

**River Corridor/Remediation of 100-K Area  
Tri-Party Agreement Milestone Review  
Meeting Minutes  
March 18, 2010**

Approval:

*J. Hedges*  
**J. Hedges***Ecology IAMIT Representative*

Date:

*4/22/2010*

Approval:

*M.S. McCormick*  
**M.S. McCormick***DOE IAMIT Representative*

Date:

*4/22/2010*

Approval:

*Larry Faulk*  
**D.A. Faulk***EPA IAMIT Representative*

Date:

*4-22-2010*

Minutes Prepared by:

*T.W. Noland*  
**T.W. Noland***Mission Support Alliance, LLC*

Date:

*4/22/2010*

Balone, S.N.	RL	Knox, K.E.*	KCR
Bignell, D.T.	WCH	LaRue, D.N.	WCH
Black, D.G.*	CHPRC	Lobos, R.A.	EPA
Blackburn J.E.*	WCH	McCormick, M.S.	RL
Bond, R.	Ecology	Menard, N.M.*	Ecology
Bohnee, G.	NPT	Morrison, R.D.	MSA
Buelow, L.C.	EPA	Neath, J.P.*	RL
Bryson, D.C.*	RL	Niles, K.	OOE
Call, P.K.	RL	Noland, T.W.*	MSA
Cameron, C.E.	EPA	Piippo, R.E.*	MSA
Cimon, S.*	ODE	Potter, R.D.	MSA
Dagan, E.B.	RL	Price, J.B.	Ecology
Donnelly, J.W.*	WCH	Riffe, D.J.	CHPRC
Einan, D.R.	EPA	Russell, R.W.	ORP
Faulk, D.A.	EPA	Sands, J.P.	RL
Franco, J.R.	RL	Skinnarland, E.R.	Ecology
French, M.S.	RL	Smith, D.C.	RL
Gadbois, L.E.*	EPA	Teynor, T.K.*	RL
Glossbrenner, E.T.	RL	Vanni, J.*	Yakama
Guercia, R.F.	RL	Watson, D.J.*	CHPRC
Guzzetti, C.J.	EPA	Whalen, C.	Ecology
Harris, S.	CTUIR	Williams, J.D.	CHPRC
Hedges, J.*	Ecology	Wintczak, T.M.	WCH
Henry, D.	OOE	Wise, B.K.	MSA
Jim, R.	Yakama	Administrative Record	
Johnson, W.F.*	WCH	*Attendees	
Jones, M.E.	Ecology		

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**River Corridor/Remediation of 100-K Area  
Tri-Party Agreement Milestone Review  
Meeting Minutes  
March 18, 2010**

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

DOE distributed a handout on the quarterly summary for the period December 2009 through February 2010, the milestone status, significant accomplishments, significant actions planned, performance summary, and issues. All of the milestones are currently reflected as on schedule.

Quarterly Summary

DOE stated that the 118-H-5 burial ground documentation has been completed and signed, and the remaining paperwork for Milestone M-16-51-TO1 is being processed. DOE noted that TPA Change Request M-16-09-06, which proposes removal of 100-D-31 Segment 12 pipeline, has been discussed with Ecology and is in process for final approval.

Significant Accomplishments - For Last 3 Months

M-16 - Remedial Action/Risk Assessment - EPA noted that the design process has been initiated for 100-C-7, and inquired about the digging going on at C-7. WCH stated that sampling for the process borderline is being done. DOE added that Segment 1 and the 100-B Area were included in the goal to reduce the footprint in 2010, but the 100-B Area is being delayed and will correspond with completing C-7. Segment 1 will still be relocated as planned. EPA noted that the closeout data evaluation for 618-1 burial ground has been received as acceptable.

M-89 - 324 Bldg Non-Permitted MW Units Closure - Yakama Nation (YN) asked about the 324 B-Cell decontamination and how it is being coordinated with the RCRA permitted portions. Ecology provided a point of contact at Ecology for obtaining the details of the coordination efforts. DOE offered a follow-up meeting with the project managers, which YN accepted.

Performance Summary

WCH pointed out that the 80,863 schedule variance and 162,976 cost variance should be noted as 80.8 million and 162.9 million dollars. The ARRA performance summary reflects a schedule variance of 10.3 million dollars and a cost variance of 1.4 million dollars.

