

Section D

Soil and Groundwater Remediation Project (RL-0030)



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PROJECT SUMMARY

Work included pump-and-treat (P&T) operations, Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) remedial process documentation for the River Corridor and Central Plateau. Sampling and groundwater treatment completed in June includes the following:

- Collected 1,356 samples, resulting in 3,070 analyses.
- 21.4M gallons groundwater treated by KX treatment facility
- 8.6M gallons groundwater treated by KW treatment facility
- 9.7M gallons groundwater treated by KR-4 treatment facility
- 31.8M gallons groundwater treated by HX treatment facility
- 23.6M gallons groundwater treated by DX treatment facility
- 0.1M gallon groundwater treated by TX/TY well pumps
- 95.3M gallons of groundwater treated total

EMS Objectives and Target Status

Objective#	Objective	Target	Due Date	Status
12-EMS-SGWR-OB1-T1	Reduce the release of toxic and/or hazardous material	Treat 1 billion gallons of groundwater from all Pump & Treat systems during FY2012. This assumes that existing P&T facilities continue to operate at or near current production /through put levels.	9/30/12	On Schedule
		Review and tally total number of gallons treated	Monthly	881.5M Gallons through 6/30/12

TARGET ZERO PERFORMANCE

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	0	N/A
Total Recordable Injuries	0	4	N/A
First Aid Cases	2	52	<p>6/13/2012 – Employee fell backwards and hit her head while wrestling a hose connection loose. (22795) S&GRP</p> <p>6/20/2012 – Employee picked up a box containing empty glass sample bottles and as she turned to leave the room experienced pain under her shoulder blade. (22805) S&GRP</p>
Near-Misses	0	1	N/A

KEY ACCOMPLISHMENTS

Base - RL-0030.C1 –GW Remedy Implementation

Engineering Projects and Construction (EPC) Projects in Support of Soil and Groundwater Remediation Project (S&GRP) - Base

- 200W P&T: Completed all Acceptance Test Procedures (ATPs) (23 of 23 complete) as of June 22, 2012. The Integrated Acceptance Test Procedure (IATP) field checks started on April 30, 2012 and were completed on June 25, 2012. Turnover to operations was successful on June 28, 2012.

Base - RL-0030.01 RL 30 Operations

Strategic Integration

- Remediation Optimization Study: The draft Remediation Optimization Study has been completed and formally transmitted to DOE-RL. Comments from DOE-RL were requested by July 31, 2012 to facilitate completion of the final document by September 30, 2012.
- Environmental Program and Strategic Planning staff supported EPA's River Corridor cleanup workshops in Seattle, Portland and Hood River. The purpose of the workshops was to set the context for the upcoming cleanup decisions along Hanford's River Corridor, foster opportunities for dialogue between agency representatives and the public, address questions, and identify key points of interest from the public and stakeholder groups.

Environmental Databases

- Prototype of WAL-E (Well Access List- Electronic) completed. WAL-E automates the review of the well access list before wells are added to the water level measurements sampling performed by FLEDG (Field Logging and Electronic Data Gathering). This software will provide a consistent design approach between the client and web components of the system.

Technical Integration

- Completed a presentation that discusses the technical justification and “high level sensitivity analysis” for the recharge rate used in the River Corridor RI/FS documents. Provided the presentation to DOE-RL as a basis for discussion with the Regulators.
- Completed hardware specification for proposing a replacement cluster to support future modeling calculation needs. Evaluation of the specification is underway at MSA, system pricing estimates will be provided based upon the specification.

River Corridor

100-KR-4

- RI/FS Report and Proposed Plan:
 - Concurrence reached with RL and provided the working draft of Rev 0 to EPA.
 - Advance Notice sent out via ListServe announcing upcoming public comment period.
- All 100-K pump-and-treat systems completed conversion to SIR-700. KR4 is now transitioned to SIR-700 resin.

300-FF-5

- The Draft Rev. 0 RI/FS Report and Draft Rev. 0 Proposed Plan were provided to RL for their review and comment on June 12 and June 7, respectively.

Central Plateau

200-UP-1 Operable Unit – Base

- The Rev.0 Remedial Investigation/Feasibility Study (RI/FS) report and Proposed Plan are being finalized based on EPA and DOE comments received in June, and resolution of outstanding issues (e.g., Interim versus final ROD, Iodine ¹²⁹ technology evaluation scope). The start of the public review period is being planned for mid-July.
- Construction and ATP of the S-SX extraction system was completed. Scheduled system startup is no later than August 31, 2012.

