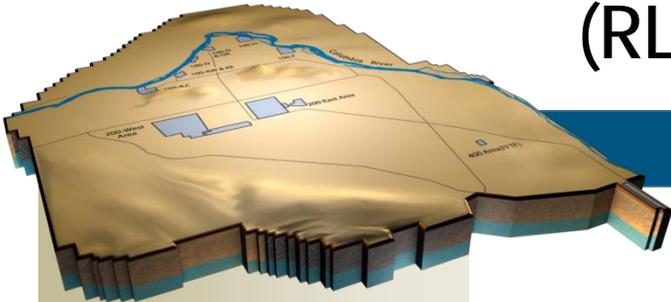


Section F

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



Monthly Performance Report

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105KW Sedimentation Basin Demolition

February 2010
DOE/RL-2008-69, Rev. 16
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

American Recovery and Reinvestment Act (ARRA)

Facilities

Work continued on 105KE Reactor Disposition preliminary design, project definition and regulatory documentation. 105KE deactivation activities conducted an electrical outage in mid-February. Continued field work for characterization of the reactor core, process tube, and port surveying.

Issued the explosive demolition request for proposal on 116KE (Reactor Exhaust Stack).

Continued final disposition characterization at 115KE (Gas Recirculation Building); isotope samples cannot be performed at WSCF so were sent to another lab and results are pending.

Continued cold and dark activities on 117KE (Exhaust Air Filter Building).

The 1706KE (Radiation Control Counting Laboratory) and 1706KER (Water Studies Recirculation Building) below-grade asbestos set-up was completed; asbestos removal will begin in March.

Initiated demolition of the 183.1KW (HEAD HOUSE) above-grade structure; Continued demolition of 183.2KW (Sedimentation Basin).

Sample results from 183.3KW (Sand Filter) were obtained and demolition preparation was initiated.

Completed asbestos abatement at 183.7KW (Tunnel). Physical isolation (part of demolition preparation) was completed.

Waste Sites

Continued waste site remediation of UPR-100-K-1/100-K-42, 100-K-56, 100-K-47, 100-K-3, and 100-K-53 Remove, Treat, and Dispose sites.

Waste Site	Feb-2010		FYTD (9/28/09 – present)	
	Tons	Loads	Tons	Loads
UPR-100-K-1 (aka 100-K-42)	0	0	9,320	640
100-K-3	1499	111	1625	120
100-K-56	3646	263	4774	358
100-K-47	1296	93	2054	154
100-K-53	0	0	0	0
Totals	6,441	467	17,773	1,272

The decision was made to have D4 perform the work of scabbling the diversion wall and breaking the remainder of the floor. Work remains suspended on UPR-100-K-1/100-K-42 until the diversion wall is scabbled.

Initiated remediation of the 100-K-53 pipelines. The pipes were tapped and found to contain glycol product. A path forward to collect and dispose of the glycol is being prepared.

Additional equipment and manpower was mobilized early in January to begin remediation of the waste sites near the 183.1KW head house once D4 activities are completed. The crews and equipment were partially utilized on work near the 105KE Reactor Building until the head house is available.

Other

Continued debris removal from the K West Basin; over 261 units removed through February. The 100K Area River Water Isolation, Electrical Power Isolation, and the K West Basin Airborne Contamination Remediation Projects have reached final design phases. Procurement of the Pall Microfiltration Unit has been awarded, with the Air Handling Units/HEPA filtration skids going through bid review. The procurement of components and fabrication of the skid mounted substation have been awarded. 100B import water line has been awarded and waiting for cultural review and approval.

Base**Facilities**

Continued 116KW (Reactor Exhaust Stack) cold and dark.

Completed 1713KER (Shop Building) demolition and demolition load-out.

Continued demolition of 1724KB (Bottle Dock).

Completed cold and dark, and initiated demolition of the 1614K3 (Environmental Monitoring Station).

Completed cold and dark, and initiated demolition, at the 182K (Water Reservoir Pump House).

Continued 183.5KW and 183.6KW (Lime Feeder Buildings) decontamination.

Waste Sites

Completed excavation of waste site remediation of 100-K-4 Remove, Treat, and Dispose site.