RCC Issues

RESRAD - DOE stated that a draft response letter has been sent to Ecology and EPA regarding the RESRAD issue. The letter states DOE will need to continue utilization of the RESRAD

modeling program as it's currently defined in the remedial design report (RDR) for continued interim closure for the interim closure record of decision (ROD). A series of workshops with DOE, Ecology and EPA will be held to establish the history of the RESRAD and how the modeling program was incorporated into the interim ROD, and then to establish a path forward to the final ROD.

100-D Waste Site Closeout Documents - DOE stated that there are a number of 100-D closeout documents that Ecology is providing feedback regarding the need to review for the characteristics of some sites at 100-D that may require actions outside of the interim ROD. Ecology stated that a meeting will be scheduled to discuss the issue, and if it can't be resolved it will be elevated to the IAMIT for resolution. DOE indicated that while this issue is being resolved, backfilling of the 100-D waste sites is being held up and the project is close to being impacted. Ecology stated that there are three waste sites under question, and two waste sites that do not have the completed closeout documentation. DOE inquired about the number of waste sites that have closeout documentation that Ecology is in the process of responding to. Ecology indicated that it has requested a list of sites, and will be able to provide an answer once the list has been received.

It was noted the milestone for this action is M-16-47, with a completion date of 12/30/2011. DOE stated that efficiencies in the contract are incentivized, and DOE does not want to hold up the contractor from completing its work. WCH noted that there are about 140 acres that will need re-vegetation after backfilling, and there is a limited window for planting. YN expressed a concern about the source of the backfill and the soil to be used for re-vegetation. YN recommended the use of ERDF clean soil for backfill, and indicated there would be further discussions if soil from barrow area C is used.

Oregon Department of Energy (ODE) expressed the concern regarding backfilling all the waste sites to interim ROD standards before a determination is made what the requirements will be in the final ROD, with the possibility that the final ROD requirements will be more stringent. Ecology concurred with ODE's concern, and stated that it would be less efficient to backfill the sites and then have to go back in and dig them up than to wait until the issue is resolved. DOE stated that agreements were made and a bias for action that the work would be done to the interim ROD. Ecology responded that the discussion should be raised regarding questions on the three waste sites, and if there is a concern, then determine if it could be addressed under the interim ROD. If not, then it would have to be discussed at the final ROD stage. DOE stated that it has a commitment to the final ROD, and it will go through the CERCLA process to evaluate the risk to human health and the environment and determine if additional work is needed. EPA cited MTCA (version 2001), Section 173-340-702(12)(c), which acknowledges that new MTCA cleanup numbers will be different, and some numbers can be more stringent. Further, a risk evaluation process is used to determine if the prior cleanup done to the old standards is still considered protective of human health and the environment and therefore it still complies with MTCA.

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

A summary of the TPA milestone status, 100K project risk status and PBS RL-12 and PBS RL-41 project performance was provided.

### M-93-22, Complete 105KE Reactor Interim Safe Storage In Accordance with the Remedial Design/Remedial Action Work Plan

DOE is going forward with interim safe storage (ISS) of 105KE reactor by removing hazardous materials, i.e., bricks, asbestos, draining fluids. DOE is also still pursuing taking the core out. The comparison of the core material with the waste acceptance criteria for ERDF has already been done, and the core would go into ERDF. The radionuclide in the graphite, carbon 14, is the main contaminant of concern in the core. Since it is contained in a solid matrix, it is considered acceptable for disposal at ERDF. DOE noted that EPA has been closely involved in the decision-making process. The reactor has been defueled, but the possibility of finding fuel will be carried as a risk. WCH is developing a dry fuel storage cask.

Critical Decision 0 (CD-0) for reactor core removal is in Headquarters review, and CD-1/2 will be submitted for review by early September 2010. Plans are in place to sample the core in mid-April 2010. The intent is to get the core (including reactor) declared less than a hazard category 3, which relates to the impact on the workers, near term. The stringent requirements for nuclear safety and criticality safety will still be maintained, but it will allow a much more efficient approach to work. The facility hazard categories will be identified in the work plan.

A push sample will be taken in later summer 2010 in the soil between the area between the pool wall and the reactor substructure wall. Those samples will be used as justification for taking the K East reactor out because of the contamination, mainly cesium and strontium.

