

RIVER CORRIDOR CLOSURE PROJECT

DOE's Largest Environmental Cleanup Closure Project

TPA Quarterly Review

For Period: July - September 2011



Tri-Party Agreement

River Corridor Milestones:

M-16

M-89

M-92

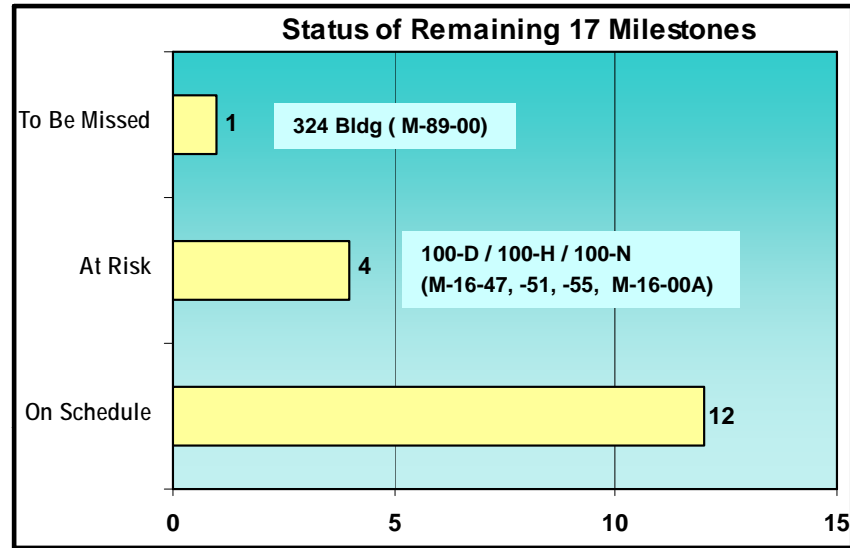
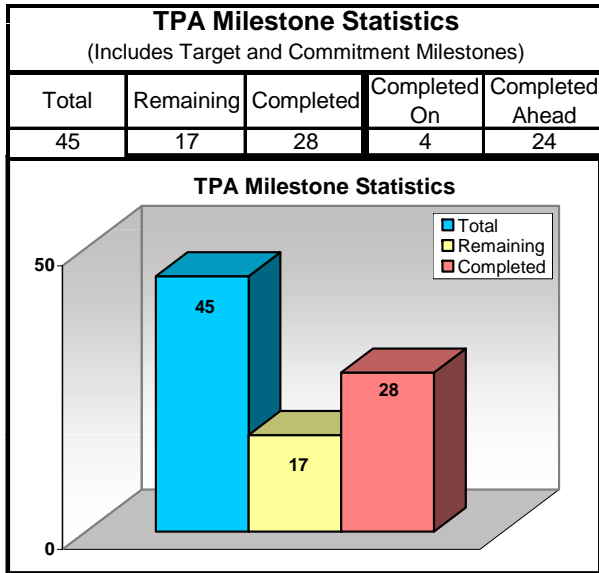
M-93

M-94

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

October 20, 2011

Protecting the Columbia River



Quarterly Summary (July - September 2011)

- **Completed TPA Milestones:**
 - No milestones were completed during this reporting period.
- **Change Requests Pending Approval:**
 - Two change requests are pending approval:
 - M-16-11-17 – Remove waste sites from M-16-51, Complete Interim Remedial Actions for 100-H Area, due 12/31/11
 - M-16-11-18 – Remove waste sites from M-16-47, Complete Interim Remedial Actions for 100-D Area, due 12/31/11
(Waste site closure for removed sites will be completed under M-16-00A)

