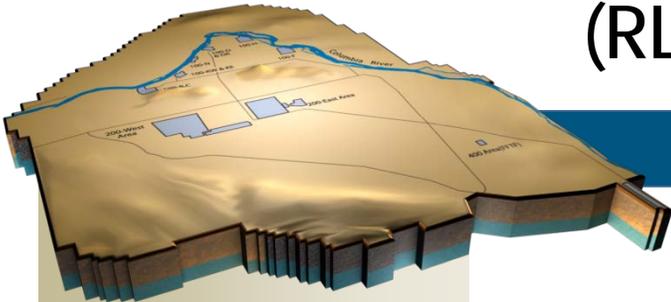


Section F

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



Monthly Performance Report

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105KW Debris Removal

March 2010
DOE/RL-2008-69, Rev. 17
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. Decontamination starts at the end of April 2010 and demolition starts mid-April with the removal of Trailer MO872. Continued field work for characterization of the reactor core, process tube, and port surveying.

Continued final disposition characterization at 115KE (Gas Recirculation Building); sample results were received and the final report is pending; continued asbestos removal.

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

The 1706KE (Radiation Control Counting Laboratory) and 1706KER (Water Studies Recirculation Building) began asbestos removal.

Completed demolition of the 183.1KW (Head House) above-grade structure and began demolition of the below-grade structure.

Continued demolition of 183.2KW (Sedimentation Basin).

Demolition of the 183.3KW (Sand Filter) will be initiated in early April.

Demolition preparation of the 183.7KW (Tunnel) was initiated.

Waste Sites

Continued waste site remediation of the below listed Remove, Treat, and Dispose sites:

Waste Site	Mar-10		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	3866	271	5491	391
100-K-56	1696	120	6469	478
100-K-71	3038	210	3163	219
100-K-47	3204	231	5559	407
100-K-53	0	0	0	0
116-KE-3	433	30	888	62
Totals	12,237	862	30,890	2,197

Work has been suspended on UPR-100-K-1 pending D4 performing the work of scabbling the diversion wall and breaking the remainder of the floor.

The 100-K-53 pipelines were tapped and residual glycol removed. The glycol was contained and will be processed with the remainder of the 100-K area glycol retrieved as part of deactivation of facilities.

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. Access for waste site remediation is expected in early April.

Other

Continued debris removal from the K West Basin; over 415 units removed through March. The 100K Area River Water Isolation, Electrical Power Isolation, and the K West Basin Airborne Contamination Remediation Projects have released all procurements for equipment, construction contractors have been selected, construction of the new potable/service water line inside the 100K Fence has begun, and installation of ducting material in 105KW has kicked off to support improved air quality in the basin.

Fabrication of the Pall Microfiltration Unit is underway. The Air Handling Units/HEPA filtration skids were recently awarded and fabrication has begun. The procurement of components and fabrication of the skid mounted substation have begun. 100B import water line has been awarded and waiting for cultural review and approval prior to construction. Design and construction contract for the Water Treatment Building and Dual-use Water Tank was awarded.

Base

Facilities

Continued 116KW (Reactor Exhaust Stack) cold and dark

Completed demolition of 1724KB (Bottle Dock)

Completed demolition of the 1614K3 (Environmental Monitoring Station)

Completed demolition of the 182K (Water Reservoir Pump House) above-grade; below-grade demolition will occur this summer.

Initiated characterization of the 183KE (Chlorine Vault)

Completed 183.5KW and 183.6KW (Lime Feeder Buildings) decontamination and prepared for demolition

Waste Sites

Completed excavation of waste site remediation of 100-K-4 Remove, Treat, and Dispose site in February 2010. A Verification Sample Instruction was issued and approved by EPA. Samples were collected and sent to the laboratory for analysis to verify the remedial action goals were attained. Sample data should be available by mid-April.

Waste Site	Mar-2010		Cumulative (9/28/09 – present)	
	Tons	Loads	Tons	Loads
100-K-4	0	0	2989	209