Waste Site	Feb-2010		Cumulative (9/28/09 – present)	
	Tons	Loads	Tons	Loads
100-K-4	1,611	113	2,989	210

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	05/31/10	On Schedule
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	On Schedule
		3) Develop and provide awareness, prevention, response and mitigation training to >85 percent of project personnel as related to spill response	05/30/10	On Schedule
		4) Review and validate pre-designations for commonly used chemicals at the facility	06/30/10	On Schedule
		5) Incorporate new spill requirements into applicable procedures/work packages based upon issuance of spill response procedure	04/30/10	On Schedule
		6) Evaluate the need for a system to pre-designate new chemicals	06/30/10	On Schedule

TARGET ZERO PERFORMANCE

	CM Quantity	FYTD Quantity	Comment
Days Away, Restricted or Transferred	0	0	N/A
Total Recordable Injuries	0	3	N/A
First Aid Cases	1	12	02/01/10 Electrician was working on installing temporary lighting and for an unknown reason experienced low back strain. Worker went to AMH was examined and released with no restrictions. (20676)
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

ARRA Facilities

- Continued design, project definition, and pre-characterization work of 105KE Reactor Disposition. Continued deactivation activities and conducted an electrical outage.
- Isotopes contained in 115KE (Gas Recirculation Building) samples required removing existing samples from the WSCF lab. Lab tests were performed at a private facility. One final oil sample is needed in early March.
- Issued the demolition explosives request for proposal on the 116KE (Reactor Exhaust Stack): potential vendors are scheduled for March site visits after which they will submit their bids, resulting in contract issuance planned in early April.
- Continued cold and dark at 117KE (Exhaust Air Filter Building)
- Completed an independent structural review of 1706KE (Radiation Control Counting Laboratory) and 1706KER (Water Studies Recirculation Building) which confirmed structural integrity. Scaffolding was erected for asbestos removal, which will begin in March.
- Initiated demolition of the 183.1KW (Head House); the above-grade demolition should finish
- Demolition continues on 183.2KW (Sedimentation Basin), where wall removal has been done on both sides, working towards the 183.7KW tunnel running through the center of 183.2KW.
- Completed asbestos abatement at 183.7KW (Tunnel). Glycol removal was completed, but glycol removal continues on the balance of the 100KW facilities. Physical isolation from adjacent buildings was completed.

Waste Sites

- Remediation continued on pipelines associated with 105KE Reactor effluent and miscellaneous laboratory type drain lines. This includes 100-K-56, 100-K-47, and 100-K-3.
- Remediation was initiated on 100-K-53, 100-KE Glycol Heat Recovery Underground Pipelines.

Other

- Reached Final Design Phase for 100K Utilities Re-Route Project: initiated the procurement process on long-lead procurement items and placed major construction contracts

**Base
Facilities**

- Continued 116KW (Reactor Exhaust Stack) cold and dark. This stack will be exploded concurrent with the 116KE stack during this summer.
- Completed cold and dark, and initiated demolition of 1614K3 (Environmental Monitoring Station). This facility was in the FY 2013 baseline, but was accelerated due to its proximity to other facilities in the demolition process. Demolition load-out should complete in early March.
- Completed 1713KER (Shop Building) demolition and demolition load-out
- Continued demolition of 1724KB (Bottle Dock); final demolition and load-out should complete the first week of March
- Completed 182K (Water Reservoir Pump House) cold and dark. Electrical isolation was completed and above-grade demolition began. Below-grade demolition cannot commence until the new utility systems are operational.
- Continued 183.5KW and 183.6KW (Lime Feeder Buildings) decontamination. Revised pedestrian walk-ways are being developed. These buildings will be removed when the 183.3KW (Filter Basin) is removed.

Waste Sites

- Excavation is complete on 100-K-4 (Group 2 Waste Site).

MAJOR ISSUES

Issue Statement – Extent and severity of contamination in the UPR-100-K-1/100-K-42 waste site (soil associated with the 105KE Fuel Storage Basin leak) is much higher than anticipated. The significance of this higher than anticipated contamination is that the work must be conducted under nuclear Hazard Category three controls, productivity will be at a diminished rate, and a larger volume of contaminated soil will need to be removed.

Corrective Action – Mitigation of the issue is tied to higher-than-anticipated contamination levels (which has led to working under hazard category three controls and diminished productivity, both of which are leading to schedule growth and increased costs) has not been resolvable to date. Efforts are ongoing to improve the productivity by ensuring the containers are loaded to their maximum weight without going over the legal load limits. This yields a higher ton-per-container average with some influence on overall schedule. Removal of the source term (contamination on the discharge chute concrete) by scabbling will also improve production rates. Preliminary samples are being taken at depth to clarify the overall nature and extent of contamination to support the development of the baseline change request/request for equitable adjustment.

Status – With the scabbling and floor removal activity to be initiated in March, production rates should gradually increase with the removal of that source term. Information on the overall nature and extent of contamination is being used in the development of the baseline change request/request for equitable adjustment.

Issue Statement – Necessary clean up of contamination spread during basin removal was not anticipated. Impacts have not been fully assessed because D4 has not completed demobilization. Through February, additional quantities of contaminated materials have been encountered.