RIVER CORRIDOR CLOSURE PROJECT

For Period: July – September 2011

TPA MS No.	Compliance Date	Title	Status	Comments
M-16 Milestones - Remedial Action (milestones through 12/31/2012 and "at risk")				
M-16-47	12/31/11	Complete Interim RA for 100-D Area	At risk	DOE submitted 90-day notice to Ecology and further discussions are pending Ecology response.
M-16-51	12/31/11	Complete Interim RA for 100-H Area	At risk	DOE submitted 90-day notice to Ecology and further discussions are pending Ecology response.
M-16-56	02/28/12	Complete Interim RA for 100-IU-2 / 100-IU-6 Waste Sites Listed in 1999 100 Area Remaining Sites ROD (32 sites) as Described in RDR/RAWP	On schedule	
M-16-74	09/30/12	Complete Interim Remediation (to include excavation, loadout, closeout sampling, backfill) for all 300 Area "Inside the Fence" Waste Sites North of Apple Street, Except that the 300-268 and 300-123 Waste Sites Remediation Need Only Be Completed Through Excavation and Loadout	On schedule	Waste sites 300-4, 300-15, 300 RRLWS, 300-265, 300-257, 300-214, and 300 RLWS are impacted by 300 Area building retentions and are addressed in M-16-00B. Revegetation of M-16-74 waste sites will be completed under M-16-139.
M-16-55	12/31/12	Complete Interim RA for 100-N Area	At risk	Waste site cleanup and facility demolition are being coordinated to optimize 100-N remediation.
M-16-145	12/31/12	Complete Interim RA for 100-K Area Facilities and Waste Sites not Included as Phase 1,2, or 3 Work	On schedule	Sites in this milestone are those listed in IROD prior to August 2009. Remediation design of two failed confirmatory sites (600-29, 128-K-2) began in July. Remediation of 600-29 started September 2011.
M-16-00A	12/31/12	Complete All Interim RA for 100 Area Units, with Exception of 100-K Area, by Specified Due Date as Approved in a RDR/RAWP	At risk	At risk due to M-16-47, -51, -55.

RIVER CORRIDOR CLOSURE PROJECT

For Period: July – September 2011

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

Significant Accomplishments – For Last 3 Months:

M-16 – Remedial Action / Risk Assessment:

- Started remediation of deep chromium sites at 100-D Area.
- Restarted backfill at 100-D/H Areas; continued backfill at 100-IU-2/6.
- Continued 118-K-1 remediation and found more spent nuclear fuel.
- Completed bench construction at 181N, 181NE, and 1908NE.
- Continued remediation of 100-N-61/63/64 pipelines.
- Successfully completed 618-11 vertical pipe unit technology development proof-of-concept testing.
- Received approval of 19 waste site closure documents during this reporting period (includes 1 American Recovery and Reinvestment Act [ARRA] site).
- Provided Draft A screening level ecological risk assessment report (Releases to Columbia River Vol. I) to regulators for review.
- Provided Draft C ecological risk assessment report (RCBRA Vol. 1) to regulators for review.
- Transmitted Segment 1 Interim Remedial Action Report, Rev. 0 to EPA.
- Transmitted 100-BC-1 Operable Unit Interim Remedial Action Report, Rev. 0 to EPA.

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

- Continued planning for remediation of new waste site 300-296 under B-Cell. Received lab results of soil sample under B-Cell; report in development.

M-93 – Reactors Final Disposition:

- Continued below-grade demolition/loadout of 105N fuel storage basin.
- Completed installation of safe storage enclosure (SSE) roof panels and roof siding.
- Continued installation of SSE control and monitoring system.

M-94 – 300 Area Surplus Facilities Disposition:

- Completed 340B Waste Loading Building above-grade demolition/loadout.
- Completed 309 Plutonium Recycle Test Reactor dome wall cutting.
- Shipped 327 lower SERF cell and carousel to ERDF for disposal.



Bench Construction at 181NE and 1908NE



105N Reactor ISS Progress

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

ERDF – (ARRA scope)

- For period July-September, disposed nearly 739,000 tons of waste; achieving a quarterly disposal record. Disposed a record 2,255,000 tons of waste during FY11, bringing total to 6,412,000 tons disposed since WCH assumed River Corridor cleanup responsibilities 8/27/05.
- Completed construction of all new ERDF maintenance facilities – equipment, truck, container facilities, and operations center.
- Coordinating ERDF performance assessment (PA) with Tank Closure and Waste Management Environmental Impact Statement. Estimating draft PA to be issued in July 2012.



Aerial View of ERDF

Significant Actions Planned – For Next 3 Months:

M-16 – Remedial Action / Risk Assessment:

- Commence revegetation at 100-H Area.
- Complete 100-IU-2/6 backfill of TPA sites.
- Complete excavation and loadout of 118-K-1 Burial Ground.
- Complete all 618-11 safety basis work to support NRC license amendment.
- Complete readiness activities to prepare for 300 Area confirmatory sampling campaign.

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

- Continue remediation planning activities for site 300-296 under B-Cell.

M-93 – Reactors Final Disposition:

- Complete below-grade demolition/loadout of 105N Fuel Storage Basin.
- Complete acceptance testing of SSE control and monitoring system.