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	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	On Schedule
		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	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	9	21	<p>03/01/10 - D&D worker unhooked a hose that was thought to be drained previously. Worker splashed hot water on right arm causing a minor burn. Manager and worker agreed to self-treat. (20737)</p> <p>03/04/10 - RCT reported being short of breath and lightheaded from entering a building that contained bird feces and dust. Taken to AMH, examined, and returned to work with no restriction. (20747)</p> <p>03/06/10 - D&D Worker suffered a minor cut to the right middle finger. The worker was using a utility knife to open a box of supplies when the injury occurred. Worker and supervision evaluated the minor cut and elected to self-treat. (20749)</p> <p>03/08/10 - D&D worker reported that due to climbing in and out of Bobcat, right knee became painful and swollen. Worker was taken to AMH for evaluation. Worker was given OTC medications and returned to work without restrictions. (20753)</p> <p>03/08/10 - Employee was moving a stanchion in the 100KE queue to ensure that the area was secured, roped, and posted at the end of the day. The cinder block moved, pinching the right hand between the index finger and the thumb, causing a minor skin abrasion and slight bleeding. Supervisor and employee elected to self-treat. (20751)</p> <p>03/14/10 - NCO scrapped a knuckle of the left hand while processing through PCM. Employee and management elected to self-treat. (20777)</p> <p>03/22/10 - Teamster working decon line east side of 105KE received bee sting to right shoulder. Management and worker agreed to self-treat. (20794)</p> <p>03/24/10 - Pipefitter bumped right shin on a trailer hitch. With management approval the worker elected to self-treat. (20802)</p> <p>03/25/10 - Rigger was in CA zone passing scaffolding material into a HCA zone when a piece of plywood door panel was caught by the wind striking the rigger in the left thigh. Rigger was taken to AMH for evaluation. Worker was returned to work with no restrictions. (20805)</p>
Near-Misses	0	0	N/A

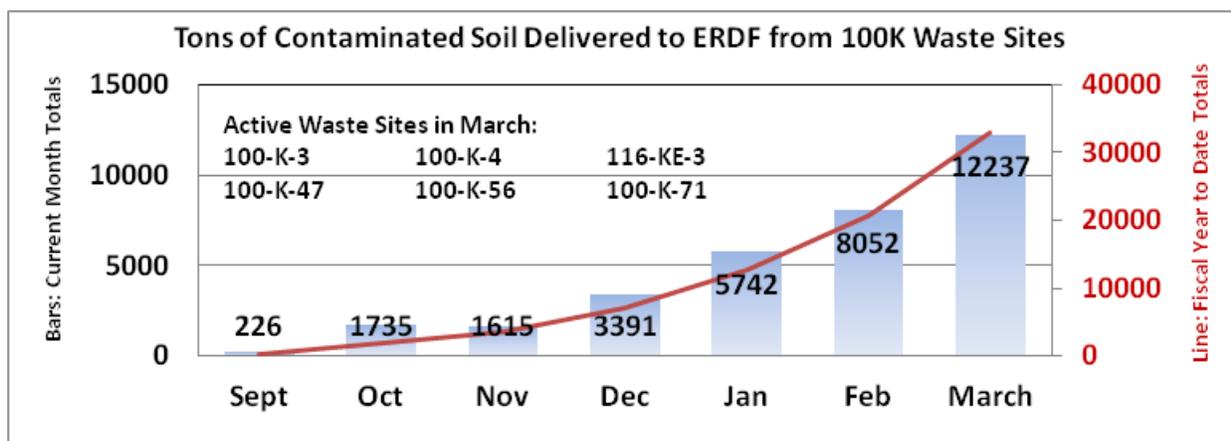
KEY ACCOMPLISHMENTS

ARRA Facilities

- Continued design, project definition, and pre-characterization work of 105KE Reactor Disposition. Deactivation work was completed.
- Isotope sample results for 115KE (Gas Recirculation Building) were received; the final characterization report should be issued in early April. Asbestos work progressed well, with only two asbestos-wrapped tanks remaining to be decontaminated.
- The 116KE (Reactor Exhaust Stack) demolition explosives vendor visited the Hanford Site and submitted their bid. Contract award is expected in early April.
- Completed cold and dark at 117KE (Exhaust Air Filter Building). The demolition work package was initiated.
- Below-grade asbestos removal was initiated in the 1706KE (Radiation Control Counting Laboratory) and 1706KER (Water Studies Recirculation Building).
- Completed above-grade demolition of the 183.1KW (Head House) and initiated the below-grade demolition, removing much of the west wall. Once the -3 foot demolition is done (anticipated early April), adjacent waste site remediation will begin. Once the adjacent waste site is remediated, the remainder of the below-grade demolition can be performed.
- Demolition continues on 183.2KW (Sedimentation Basin), where stem wall removal has been done, with floor removal in process. The 183.2KW walls adjacent to the 183.1KW and 183.3KW will be removed concurrent with removal of those facilities, to ensure structural integrity throughout the demolition process. The “paddle” waste has been shipped to ERDF. The concrete rubble is being stock-piled alongside the excavation. A processor will be utilized to separate the rebar for shipment to ERDF, while the residual concrete will be utilized as clean fill at U-Plant (originally the concrete was also slated for disposal at ERDF).
- Demolition of the 183.3KW (Filter Basin) is anticipated to begin in early April, which will allow the end wall of the 183.2KW to be simultaneously removed.
- Demolition preparation for the 183.7KW (Tunnel) was initiated.