### 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: (see handout)

DOE has in place a two-phased approach for dispositioning the sludge, and the two phases will be done in parallel. The first phase is to move the sludge for interim storage at T Plant, and preparations are being made to move the sludge off the river. The second phase, which has been initiated, is developing new treatment and packaging technologies. The contractor has selected four technologies of interest for treatment, and they are going through alternatives analysis. Simulants are not being used at this time, and PNNL's 324 hot cell will be used to test sludge that was just extracted from K East/K West. PNNL is working on improving the simulant recipe. The knockout pot material has been retrieved, and six of the ten settler tubes material has been retrieved.

DOE stated that through assistance with EPA, the actions under this milestone will be separated into five remedial action work plans (RAWPs) in an effort to gain efficiency and have more focused discussions and review. The RAWPs are due to EPA for review by March 31, 2011.

Project Performance

PBS RL-12, which covers sludge work and continued operations of K West basin, is slightly behind schedule with a slight negative cost variance. Overtime work is being implemented to recover cost and schedule, and it is anticipated cost and schedule will be recovered by the end of the year. PBS RL-41, which is inside the perimeter fence and covers deactivation, decommissioning and remediation, is slightly ahead of schedule with a positive cost variance.



**March 18, 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: Larry Gadbois

**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-16-57  
M-16-140  
M-16-143  
M-16-155  
M-93-22

11:00 am Adjourn Milestone Review



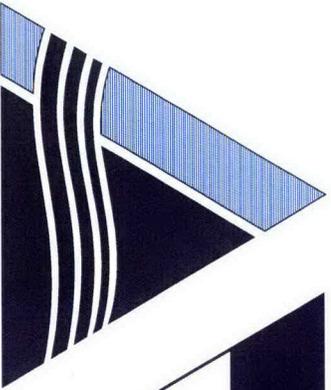
# TPA Quarterly Review

For Period: December 2009 - February 2010



## River Corridor Milestones:

- |      |      |
|------|------|
| M-16 | M-93 |
| M-89 | M-94 |



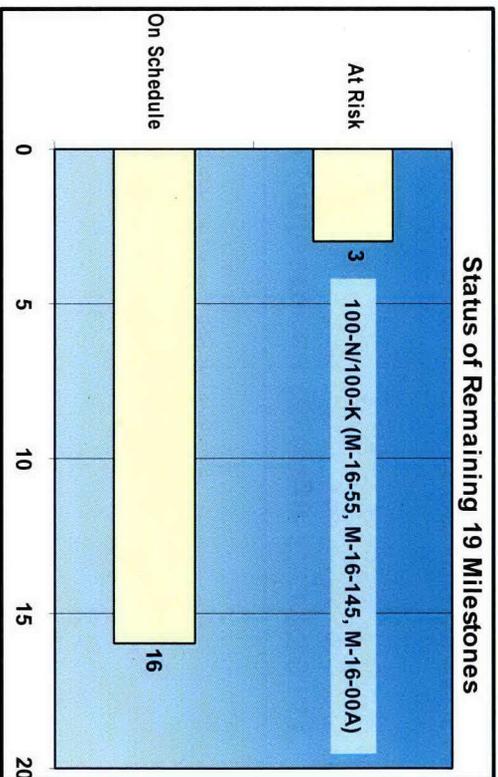
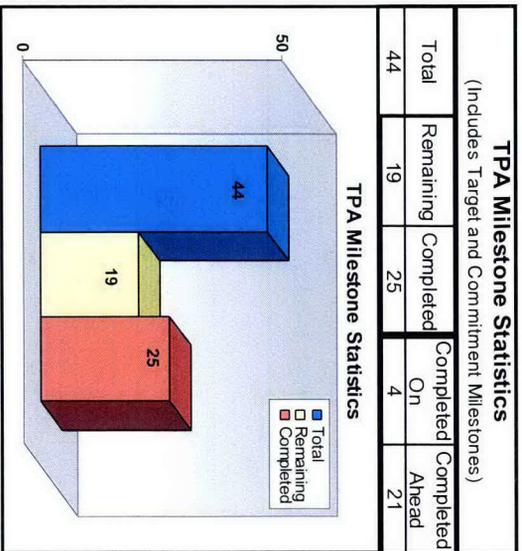
Tri-Party Agreement