Corrective Action – Add additional cover to areas contaminated by D4 equipment staging and

decontaminate as the areas become available. Those covered area soils are being excavated and shipped for disposal. This volume and schedule will be included into the baseline change request/request for equitable adjustment associated with the UPR-100-K-1 issue above or subsequent baseline change request/request for equitable adjustment as needed.

Status – Work in progress.

Issue Statement – Approximately ten new sites have been discovered where radiological or chemical contaminants are being found above cleanup standards.

Corrective Action – Two sites were added as part of the Performance Measurement Baseline, Rev. 2; the remainder, along with any future sites, will be added to the contract via the request for equitable adjustment process. Additional sites (i.e., 100-K-97) will be added via baseline change request/request for equitable processes as they are encountered and defined.

Status – BCR/REA process continues.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk

● Working - No Concerns Increased Confidence
● Working - Concern No Change
● Working - Critical Decreased Confidence

Risk Title	Risk Strategy/Handling	Assessment		Comments
		Month	Trend	
KBC-001A: KE Basin Phase IV Demolition Contamination Levels	Risk accepted without mitigation	●	↔	Contamination levels are expected to result in increased costs for subsurface waste removal and disposal.
KBC-002: Subcontract change orders/claims exceed planned allowances	Prepare accurate functional requirements and SOW, including flow-downs; monitor subcontractor activities and encourage early communication of problem areas	●	↔	No issues at this time.
KBC-004: Contamination Depth Greater Than Planned, Increasing Waste Volumes to ERDF	Unassigned Risk - No mitigation	●	↔	Risk has been realized and BCR is being prepared.
KBC-009: D4/Waste Site Inteference	Integrate all 100 K work activities to minimize issues/conflicts between D4 activities and waste site remediation	●	↔	No issues at this time.
KBC-019: Groundwater Treatment Activities Impact D4/Waste Site RTD Activities	Coordinate with S&GRP to minimize impact to D4 and waste site remediation.	●	↔	No issues at this time.
KBC-020: Ecological/Cultural Conditions Restrict Field Activities	Accelerate cultural resource reviews to minimize schedule impact if cultural resource mitigation is required prior to initiating remediation	●	↔	Although no impacts have been realized at this time, some sensitive cultural areas are expected to be encountered
KBC-022: Drawing Unavailability/Errors Cause Work Stoppage During Utility Isolation	Reroute utilities to prevent this scenario. Reconfiguration work planned during ARRA period.	●	↔	No new issues at this time.
KBC-035: ERDF Packaging Can Shortage	Work closely with W&FM Project regarding ERDF packaging can needs to ensure can availability	●	↔	No issues at this time.
KBC-043: Waste Site Remediation Completion Requirements	Existing closure approach is consistent with WCH approach for balance of River Corridor waste sites; risk accepted without mitigation.	●	↔	No issues at this time.
KBC-061: Technology Readiness Assesment Required for Reactor Core Removal and Demolition	Perform mock-up testing of equipment to demonstrate effectiveness; obtain early RL agreement of technology readiness approach.	●	↔	No issues at this time.
KBC-070: New SARP Required for Waste Packages	Very low probability of occurrence; risk accepted without mitigation	●	↔	No issues at this time.
KBC-076: Treatment Required for 100 K RTD Waste Prior to Disposal	Review waste disposal records as part of RTD planning to identify potential issues prior to beginning retrieval; work with ERDF to determine minimum acceptable treatment to minimize quantity of waste that must be treated or disposed elsewhere	●	↔	No issues at this time.
PRC-044: ERDF Not Available for PRC Waste	Unassigned risk. Note that ERDF has modified off-load procedures, began dumping containers in the queue, and resumed container shipments.	●	↔	No issues at this time.

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 (%)	Budget at Completion (BAC)
ARRA	8.7	9.7	5.2	1.0	11.3	4.5	46.1	223.8
Base	<u>0.8</u>	<u>0.9</u>	<u>0.6</u>	<u>0.1</u>	<u>14.5</u>	<u>0.3</u>	<u>35.4</u>	<u>335.6</u>
Total	9.5	10.6	5.8	1.1	11.6	4.8	45.2	559.4

Numbers are rounded to the nearest \$0.1M.

ARRA

CM Schedule Performance: (+\$1.0M/+11.3%)

100K Area Project (Facilities and Others) (+\$0.0M)

The positive schedule variance in 105KE Reactor Disposition (+\$0.1M) is due to decontamination activities starting early and K West Deactivation (+0.9M) where smaller debris has been removed. Larger debris units (including some requiring size reduction) will be removed in the upcoming months. This is offset by utilities reroutes (-\$1.0M) where several small contracts slipped.