200-ZP-1 Operable Unit - Base

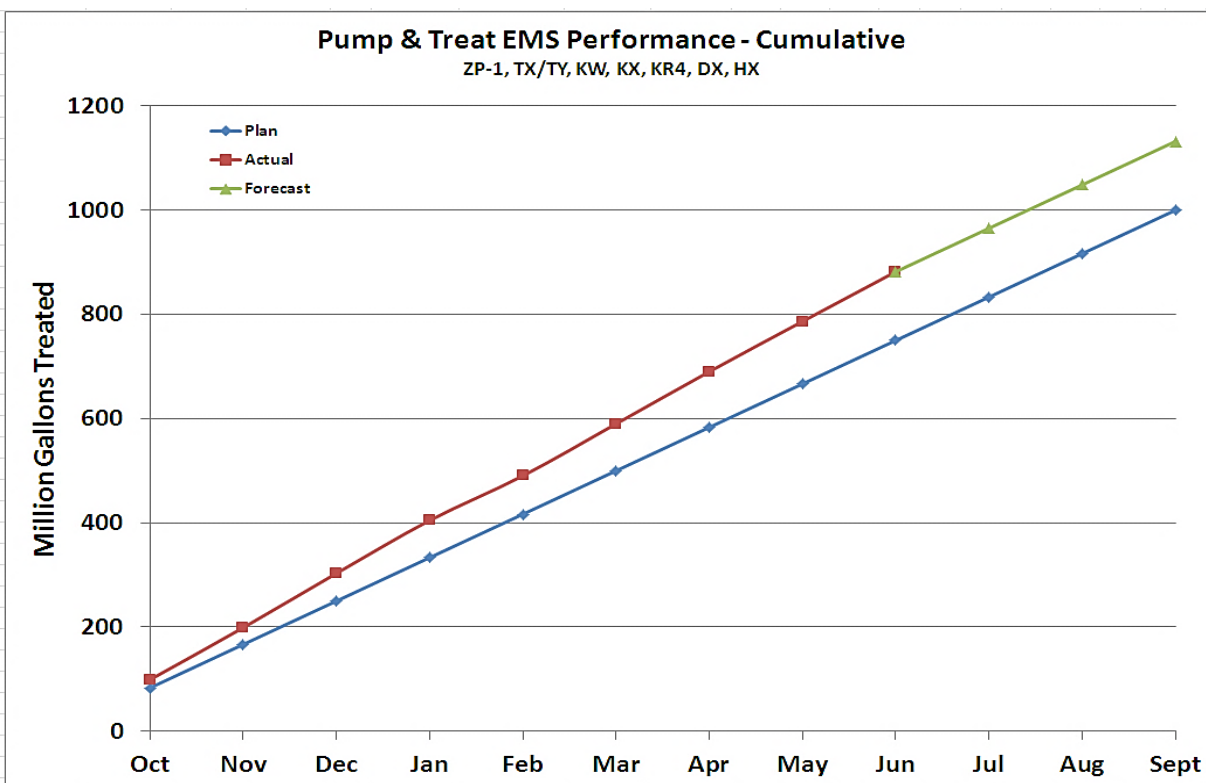
- 200 West P&T system has been turned over from EPC to S&GRP.
- Operational Testing for the 200 West P&T system has been initiated.

200-DV-1 Operable Unit – Base

- The Desiccation Test Report (DOE/RL-2012-45, Rev. 0) was transmitted to RL on June 13, 2012 for further transmittal to the EPA and Ecology on June 20, 2012. This document was prepared to meet TPA Milestone M-015-110D due June 30, 2012.
- The B Area perched water removal system continues to operate at a rate of approximately 2,100 gallons per week. By the end of June 2012, approximately 41,825 gallons of effluent have been removed from the perched water zone this fiscal year.

Pump and Treat Operations – Base

P&T Operations is trending ahead of the goal of reaching one billion gallons of treated contaminated groundwater in FY2012.



MAJOR ISSUES

Issue - The number of comments on CERCLA document comments and the need for policy and technical decisions is impacting contractual delivery due dates and decreasing float on major TPA Milestone M-015-00D “DOE shall complete the RI/FS process through the submittal of a Proposed Plan for all 100 and 300 Area operable units”.

