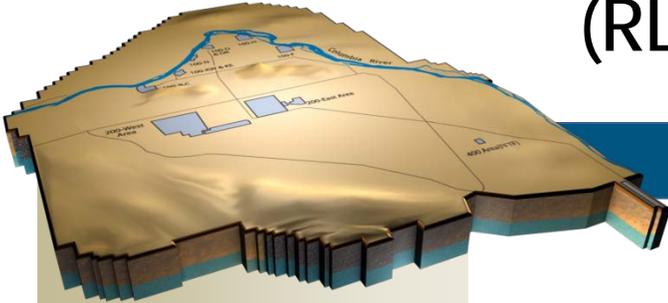


# Section F

## Nuclear Facility D&D, River Corridor (RL-0041)



### Monthly Performance Report

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Remediation Project



**100K Area**

September 2011  
CHPRC-2011-09, Rev. 0  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1

## PROJECT SUMMARY

### American Recovery and Reinvestment Act (ARRA)

#### Facilities

Completed the demolition and load out of the 183.1KE Head House, 183.3KE Filter Basin, and the 183.4KE Clearwell

Completed the demolition and load out of the 183.4KW Clearwell

Completed the demolition of the 181KE River Pump House

Completed the demolition and load out of 1720 Administrative Office Building.

Completed the demolition of 190KE Main Pump House

Continued with asbestos removal in the 190KW Main Pump House.

Completed below-grade demolition of the 1706KE Radiation Control Counting Laboratory and 1706KER Water Studies Recirculation Building.

Completed 165KE asbestos abatement planning.

#### Waste Sites

Verification sampling of waste at 100-K-77, the last ARRA funded waste site at 100-K, was completed in August. Backfill is expected to be completed by the end of September 2011.

Excavation on ARRA Waste Sites and Sub-Grade Structures	September 2011	
	Tons	Containers
ARRA Cumulative (fiscal year [FY]2009 to Date)	132,630	7,197

#### Other

##### Base

#### Facilities

Continued 105KE Reactor engineering/planning activities for the design and construction of the reactor building Safe Storage Enclosure (SSE) to place it in Interim Safe Storage (ISS). Demolition of the 183.2KE Sedimentation Basin will continue in FY2012.

Completed demolition and electrical work packages for the 115KW Gas Recirculation Building.

#### Waste Sites

- The MOA for waste site 100-K-63 was approved and issued on August 24, 2011.
- Excavation and load out were completed at the following waste sites in September
  - 1706KE below grade structure
  - 1706KER below grade structure
  - 105KE East Annex
  - 105KE West Annex
  - 105KE Cyclone Separator

- The table below displays the number of tons and containers sent to ERDF during September.

Active Excavation on Base Waste Sites and Sub-Grade Structures	September 2011	
	Tons	Containers
105KE Admin	3,517	171
105KE West Wall	4,799	231
1706KE	7,225	340
1706KER	6,587	319
110-K-6	1,629	77
<b>Monthly Total</b>	<b>23,757</b>	<b>1,138</b>
<b>Previous Cumulative (all sites under Base)</b>	<b>294,848</b>	<b>14,773</b>
<b>Base Cumulative (FY2009 to Date)</b>	<b>319,743</b>	<b>15,911</b>

### EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
10-EMS-100K-OB3-T1	Integrate methods for controlling air emissions into 105KE reactor core removal planning	Include methods for controlling air emissions in detailed design package	08/31/10	Complete
10-EMS-D&D-OB2-T2	Mitigate spill impacts	1) Develop spill management tools for routine activities (building demolition and surveillance and maintenance)	03/31/10	Complete
		2) Evaluate the need for lower tier project procedures to implement the PRC spill response procedure	04/30/10	Complete
		3) Develop and provide awareness, prevention, response and mitigation training to >85 percent of project personnel as related to spill response	05/30/10	Complete
		4) Review and validate pre-designations for commonly used chemicals at the facility	06/30/10	Complete
		5) Incorporate new spill requirements into applicable procedures/work packages based upon issuance of spill response procedure	04/30/10	Complete
		6) Evaluate the need for a system to pre-designate new chemicals	06/30/10	Complete