M-94 – 300 Area Surplus Facilities Disposition:

- Complete Phase II of 327 below-grade demolition.
- Complete deactivation of remaining 309 building.

ERDF – (ARRA scope)

- Train new teamsters for shuttle truck operations.
- Continue treatment of 100-C-7 land disposal restriction (LDR) waste.

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

	IPB		CUMULATIVE			Previous Quarter Comparison			
	BAC	EAC	BCWS	BCWP	ACWP	SCHEDULE VAR (\$)		COST VAR (\$)	
						Jun	Sep	Jun	Sep
D4	550,185	526,422	386,288	442,583	350,936	57,956	56,295	95,023	91,647
Reactor ISS	87,920	89,500	74,129	71,633	70,182	111	-2,496	2,178	1,451
Field Remediation	603,179	760,388	466,002	457,531	427,906	12,013	-8,471	41,700	29,625
Waste Operations	440,928	421,876	311,090	404,322	318,055	100,615	93,232	85,534	86,267
ESFC	70,806	68,681	59,681	58,733	50,580	-192	-948	7,258	8,153
Mission/General Support	276,425	342,446	248,177	248,177	235,322	0	0	8,498	12,855
Transition	3,979	3,747	3,979	3,979	3,747	0	0	232	232
Contingency	54,240	54,240							
TARGET COST TOTAL	2,087,663	2,267,300	1,549,345	1,686,958	1,456,728	170,502	137,613	240,422	230,230

Schedule Variance (PMB): \$137,613K

- Acceleration of 300 Area and 100-N Area building demolitions.
- Remediation delays at 118-K-1, 100-D closeouts, and 300 Area/100-N excavations. Partially offset by accelerated work at 100-B/C.
- Earned value method for waste treatment changed via change control in April 2011 from percentage actual tons treated to apportioned effort of actual tons disposed (also applies to cost variance).
- ERDF transportation, treatment, and disposal support to accelerated work in FR and D4 Projects.

Cost Variance (PMB): \$230,230K

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

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

	IPB		CUMULATIVE			Previous Quarter Comparison			
	BAC	EAC	BCWS	BCWP	ACWP	SCHEDULE VAR (\$)		COST VAR (\$)	
						Jun	Sep	Jun	Sep
RL0041.R1.2 - Cell 9 / ERDF	51,361	44,303	51,361	51,361	44,303	-336	0	6,576	7,058
RL0041.R1.3 - Acc Rem / ERDF	59,737	43,437	59,737	59,737	43,281	3,563	0	16,454	16,456
RL0041.R1.4 - Cell 10	37,672	26,789	37,672	37,672	26,789	6,513	0	10,930	10,883
RL0041.R1.5 - Waste Ops	26,000	30,677	23,354	25,306	24,891	2,048	1,952	-546	415
RL0041.R2 - 618-10	67,622	68,796	67,622	62,987	52,300	7,270	-4,635	5,121	10,687
Contingency	3,179	3,179							
TARGET COST TOTAL	245,571	217,181	239,746	237,063	191,564	19,055	-2,683	38,533	45,498

Schedule Variance (PMB): (\$2,683K)

- Fewer samples taken and less soil excavated than planned due to all field work activities suspended for conduct of operations and stand-down.
- ERDF operations ahead of schedule due to greater than planned quantities being available.

Cost Variance (PMB): \$45,498K

- ERDF Cells 9/10 construction realized efficiencies.
- ERDF equipment and facility upgrade costs less than budgeted.
- ERDF realized efficiencies in chromium and lead treatment.
- Field Remediation project support requirements less than planned.
- Fewer comments received and streamlining the confirmatory sampling process (e.g., use of fewer sub-sites than originally planned) resulted in significantly lower analytical costs and positive cost variances in several accounts.
- 618-10 drum punch procurement/fabrication less than budgeted, fewer anomalies found than anticipated, and well installation and overall infrastructure upgrades are under budget; partially offset by design costs impacted by multiple waterline design, material-at-risk calculations, and other miscellaneous document overruns.
- 618-11 non-intrusive characterization awarded contract was significantly less than budgeted.

RCC Issues

- Determining impact of radiological contamination encountered under the 324 facility. This will affect schedule for demolition of the 324 complex.
- Craft layoffs may cause impacts to the remediation and demolition schedule for M-16-55.
- Working with Ecology to resolve comments and obtain approvals of closure documents associated with TPA Milestones M-16-47 and M-16-51.
- Working with Ecology to develop a path forward for closure of the 126-H-2 waste site.