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

**March 18, 2010**

# RIVER CORRIDOR CLOSURE PROJECT

For Period: December 2009 – February 2010



## Quarterly Summary (December 2009 – February 2010)

- Completed one TPA milestone:
  - M-16-62 – Complete Interim Remedial Actions, Except Revegetation, for the Following 300-FF-2 Waste Sites: 300-8, 300-18, 300-VTS, 600-47, 600-259, 618-2, 618-3, 618-5, 618-7, 618-8, and 618-13 (due 12/31/2012) - 2/25/10
- No TPA change requests were approved during the past quarter. TPA change request M-16-09-06 (100-D Area) is ready for approval.

**RIVER CORRIDOR CLOSURE PROJECT**

For Period: December 2009 – February 2010

TPA MS No.	Compliance Date	Title	Status	Comments
<b>M-16 Milestones - Remedial Action (milestones through 12/31/2011)</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	Completion expected summer 2010.
M-16-94	11/30/10	Complete Interim RA at 22 100-B/C Area Waste Sites	On schedule	Revegetation is complete. Closure documentation in progress.
M-16-51-T02	12/31/10	Complete Excavation of 3 of 5 100-H Burial Grounds	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	On schedule	TPA CR M-16-09-06 proposes removal of 100-D-31 Segment 12.
<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	On schedule	
<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:

- Completed 100-B/C backfill and revegetation campaign.
- Initiated design process for 100-C-7.
- Completed 100-H demobilization; initiated suspect SNF characterization.
- Completed verification sampling of 618-1 Burial Ground; evaluating data.
- Began 100-N bioremediation respirometry test.
- Continued excavation and loadout of 300 Area building slabs/waste sites.
- Completed Phase IIb (indicator contaminant screening) fieldwork for groundwater upwelling survey using the Trident Probe technology (in support of remedial investigation of Hanford Site releases to Columbia River). Phase III characterization activities (sampling) are ongoing.
- Issued 100-N Area Orphan Sites Evaluation Report, Rev. 0.
- Held meeting with MSA and PRC to discuss long-term stewardship program plan development; agreed to establish multi-project team.
- Approved 15 waste site closure documents during this reporting period.
- ARRA – Continued 618-10 vertical pipe unit (VPU) radiological characterization activities; initiated trench VPU radiological characterization.
- ARRA – Awarded contract for intrusive characterization of 618-10 trenches.

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

- Continued 324 B-Cell decontamination.
- Awarded subcontract for 324 hot cell disposition.
- Continued characterization and demolition planning.

### M-93 – Reactors Final Disposition:

- Began 109N safe storage enclosure (SSE); continued 105N SSE design.
- Continued 105N east side above-grade demolition and loadout.

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

- Completed 327 canyon stabilization.
- Completed installation of 327 temporary wall cover and continued gantry installation to facilitate removing hot cells.
- Continued above-grade demolition of 338 Maintenance Building.



Deployment of Power-Grab Sediment Sampler Unit in Support of Columbia River Remedial Investigation



N-Reactor Demolition

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

### ERDF:

- Began truck-and-pup transportation for 100-D and 100-IU remediation.
- For period of December 2009 through February 2010, disposed more than 283,000 tons of waste in ERDF.
- ARRA – Completed Super Cell 9 excavation (~ 1.9M cubic yards).
- ARRA – Started excavation of Super Cell 10.
- ARRA – Received 150 new waste containers, 10 disposal shuttle trucks, and 1 water truck.

## Significant Actions Planned – For Next 3 Months:

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

- Complete verification sampling of 100-H waste sites.
- Award 100-N remaining sites remediation subcontract.
- Support remedial investigation for Hanford Site releases to the Columbia River by: 1) completing Phase III groundwater upwelling characterization activities, and 2) completing walleye collection activities.
- Deliver Draft B of the RCBRA report ecological and human health volumes to RLregulators for review.
- ARRA – Conduct 618-10 VPU soil sampling project startup review activities.

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

- Continue hot cell stabilization activities.
- Continue deactivation/decommissioning of 324 support areas.
- Begin demolition of 324 High Bay.