## TARGET ZERO PERFORMANCE

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	3	N/A
Total Recordable Injuries	0	5	N/A
First Aid Cases	3	24	<p><b>09/15</b> An Insulator rolled ankle while walking. <b>(22366)</b></p> <p><b>09/21</b> Electrician rolled right ankle when worker stepped on a roll of cargo tape while removing temp lighting. <b>(22364)</b></p> <p><b>09/27</b> Electrician was descending small hill and felt a “twinge” in right knee. <b>(22374)</b></p>
Near-Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### ARRA

#### Facilities

- Completed demolition and load out of 7 Recovery Act Facilities for a total of 26 Facilities completed to date.
- Project closeout completed on the 105KE Reactor Core Removal Final design.
- Complete the 165KE Power Control Building asbestos abatement planning.
- Continued with the demolition work plan and asbestos removal in 190KW.
- Completed below-grade demolition of the 1706KE Radiation Control Counting Laboratory and the 1706KER Water Studies Recirculation Building.

#### Other

- Continued videotaping in the 105KW West Bay and Weasel Pit.
- Performed annual check of the multi-canister overpack (MCO) loadout station (MLS).
- Conducted troubleshooting of the limit switch for the MLS Gantry.

### 100K Water Project

#### Base

#### Facilities

- Continued 105KE Reactor Disposition – ISS engineering/planning activities for the design and construction of the Reactor Building SSE. Demolition of the 183.2KE Sedimentation Basin will continue in FY2012.

## Waste Sites

- Drafted Remaining Sites Verification Package (RSVP) for waste site 100-K-110.
- Completed the Sampling for at the 183.4-KW and 183.4-KE Clearwells. Sample results are being compiled and a report, including the results, is being drafted.
- Confirmatory samples collected at waste site 100-K-79, Subsite 4, Treated Water Lines, determined the waste site needed to be removed. A Rationale to Change the Status of this waste site was drafted and approved; document number RA-00394.
- The draft Verification Sampling Instruction for Area AA, Zone 3, waste sites 120-KW-1, 120-KW-2, 120-KW-3, 120-KW-4 and Stock piles 5, 7, and 9 were approved by DOE and sent to EPA for review. The samples were collected and are currently being third-party validated. An RSVP for these waste sites is being drafted.
- The draft Verification Sampling Instruction for Area AA, Zone 2, waste sites 100-K-18, 100-K-19, 100-K-79 (Subsites 1a and 2a), 100-K-97, 120-KW-5 and 120-KW-7 were approved by DOE and sent to EPA for review. The samples were collected and results are currently being third-party validated. An RSVP for these waste sites is being drafted.
- The draft Verification Sampling Instruction for Area AA, Zone 4, waste site 100-K-109 were approved by DOE and sent to EPA for review. The samples were collected and results were third-party validated. An RSVP for these waste sites is being drafted.
- The draft Verification Sample Instruction for, Area AA, Zone 1, waste sites 100-K-102, 1607-K3, 100-K-34 and structures 183.1KW and 183KW were approved by DOE and sent to EPA for review. The samples were collected and results are currently being third-party validated. An RSVP for these waste sites is being drafted.
- Continued drafting a Verification Sample Instruction for waste sites 100-K-3, 100-K-47, 100-K-56, 100-K-68, 100-K-69, 100-K-70, 100-K-71 and 116-KE-3. The samples were collected and the data has not yet been received.
- Continued drafting a Verification Sample Instruction based on discussions with DOE and EPA for waste site 100-K-63. The samples are being collected; sampling is expected to be complete by 9/6/11.
- The draft Verification Sample Instruction for waste site 100-K-77 was approved by DOE and sent to EPA for review. The samples were collected and results are currently being third-party validated. An RSVP for waste site 100-K-77 is being drafted.
- DOE and EPA met and discussed strategies for closing 100-K-64 and associated waste sites. A Memorandum of Agreement (MOA) is being prepared to conduct interim work to remove structure on the 100 K eastern floodplain.

## MAJOR ISSUES

**Issue** – RL-0041 Waste Site Remediation will probably not be able to complete the remediation work scope tied to waste sites 100-K-57 and 100-K-64 by December 31, 2012. The sites are located in an area of extreme cultural sensitivity. The inability to complete this work by December 31, 2012, is being driven by the lack of an approved cultural resources mitigation action plan.

**Corrective Action** – Move this waste site from TPA Phase 1 to TPA Phase 3.

**Status** – CHPRC drafted a TPA change package for RL to present to EPA for approval that will move this waste site from TPA Phase 1 to TPA Phase 3. RL presented the change package to EPA, but EPA is not inclined to move the sites into a later TPA Phase.