Waste Sites

- Remediation continued on waste sites within 100-K Area. Production rates increased due to increased access to waste sites after D-4. There is also increased contaminated soil to clean as overburden soil ratios have been higher than anticipated. This caused more waste disposal than planned.



Other

- The 100K Area Electrical Power Isolation has reached the final design phase. Design is complete for the K West Basin Airborne Contamination Remediation Projects and 100K River Water Infrastructure Isolation Project. The Air Handling Units/HEPA filtration contracts were awarded. The procurement of components and fabrication of the skid mounted mobile substation was awarded. 100B import water line was awarded and is waiting for cultural review and approval prior to construction. The contracts for design and construction of the Water Treatment Building and Dual-use Water Tank were awarded.
- Completed 225 of 285 units of the second Debris campaign for a total of 415 units removed to date.

Base**Facilities**

- Continued 116KW (Reactor Exhaust Stack) cold and dark; the Facility Hazards Categorization and electrical isolation are in process. This stack is included as an option in the 116KE explosive demolition contract to be awarded in early April.
- Completed demolition of 1614K3 (Environmental Monitoring Station). This facility is in the FY 2013 baseline, but was accelerated due to its proximity to other facilities in the demolition process.
- Completed demolition of 1724KB (Bottle Dock), four months ahead of the August baseline date.
- Completed 182K (Water Reservoir Pump House) above-grade demolition; below-grade demolition cannot commence until the new utility systems are operational this summer.
- Initiated characterization of the 183KE (Chlorine Vault), with the final report anticipated mid-April. Deactivation is expected to begin in late April.
- Completed 183.5KW and 183.6KW (Lime Feeder Buildings) decontamination. Revised pedestrian walk-ways were developed. Demolition work packages were completed, and demolition of 183.6KW is anticipated in early April with 183.5KW demolition to follow. Leased facility MO872 was disconnected and will be removed from that site in early April. This will allow easier access to the 105KE Reactor.

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 May, production rates should gradually increase with the removal of that source term. Information on the overall nature and extent of contamination is being considered 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 March, 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
 Working - Concern
 Working - Critical
 Increased Confidence
 No Change
 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 Readness 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.
WSR-028: Unexpected Liquid in Pipelines/Tanks	Anticipate liquids in field work plans; include spill response plans in RD/RAWPs			100-K-53 lines capped and drained; No issues this month.
KBC-044: 100 K Waste Sites Require Haz Cat Controls	Existing characterization data indicates the likelihood of this risk occurring is low; however, if it does occur the consequences may be medium to high with respect to cost and schedule impact.			100-K-42 site is a Haz Cat 3 facility and we have realized some schedule delays.
KBC-045: 100 K East Basin Soil Disposition	Treatment will likely be in the form of waste blending for in accordance with DSA for that wite.			Some materials are having to be blended for this site.

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 (%)
ARRA	10.5	7.3	6.7	(3.1)	-29.9	0.6	8.4
Base	<u>1.2</u>	<u>1.1</u>	<u>0.6</u>	<u>(0.2)</u>	-14.4	<u>0.5</u>	47.2
Total	11.7	8.4	7.3	(3.3)	-28.3	1.1	13.3

ARRA

CM Schedule Performance: (-\$3.1M/-29.9%)

100K Area Project (Facilities and Others) (-\$2.5M)

The positive schedule variance is K West Deactivation (+\$2.5M) due to removing smaller debris units first. Additionally, the Debris Disposition project having experienced staff members (the baseline assumed a staff that would not be experienced in debris removal operations, so a learning curve was built in to the schedule). This is offset by Utilities (-\$3.3M) where award of several contracts was delayed due to late release of design media for contact bid proposal submittals; Facilities (-\$1.3M) due to slipping start of demolition on the 183.3KW Filter Basin several weeks as new safety pathways and lighting along the West wall were established, 115KE Gas Recirculation Building where asbestos decontamination is continuing, and 117KE Exhaust Air Filter Building additional sampling requirements extending the duration, and the 116KE Stack demolition contract award slipping into early April; and 105KE Reactor (-\$0.4M) due to Insulators being unavailable for asbestos abatement.

Waste Sites (-\$0.6M)

The negative Waste Site schedule variance is due to a point adjustment from implementation of BCR – PRC-10-027R0 and unavailability of the head house area due to demolition delays. Crews were ready but the area was inaccessible for excavation due to other work.