Truck-and-Pup and Super Dump ERDF Disposal Operations

### M-93 – Reactors Final Disposition:

- Begin 105N excavation and below-grade demolition.
- Complete 109N SSE joistwall/roof panel fabrications.

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

- Remove 327 hot cells from building and stage for packaging.
- Continue shipping gloveboxes from 308 laboratory to Perma-Fix.
- Accept transfer of 307 Basins, 310 TEDF, and 340 facilities for disposition.

### ERDF:

- ARRA – Procure, produce, and place admix for Super Cell 9.
- ARRA – Issue notice to proceed for design/build for container, equipment, and truck maintenance facilities.

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

	IPB		CUMULATIVE		Previous Quarter Comparison				
	BCWS	EAC	BCWS	BCWP	ACWP	SCHEDULE VAR (\$)		COST VAR (\$)	
						Nov	Feb	Nov	Feb
D4	659,672	532,658	273,617	326,811	213,189	61,666	53,194	115,167	113,622
Reactor ISS	119,178	113,064	64,328	47,225	43,616	-14,272	-17,103	4,926	3,609
Field Remediation	555,616	557,012	275,787	284,842	243,711	17,911	9,055	28,295	41,131
Waste Operations	390,788	394,453	153,193	187,254	183,677	30,429	34,061	-2,621	3,577
ESFC	52,293	54,570	34,901	36,556	32,553	185	1,655	2,046	4,003
Mission/General Support	328,974	343,400	179,148	179,148	182,347	0	0	-6,019	-3,199
Transition	3,979	3,747	3,979	3,979	3,747	0	0	232	232
Contingency	170,181	170,181							
<b>TARGET COST TOTAL</b>	<b>2,280,681</b>	<b>2,169,086</b>	<b>984,953</b>	<b>1,065,816</b>	<b>902,840</b>	<b>95,918</b>	<b>80,863</b>	<b>142,025</b>	<b>162,976</b>

**Schedule Variance (PMB): \$80,863K**

- Acceleration of 300 Area and 100-N Area building demolitions.
- Stop-work at KE/KW Reactor ISS (RL direction).
- 100-D/H burial grounds accelerations and early completion of 100-B-14 and 100-C-9; partially offset by delays at 100-K burial grounds, 300 Area waste sites, 100-U-2/6, and 618-10/11 Burial Grounds.
- Transportation, treatment, and disposal support to accelerated work in FR and D4 Projects.

**Cost Variance (PMB): \$162,976K**

- Significant underruns experienced in 300 Area building characterization, deactivation, and demolition activities.
- 100-D/F/H and 300 Area burial grounds remediation underruns. Partially offset by increased costs for 118-K-1 FY06-08 remediation/shutdown costs and FY09-10 restart costs, and by significant project support costs at all active dig sites.

**ARRA - Performance Summary**  
 April 2009 through February 2010  
 (\$K)

	IPB		CUMULATIVE				Previous Quarter Comparison			
	BCWS	EAC	BCWS	BCWP	ACWP	SCHEDULE VAR (\$)		COST VAR (\$)		
						Nov	Feb	Nov	Feb	
RL0041.R1.2 & 3 - ERDF	91,918	91,918	20,362	28,008	25,388	5,348	7,646	-1,106	2,620	
RL0041.R1.2 - M/G Support	1,704	1,704	1,704	1,704	1,619	0	0	46	85	
RL0041.R1.3 - Acc Rem	1915	1915	533	980	629		447		351	
RL0041.R2 - 618-10	16,552	16,552	5,643	7,916	9,572	463	2,273	-1,576	-1,656	
Contingency	4,705	4,705								
<b>TARGET COST TOTAL</b>	<b>116,794</b>	<b>116,794</b>	<b>28,243</b>	<b>38,608</b>	<b>37,207</b>	<b>5,811</b>	<b>10,365</b>	<b>-2,636</b>	<b>1,400</b>	

**Schedule Variance (PMB): \$10,365K**

- ERDF equipment purchases and various projects are running ahead of schedule.
- Cone penetrometer installation completed ahead of schedule, masking delays in the characterization.

**Cost Variance (PMB): \$1,400K**

- ERDF cell construction and disposal upgrades are realizing efficiencies.
- 618-10 water line design is expending additional costs evaluating alternatives.

## ***RCC Issues***

- Next steps and path forward regarding continued use of RESRAD for chemicals.
- Obtaining approval of 100-D waste site closeout documents.