## RISK MANAGEMENT STATUS

Unassigned Risk  
Risk Passed  
New Risk

 Working - No Concerns  
 Working - Concern  
 Working - Critical

 Increased Confidence  
 No Change  
 Decreased Confidence

Risk Title	Risk Strategy/Handling	Assessment		Comments
		Month	Trend	
<b>RL-0041/WBS 041</b>				
<b>WSR-007: More Extensive Contamination Than Expected</b>	Cannot control extent of contamination; no mitigation.			No new issues this past month.
<b>WSR-009: Different Remediation Approach</b>	Clean up remedies are consistent with direction received from RL in the PRC. There is a risk that the regulators will require a different cleanup remedy that what is planned.			It has been demonstrated that with ISS of 105-KE, two significant plumes will not be fully remediated under RTD. The project is researching a long term (i.e., 75 year), low cost stabilization that will retard water movement through the contaminated zone. Failure to retard precipitation will result in additional contamination to the groundwater and possibly the Columbia river unless more drastic measures are taken. There are alternative remediation strategies being discussed for the following waste sites: 100-K-42/UPR-100-K-1 (Fuel Storage Basin); 100-K-57 and 100-K-64 (100-K East Flood Plain), and 116-KE-1 (Ventilation Condensate Crib with Carbon-14 and Tritium). The client is being kept informed on developments.
KBC-044: 100 K Waste Sites Require Haz Cat Controls	Existing characterization data indicates the likelihood of this risk occurring is low; risk accepted without mitigation.			Additional direct pushes and associated logging, along with pothole samples are being looked at as an option to better understand the path of contamination movement to the east and west and to the south around the 105-KE Reactor and former fuel storage basin. Logging data and sample results will be evaluated and used to assess the radiological inventory around and under the 105-KE reactor building.
KBC-045: 100 K East Basin Soil Disposition	Treatment will likely be in the form of waste blending in accordance with DSA for that site.			This situation continues to be managed as load out effort continues from the 100-K-42 waste site.
KBC-020: Ecological/Cultural Conditions Restrict Field Activities	This risk will be monitored throughout work execution.			Due to the complexities of the MOA process is not likely and it is too early to tell if remediation can be accomplished by December 31, 2012, putting the associated TPA milestone (M-016-53; due December 31, 2012) at risk.
WSR-020: Ecological/Cultural Conditions Restrict Field Activities	This risk is accepted as written and will be monitored throughout work execution.			The risk status was changed to stable as there has been very little movement on memorandum of agreements that RL is drafting. With the MOA's approval, CHPRC will be able to initiate controlled remediation activities in the 100-K-57 waste site and initiate backfill or similar for 100-K-63. Completing remediation of this site under ARRA funds by the end FY 2011 is not likely and it is too early to tell if remediation can be accomplished by December 31, 2012, putting the associated TPA milestone (M-016-53; due December 31, 2012) at risk.

## PROJECT BASELINE PERFORMANCE

### Current Month

(\$M)

WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
<b>ARRA</b>	4.1	4.6	7.8	0.5	12.5	(3.2)	-66.3
<b>Base</b>	<u>11.8</u>	<u>9.8</u>	<u>1.6</u>	<u>(2.0)</u>	-17.4	<u>8.2</u>	84.0
<b>Total</b>	<b>15.9</b>	<b>14.4</b>	<b>9.4</b>	<b>(1.5)</b>	<b>-9.7</b>	<b>5.0</b>	<b>35.5</b>

Numbers are rounded to the nearest \$0.1M

#### ARRA

##### CM Schedule Performance: (+\$0.5M/+12.5%)

Waste Sites (+\$0.0M) The variance is within reporting threshold.

100K Area Project (Facilities and Others) (+\$0.5M) The variance is within reporting threshold.

##### CM Cost Performance: (-\$3.2M/-66.3%)

Waste Sites (+\$0.4M) The positive variance is within reporting threshold.

100K Area Project (-\$3.6M) The negative cost variance is due to high costs for KW Basin Debris removal, and cost transfers from Base processed during the month for 1706K, 1706KER and 181KW Pump House that moved costs from prior months to September.

#### Base

##### CM Schedule Performance (-\$2.0M/-17.4%)

Waste Sites (-\$2.6M) The negative schedule variance is primarily from delays due to higher than expected levels of contamination forcing a strategic pause and re-evaluation of the path forward for waste sites in the 105KE fuel storage basin and for performance earned in prior months.

