0	-593	9,150
012.03 - Facility Operations	2,800	2,760	3,016	-40	-256	4,462
012.09 - Sludge and Fuel Disposition Management	1,212	1,212	977	0	235	1,866
012.11 - 100K Facilities Deactivation	242	271	188	29	83	524
012.13 - KE Basin Demolition	4,968	5,946	5,801	979	146	7,262
012.16 - Sludge Treatment Project	17,175	19,231	17,739	2,055	1,491	28,795
012.90 - Assessments - PBS RL-12	1,938	1,952	2,214	14	-262	2,972
012.90 - Transition	21,768	21,768	21,768	0	0	21,768
012.99 - PBS RL-12 G&A and Direct Distributables	7,127	7,127	6,985	0	142	10,690
<b>Total RL-0012 - SNF Stabilization &amp; Disposal</b>	<b>69,912</b>	<b>73,113</b>	<b>71,512</b>	<b>3,201</b>	<b>1,601</b>	<b>95,511</b>



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

- Schedule Performance (+\$3.2M / 4.6 %)
  - The 100K Area Project SV (+\$1.1M) is due to favorable progress on the Phase IV substructure demolition and procurement of capital equipment.
  - The STP SV (+\$2.0M) is due to early completion of the Engineered Containers (EC) sampling campaign.
- Cost Performance (+\$1.6M / 2.2%)
  - The favorable CV is primarily due to STP efficiencies during the EC sampling campaign, under runs in test facility lease costs (late turnover), and test materials costing less than planned.



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

WBS & Title	Fiscal Year to Date					BAC
	BCWS	BCWP	ACWP	SV	CV	
041.02.01.01 - 100K Area Planning & Integration	431	443	259	12	184	1,072
041.02.02.01 - 100-K Group 1 Structures Remediation	958	670	1,464	-288	-794	6,462
041.02.02.02 - 100-K Group 1 Remediation	489	480	330	-9	150	2,769
041.02.03.01 - 100-K Group 2 Structures Remediation	743	743	182	0	561	743
041.02.03.02 - 100-K Group 2 Remediation	0	0	0	0	0	0
041.02.06.01 - KW Deactivation	0	0	9	0	-9	2,490
041.02.07.01 - 100K Area Utilities Reroute	620	0	28	-620	-28	3,800
041.02.08.01 - 105KE Reactor Disposition	353	212	110	-141	102	3,594
041.02.10.01 - RL41 Transition Subc Assignments	0	0	28	0	-28	0
041.02.11.01 - 100K Project Management	197	300	92	103	207	4,151
041.90 - PBS RL-0041 Assessments, MSC Services to PRC	78	78	48	0	30	294
041.98 - WBS 041 Ramp Up and Transition	1,502	1,502	536	0	967	6,901
041.99 - PBS RL-41 PRC G&A and Direct Distributables	1,493	1,493	1,451	0	42	5,636
<b>Total RL-0041 - Nuc Fac D&amp;D - RC Closure Project</b>	<b>6,865</b>	<b>5,921</b>	<b>4,537</b>	<b>-944</b>	<b>1,384</b>	<b>37,912</b>



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

- Schedule Performance (-\$0.9M / -13.7%)
  - The negative variance is due to scope associated with the utility re-route being inadvertently front-end loaded. This will be corrected with implementation of the 10 year PMB.
- Cost Performance (+\$1.4M / 23.4%)
  - Favorable variance is due to efficiencies/delay in cost receipts for American Recovery and Reinvestment Act (ARRA) ramp up/training, and efficiencies in Project Management/D4 activities.



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