# **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***

***March 18, 2010***



***E*** ***M*** ***Environmental Management***

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

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# TPA Milestone Status

## Remaining Milestones Due Fiscal Year 2009-2010

Number	Milestone Title	Due Date	Status / Comments
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>
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 REMEDIAL DESIGN/REMEDIATION ACTION WORK PLAN.	07/31/2014	On Schedule Current planning is focused on reactor core removal vs. interim safe storage



**EM** Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

# M-016-140 Status

- Develop Integrated RD/RAWP Schedule - ECD: March 31, 2010
- Submit Draft A RD/RA Work Plans for M-016-140 Milestone - Due: March 31, 2011
- Individual RD/RAWPs are discriminated by color below.

Milestone Item	Existing RD/RA Work Plan	Recommended RD/RA Work Plan (numbers correspond to section on integrated schedule)	Decision Document
Complete Removal of the K West Basin		1a) Develop new RD/RAWP for the K West Basin Deactivation. Use the K East Deactivation RDR/RAWP as a model to start with. 1b) Develop new RD/RAWP for K West Basin Removal and Demolition	Interim Action ROD for 100 Areas Remaining Sites, EPA/ROD/R10-99/039-ESD, Feb. 2004. ROD for K Basin Interim Remedial Action
Complete Removal of All Sludge (Includes Container, Settler Tank Sludge) From K West Basin Except Knockout Pot (KOP) Contents		2) Develop new RD/RAWP for K West Basin Sludge removal (excludes KOP contents that will be managed as spent nuclear fuel [SNE])	ROD for K Basin Interim Remedial Action
Complete Removal of KOP Contents	The current "RDR/RAWP for K Basins Interim Remedial Action" DOE/RL-99-89 RI, 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.	3) As the KOP contents will be removed as SNF, changes in the existing design may be processed as a TPA Change Notice to the existing RDR versus revising the current document.	ROD and ROD Amendment for K Basin Interim Remedial Action
Complete Treatment and Packaging of First Container of TRU Sludge Waste Certifiable for Disposal at WIPP	DOE/RL-2006-06 RO "RD/RAWP for K Basins Interim Remedial Action, Sludge Treatment and Interim Storage" is obsolete as it is based on an approach that was not implemented.	4) Revise DOE/RL-2006-06 RO or develop new RD/RAWP for K Basins Sludge Treatment	ROD and ROD amendment for K Basin Interim Remedial Action
Complete Treatment and Packaging of Sludge for Disposal at WIPP	DOE/RL-2006-06 RO "RD/RAWP for K Basins Interim Remedial Action, Sludge Treatment and Interim Storage" is obsolete as it is based on an approach that was not implemented.	4) Revise DOE/RL-2006-06 RO or develop new RD/RAWP for K Basins Sludge Treatment	ROD and ROD amendment for K Basin Interim Remedial Action



**EM Environmental Management**

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# M-016-140 Status - continued

Milestone Item	Existing RD/RA Work Plan	Recommended RD/RA Work Plan (numbers correspond to section on integrated schedule)	Decision Document
Begin 105KW Reactor Interim Safe Storage	DOE/RL-2005-26 R0 "RAWP for KE/KW Reactor Facilities and Ancillary Facilities"	5) DOE/RL-2005-26 R0 may require revision.	EE/CA 2005-86 and 100-K Action Memo
Complete 105KW Reactor Interim Safe Storage	DOE/RL-2005-26 R0 "RAWP for KE/KW Reactor Facilities and Ancillary Facilities"	5) DOE/RL-2005-26 R0 may require revision.	EE/CA 2005-86 and 100K Action Memo
Initiate Soil Remediation Under K West Basin	DOE/RL-96-17 R6 "RDR/RAWP for the 100 Area"	6) DOE/RL-96-17 R6 may not require any further updates. TPA-CN-320 defines completion dates for 100K Area (inside the fence) soil wastes sites.	Interim Action ROD for 100 Areas Remaining Sites, EPA/ROD/R10-99/039-ESD, Feb. 2004
Complete All Interim Response Actions at the 100K Area		7) New Integrated Response Action Work Plan that includes the integrated schedule for all response actions to complete this milestone.	ROD for 100A Burial Grounds, EPA/ROD/R10-00/121, and ROD for Liquid Waste Sites. Also applicable to RODs/Decision Documents identified above.