Waste Sites (+\$1.0M)

The positive Waste Site variance is 100-K-42 (+\$0.8M) reconciling the excavated amounts to the engineered design volumes waste loaded out, and work was initiated earlier than scheduled and progressed faster than scheduled on 100-K-53 and 100-K-3.

CM Cost Performance: (+\$4.5M/+46.1%)

100K Area Project (Facilities and Others) (+\$4.0M)

The positive variance is due to Facilities (+\$3.2M) achieving efficiencies of scale as groups, instead of individual facilities, are being demolished concurrently; K West Deactivation (+\$0.7M); and 100K Utilities (+\$0.4M) where the water treatment building procurement performance was overstated in January but is expected to attain that design/procurement performance in May and June. No long-term impact is anticipated. This is offset by an unfavorable variance in 105KE Reactor (-\$0.3M).

Waste Sites (+\$0.5M)

The positive Waste Site variance is primarily due to reconciling excavated volumes against the design criteria to give a better cumulative value.

Base

CM Schedule Performance (+\$0.1M/+14.5%)

The positive variance is within established reporting thresholds.

CM Cost Performance (+\$0.3M/+35.4%)

The positive variance is within established reporting thresholds

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)
ARRA	60.0	60.3	37.6	0.2	0.4	22.7	37.7	223.8
Base	<u>13.0</u>	<u>13.3</u>	<u>11.6</u>	<u>0.3</u>	<u>2.3</u>	<u>1.7</u>	<u>12.4</u>	<u>335.6</u>
Total	73.0	73.6	49.2	0.5	0.7	24.4	33.1	559.4

Numbers are rounded to the nearest \$0.1M.

ARRA

CTD Schedule Performance: (+\$0.2M/+0.4%)

The positive variance is within established reporting thresholds.

CTD Cost Performance: (+\$22.7M/+37.7%)

100K Area Project (Facilities and Others) (+\$13.7M)

The positive variance is from Facilities (+\$8.8M) due to efficiencies of scale for concurrent demolition, K West deactivation (+\$3.1M) for the debris removal campaign, utilities reroutes (+\$1.8M) where procurement performance was mistakenly taken in January but won't actually be achieved until May, 105KE Reactor Disposition (+\$1.1M) for site preparation and obstruction removal, and Mission Support Contractor support where services have not been used as extensively as planned. This is offset by Project Management (-\$1.1M) where general site cleanup labor has been utilized on site cleanup work scope.

Waste Sites (+\$0.9M)

Waste Site 100-K-56 and the miscellaneous waste sites/pipelines have achieved efficiencies in loading/shipping tonnage.

Project Support & Services (+\$8.1M)

General and Administrative achieved efficient use of assigned resources.

Base

CTD Schedule Performance (+\$0.3M/+2.3%)

The positive variance is within established reporting thresholds.

CTD Cost Performance (+\$1.7M/+12.4%)

100K Area Project (Facilities and Others) (+\$2.2M)

The positive cost variance is due to 105KE Reactor Core Removal (+\$2.9M) work efficiency on deactivation/decontamination and enabling documents; and Focused Feasibility Study (+\$0.2M) where the work has stopped while a different path forward is explored. This is offset by Facilities (-\$0.5M) where the 1706KE/KEL/KER complex above-grade demolition required more resources due to its complexity and Mission Support Contractor support (-\$0.4M) where services have been used more extensively as planned.

Waste Sites (-\$0.5M)

Waste Sites negative variance is because the subcontractor was brought on-site but utilization was delayed pending construction of a temporary container transfer area and completion of 1706KE/KEL/KER demolition/decontamination.

Contract Performance Report Formats are provided in Appendix A.

Funds vs. Spend Forecast (\$M)

WBS 041/RL-0041 Nuclear Facility D&D – River Corridor	FY 2010		
	Projected Funding	Spending Forecast	Variance
ARRA	121.5	93.8	27.7
Base	<u>20.9</u>	<u>32.7</u>	<u>(11.8)</u>
Total	142.4	126.5	15.9

Numbers are rounded to the nearest \$0.1M.

Funds/Variance Analysis:

BCR-PRC-10-024 will be processed in April to move the 183.2KW Sedimentation Basin/183.3KW Filter Basin/183.7KW Tunnel from ARRA to Base funding. The spend forecast reflects this planned move.

Critical Path Schedule

Critical Path Analysis can be provided upon request.

Estimate at Completion (EAC)

The BAC and EAC include FY 2009 through FY 2018, the PRC contract period.

Baseline Change Requests

None.

MILESTONE STATUS

None currently identified.

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.