CM Cost Performance: (+\$0.6M/+8.4%)

100K Area Project (Facilities and Others) (+\$1.6M)

The positive variance is due to K West Deactivation (+\$2.5M) removing smaller debris units first and having experienced staff members (the baseline assumed a staff that would not be experienced in debris removal operations, so a learning curve was built in to the schedule) and 100K Utilities (+\$0.5M) 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) attributed to delay in start of decontamination activities; Facilities (-\$0.8M) due to overtime usage on the 183KW Sedimentation Basin, and up-front asbestos material purchases on the 1706KE/KER Laboratory complex; Project Management (-\$0.2M); and Assessments/Mission Support Contract (-\$0.1M) support.

Waste Sites (-\$1.0M)

Costs of ERDF waste disposal, purchase order contracts, and WSCF lab account for -\$352K of the Cost Variance. The remainder is attributed to waste site contamination quantities. The March 2010 BCR caused a point adjustment that distorted change control and true variances from actual schedule progress this month.

Base**CM Schedule Performance (-\$0.2M/-14.4%)**

The negative variance is within established reporting thresholds.

CM Cost Performance (+\$0.5M/+47.2%)**100K Area Project (Facilities and Others) (+\$0.6M)**

The positive variance is Facilities (+\$0.3M) due to 116KW Stack where all resources were re-assigned to other projects until the explosives demolition contract is awarded in early April and 183.5/183.6KW Lime Feeder Buildings where the demolition budgeted in March won't occur any labor costs until April; and Assessments/Mission Support Contract (+\$0.3M) support.

Waste Sites (-\$0.1M)

The negative Waste Site variance is a combination of numerous small items which are within 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)	Estimate at Completion (EAC)	Variance at Completion (VAC)
ARRA	70.5	67.7	44.3	(2.9)	-4.1	23.4	34.5	223.5	162.1	61.5
Base	<u>14.2</u>	<u>14.3</u>	<u>12.2</u>	<u>0.1</u>	0.8	<u>2.1</u>	14.9	<u>335.5</u>	<u>363.0</u>	<u>-27.6</u>
Total	84.7	82.0	56.5	(2.8)	-3.3	25.5	31.1	559.0	525.1	33.9

Numbers are rounded to the nearest \$0.1M.

ARRA**CTD Schedule Performance: (-\$2.9M/-4.1%)**

The negative variance is within established reporting thresholds.

CTD Cost Performance: (+\$23.4M/+34.5%)**100K Area Project (Facilities and Others) (+\$15.6M)**

The positive variance is from Facilities (+\$8.1M) due to efficiencies of scale for concurrent demolition, K West deactivation (+\$5.7M) for the debris removal campaign removing smaller debris units first and having experienced staff members (the baseline assumed a staff that would not be experienced in debris removal operations, so a learning curve was built in to the schedule), utilities reroutes (+\$2.3M) where procurement performance was inadvertently taken in January but won't actually be achieved until May, 105KE Reactor Disposition (+\$0.8M) 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 (-\$1.3M) where general site cleanup labor has been utilized on site cleanup work scope.

Waste Sites (-\$0.1M)

The negative Waste Site variance is a combination of numerous small items which are individually insignificant.

Project Support & Services (+\$7.9M)

General and Administrative achieved efficient use of assigned resources.

Base**CTD Schedule Performance (+\$0.1M/+0.8%)**

The positive variance is within established reporting thresholds.

CTD Cost Performance (+\$2.1M/+14.9%)**100K Area Project (Facilities and Others) (+\$2.6M)**

The positive cost variance is due to 105KE Reactor Core Removal (+\$2.9M) work efficiency on deactivation 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 (-\$0.4M) where the 1706KE/KEL/KER complex above-grade demolition required more resources due to its complexity and Mission Support Contractor support (-\$0.1M) where services have been used more extensively as planned.

Waste Sites (-\$0.5M)

Waste Sites negative variance is due to multiple reasons including the acquisition of additional personnel and equipment waiting for D-4 facility completion, and contamination quantities greater than planned.

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	122.2	85.3	36.8
Base	<u>20.9</u>	<u>23.8</u>	<u>(2.9)</u>
Total	143.1	109.1	33.9

Numbers are rounded to the nearest \$0.1M.

Funds/Variance Analysis:

BCR-PRC-10-024 will be processed in April to move the 183.2KE Sedimentation Basin/183.3KE Filter Basin/183.7KE Tunnel and discrete portions of the 105KE reactor 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

BCR-PRC-10-027R0, Re-sequencing Waste Site Remediation within PBS RL-0041.

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.