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# 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>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>M0048 Construction Lunch Trailer</p> <p>M0060 Conference Trailer</p> <p>M0872 Leased trailer</p> <p>M0873 Leased trailer</p> <p>M0969 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>M0101 Administration</p> <p>M0102 Administration</p> <p>M0214 Administration</p> <p>M0382 Office</p> <p>M0401 Administration</p> <p>M0402 Administration</p> <p>M0442 Classroom/Office</p> <p>M0506 CVDF Lunch Room</p> <p>M0507 CVDF Conference Room</p> <p>M0907 Administration</p> <p>M0917 CVDF Administration</p> <p>M0928 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>M0054 Construction Lunch Room</p> <p>M0500 Administration</p> <p>M0236 KW Ops/HPT Change</p> <p>M0237 KW Construction Forces</p> <p>M0323 CVD Change Trailer</p> <p>M0955 Conference Room</p>

Field Work In Progress

Field Work Complete

Closure actions and documentation complete



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

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

Field Work In Progress

Field Work Complete

Closure actions and documentation complete



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

- The following CERCLA documentation was approved:
  - Waste Control Plan for 105KE Reactor Core Sampling
  - TPA Change Notice against DOE/RL-2005-33, Rev. 1 *100-K Area Interim Safe Storage and D4 Project Waste Sampling and Analysis Plan*, to obtain EPA approval of changes associated with reactor core characterization
- The following has been prepared and is pending EPA approval:
  - Radiological Air Monitoring Plan for 105KE Reactor Core Characterization
- Plan is to remove obstructions inside the K East Reactor Building that are in the way of sampling and initiate sampling in the next quarter



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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 (\$ times 1000)						BAC
	BCWS	BCWP	ACWP	SV	CV		
012.01 - Program Management	9625	9625	8801	0	824	25862	
012.02 - Basin Operations & Maintenance	13357	13357	15415	0	-2058	64700	
012.03 - Facility Operations	6023	6023	6676	0	-653	42287	
012.09 - Sludge & Fuel Disposition Management	2603	2603	2640	0	-37	5051	
012.11 - 100K Facilities Deactivation	524	524	544	0	-20	524	
012.13 - KE Basin Demolition	9220	9220	10403	0	-1183	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	43553	42513	40773	-1040	1740	267872	
012.90 - Assessments - PBS RL-12	3951	3951	4243	0	-292	13276	
012.98 - Transition	21768	21768	21768	0	0	21768	
012.99 - PBS RL-12 G&A and Direct Distributables	14619	14619	14187	0	432	85388	
TOTAL RL-0012 - SNF Stabilization and Disposal	125243	124203	125450	-1040	-1247	576924	



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

- Schedule Performance (-\$1.0M / -0.8 %)
  - The STP negative variance is due to: 1) Settler Tank Retrieval design and installation activities completing early, and now the BCWS is catching up, along with a change in plans on how to train operations personnel on the sampling has caused a slip in that activity (-\$0.2M); 2) Maintenance and Storage Facility (MASF) pool subcontractor had difficulty removing the slabs and fell behind schedule (-\$0.1M); 3) several subcontractors for the Engineered Container Retrieval, Transport, and Storage (ECRTS) were not awarded as planned (-\$0.4M); and 4) project decisions to not use nitrite in the KOP disposition and to evaluate all system upgrades for MCO processing have slipped these activities (-\$0.3M).
- Cost Performance (-\$1.3M / -1.0%)
  - The 100K negative variance (-\$3.0M) has two main components: 1) the impact to demolition and waste shipments from the K East Basin excavation has a variance of (-\$1.0M). The effort was completed in FY2009. 2) K West Basin Operations (-\$2.0M) impacts remaining from implementation of operational controls after a potential inadequacy in the safety analysis (PISA) was declared preventing the operation of the Integrated Water Treatment System (IWTS) in the K West Basin in prior months and cost to maintain aging facilities in the 100K Area.
  - The STP positive variance (+\$1.7M) is due to: 1) efficiencies in testing support and materials for the Engineered Container/Settler Tube (EC/ST) Retrieval, Transport, and Storage systems and MASF facility costs have been less than planned to support a TRL-3 assessment ; 2) early completion of the KOP 4 Phased In-Basin inspections required less 100K operations support.