100K Area Project (Facilities and Others) (+\$0.6M) The variance is within reporting threshold.

##### CM Cost Performance (+\$8.2M/+84.0%)

Waste Sites (+\$2.5M) The positive cost variance is due to additional performance taken to better align with progress in the field partially offset by additional sampling required for waste site closure, decontamination and demobilization costs for the end of the fiscal year, and cost transfers to ARRA processed during the month.

100K Area Project (+5.7M) The positive variance is due to the processing of cost transfers for 1706K, 1706KER, and 181KW River Pump House that removed the costs from prior months and moved to ARRA and additional performance taken to better align with the progress in the field.

## Contract-to-Date

(\$M)

WBS 041/ RL-0041 Nuclear Facility D&D – River Corridor	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)
<b>ARRA</b>	173.7	173.6	174.9	(0.1)	-0.1	-1.3	-0.8	176.3	177.5	(1.2)
<b>Base</b>	<u>77.2</u>	<u>78.4</u>	<u>65.6</u>	<u>1.2</u>	<u>1.5</u>	<u>12.8</u>	<u>16.3</u>	<u>351.5</u>	<u>339.9</u>	<u>11.6</u>
<b>Total</b>	<b>250.9</b>	<b>252.0</b>	<b>240.5</b>	<b>1.1</b>	<b>0.4</b>	<b>11.5</b>	<b>4.5</b>	<b>527.8</b>	<b>517.4</b>	<b>10.4</b>

Numbers are rounded to the nearest \$0.1M

**ARRA****CTD Schedule Performance: (-\$0.1M/-0.1%)**

Waste Sites (+\$0.0M) The variance is within reporting thresholds.

100K Area Project (-\$0.1M) The variance is within reporting thresholds.

**CTD Cost Performance: (-\$1.3M/-0.8%)**

Waste Sites (+\$8.4M) The positive cost variance is due to Confirmatory Sampling No Action (CSNA) sites that were completed at less than anticipated cost. This is partially offset by greater than anticipated extent and severity of contamination on many waste sites resulting in more tons disposed and more controls required, thus higher than anticipated cost.

100K Area Project (-9.7M) The negative cost variance is due to numerous design changes and additional punch list items in the Utilities Reroute project; this has also resulted in the project utilizing more vehicles and equipment than was originally planned as well as the Project Management costs to rise due to the corresponding increases for both labor and materials.

**Base****CTD Schedule Performance (+\$1.2M/+1.5%)**

Waste Sites (+\$1.2M) The positive schedule variance is due mainly to CSNA sites that were completed ahead of schedule partially offset by delays related to demolition of the 105KE Fuel Storage Basin discharge chute and the 100K Area utility switchover.

100K Area Project (Facilities and Others) (\$0.0M) N/A

**CTD Cost Performance (+\$12.8M/+16.3%)**

Waste Sites (+\$10.3M) The positive cost variance is due to CSNA sites that were completed at less than anticipated cost. This is partially offset by greater than anticipated extent and severity of contamination on many waste sites resulting in more tons disposed and more controls required, thus higher than anticipated cost, as well as level-of-effort activities bearing additional costs for increased functional group support.

100K Area Project (Facilities and Others) (+\$2.5M) The positive cost variance is within threshold.

**Estimate at Completion (EAC)**

The BAC and EAC include FY2009 through FY2018, the PRC contract period.

The August to September ARRA and BASE reflects the carryover scope for both D&amp;D and Waste Sites.

**Contract Performance Report Formats are provided in Appendix A.**

## FUNDS vs. SPEND FORECAST (\$M)

WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	FY2011		Spend Variance
	Projected Funding	Spending Forecast	
<b>ARRA</b>	61.9	60.9	1.0
<b>Base</b>	38.2	34.6	3.6

Numbers are rounded to the nearest \$0.1M.

### Funds/Variance Analysis:

Funding includes FY2010 carryover and FY2011 new Budget Authority.

### Critical Path Schedule

Critical Path Analysis can be provided upon request.

### Baseline Change Requests

BCR-PRC-11-039R0, FY2012 Annual PMB Update

## MILESTONE STATUS

None at this time.

## SELF-PERFORMED WORK

The Section H. clause entitled *Self-Performed Work* is addressed in the Monthly Report Overview.

## GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.