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# PBS RL-0041 -- Project Performance

	BCWS	BCWP	ACWP	SV \$	CV \$	SV %	CV %	BAC
041.02.01.01 -100K Area Planning & Integration	507	502	292	-4	211	0	0	1,992
041.02.02.01 -100-K Group 1 Structures Remediation	16,670	16,432	8,605	-238	7,827	0	0	29,962
041.02.02.02 -100-K Group 1 Remediation	5,904	6,964	6,649	1,061	316	0	0	34,255
041.02.03.01 -100-K Group 2 Structures Remediation	828	1,154	686	326	468	0	0	8,947
041.02.03.02 -100-K Group 2 Remediation	101	201	93	100	108	1	1	26,870
041.02.04.01 -100-K Group 3 Structures Remediation	0	0	12	0	-12	0	0	42,293
041.02.04.02 -100-K Group 3 Remediation	0	0	0	0	0	-1	0	14,806
041.02.06.01 -KW Deactivation	5,082	6,012	2,850	931	3,162	0	1	20,270
041.02.07.01 -100K Area Utilities Reroute	4,588	3,333	1,518	-1,255	1,815	0	1	21,758
041.02.08.01 -105KE Reactor Disposition -JSS	5,177	5,156	7,478	-21	-2,322	0	0	17,597
041.02.08.02 -105KW Reactor Disposition	0	0	0	0	0	0	0	68,342
041.02.08.03 -Site Preparation	2,036	1,900	30	-136	1,870	0	1	12,247
041.02.08.04 -105KE Obstruction Removal	1,845	1,849	18	4	1,831	0	1	16,114
041.02.08.05 -Core Removal	2,686	2,569	0	-117	2,569	0	1	25,085
041.02.08.06 -105KE Demolition	0	0	0	0	0	0	0	8,733
041.02.08.07 -105 KE/ KW Reactor Footprint Waste Sites	0	0	0	0	0	0	0	13,153
041.02.10.01 -RL41 Transition Subc Assignments	0	0	29	0	-29	0	0	0
041.02.11.01 -100K Project Management	5,673	5,561	6,692	-112	-1,131	0	0	67,582
041.02.12.01 -100K Bioremediation	0	0	0	0	0	0	0	4,622
041.90.01.01 -PBS RL-0041 Assessments, MSC Services to PRC	1,353	1,353	1,440	0	-87	0	0	27,496
041.90.02.01 -PBS RL-0041 Assessments, PRC Services to PRC	0	0	0	0	0	0	0	0
041.98.01.01 -WBS 041 ARRA Ramp-up/Transition Fac	0	0	0	0	0	0	1	0
041.98.01.03 -WBS 041 ARRA Training	0	0	0	0	0	0	1	0
041.98.01.05 -WBS 041 Project Services Distribution	8,552	8,552	5,872	0	2,680	0	0	12,158
041.99.01.17 -PBS RL-41 PRC General & Administrative	9,622	9,622	5,074	0	4,548	0	0	54,107
041.99.01.18 -PBS RL-41 PRC Direct Distributables	2,412	2,412	1,849	0	563	0	0	31,043
Total -RL-0041 -Nuc Fac D&D -RC Closure Proj	73,034	73,572	49,187	538	24,385	0	9	559,433



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

- Schedule Performance (+\$0.5M /+0.7%)
  - The positive schedule variance is due to acceleration of work for waste site remediation (+\$1.1M), K West Deactivation debris removal campaign (+\$0.9M), and facility demolition (+\$0.1M). This is offset by utilities reroutes (-\$1.3M) where several small contracts slipped and K East Reactor activities (-\$0.3M).
- Cost Performance (+\$24.4M/+33.1%)
  - The positive cost performance is from facility demolition (+\$8.5M) and waste site remediation (+\$0.5M) due to efficiencies of scale for concurrent activities, G&A/direct distributables (+\$6.7M) being less than planned, K East Reactor activities (+\$3.7M) being conducted more efficiently, K West Deactivation debris removal campaign (+\$3.2M) removing small debris units to date, and utility reroutes (+\$1.8M being overstated and will correct over the next few months.



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