Corrective Action -

- Maintain list of policy and technical decisions that remain open and have been resolved
- Development of detailed Field Execution Schedules
- Engagement of Assistant Manager for Central Plateau (AMCP) Management for technical decisions
- Identified additional resources necessary to meet schedule
- Partnering sessions between RL and CHPRC
- BCR processed to address the realized risks

Status - AMCP Management is working with the Regulators to determine the appropriate path forward on policy level decisions. Additional resources have been obtained and are fully engaged in the completion of the CERCLA documents.

Issue - The 200 West Groundwater Treatment Facility Project has realized several work activities resulting in an increased Estimate to Complete (ETC) with an increased Variance at Completion (VAC). The changes in work activities have cost and schedule impacts. The extension of the retained staffing to complete the project and turn over to Operations was not included in the resource budget. The major areas of impact are:




- Vendor Equipment Repairs
- Well capacity and Fiber Optic
- Odor Control and Sludge Stabilization System (Lime)
- Programming Support/ Integration of Package Software Systems
- Ion Exchange Tank Repairs
- As-Building and Red Line Drawings




Corrective Action - The project continues to work the funding issues with the primary effort focused on claims negotiations and contract closeout.



















Status – Project turned over to operations with final contract negotiations continuing.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

 Working - No Concerns
 Working - Concern
 Working - Critical

 Increased Confidence
 No Change
 Decreased Confidence

Risk Title	Risk Strategy/Handling	Assessment		Comments
		Month	Trend	
RL-030/WBS 030				
SGW-062: WSCF Availability or Performance	Develop workarounds to prepare samples for off-site analysis, evaluate hold-times and collect additional samples for Quality Control failures (hold-times)			Due to the issues at WSCF thousands of samples had to be sent to offsite labs for analysis. Due to the requirements of repackaging and shipping these samples offsite additional costs have been incurred. Costs have increased due to the overtime required to recover schedule.
SGW-080: 100-BC-5 Pump and Treat Required	This risk is accepted as written and will be monitored throughout work execution. CHPRC will implement the final action under the ROD; however, the actions may require a Request for Proposal (RFP)			EPA concurred that need for pump and treat will be evaluated as part of RI/FS process. The draft feasibility study indicate a treatment system may be required as part of a final action under the future Record of Decision. <i>Current alternative discussions indicate that treatment is highly likely.</i>
SGW-081: 100-FR-3 Pump and Treat Required	This risk is accepted as written and will be monitored throughout work execution. CHPRC will implement the final action under the ROD; however, the actions may require a RFP			EPA concurred that need for pump and treat will be evaluated as part of RI/FS process. The draft feasibility study is evaluating P&T as viable in two alternatives. <i>Current alternative discussions indicate that treatment is highly likely as a preferred alternative.</i>
PRC-021A: Workforce Restructuring Caused by Funding Changes	Revise project schedules and work planning documents around workforce restructuring timelines. Work with other contractors to minimize impacts associated with Bump and Roll.			Based on FY-13 funding projections, CHPRC is initiating a workforce restructuring act.
SGW-008A: Significant Regulatory Comments - 100-KR-4	Routine meetings are already held with the regulators and RL during document development. No additional mitigation is feasible. Risk is accepted.			Document has undergone significant changes due to EPA and RL comments received on Draft A document. These modifications have been reviewed with RL and currently reviewing with EPA. <i>Note: the risk is realized and addressed in BCR-030-12-021R0.</i>
SGW-008B: Regulatory Document Comments for 100-HR-3	Routine meetings are being held with regulators during document development; no additional mitigation is feasible.			Routine monthly meetings with Ecology will continue through document development; additional emphasis will be placed on the RI/FS reports in future meetings. <i>Note: the risk is realized and addressed in BCR-030-12-021R0.</i>
SGW-008C: Regulatory Document Comments - 100-BC-5	Routine meetings are being held with regulators during document development.			Routine meetings with EPA will continue through document development. <i>Note: the risk is realized and addressed in BCR-030-12-021R0.</i>
SGW-008D: Regulatory Document Comments - 100-NR-2	Routine meetings are being held with Ecology during document development and the 100K concepts are being incorporated. No additional mitigation is feasible at this time. Risk is accepted.			Routine meetings with Ecology will continue through document development. <i>Note: the risk is realized and addressed in BCR-030-12-021R0.</i>
SGW-008E: Regulatory Document Comments – 100-FR-3	Routine meetings are being held with regulators during document development			Routine meetings with EPA will continue through document development. <i>Note: the risk is realized and addressed in BCR-030-12-021R0.</i>

Risk Title	Risk Strategy/Handling	Assessment		Comments
		Month	Trend	
RL-030/WBS 030				
SGW-008H: Regulatory Document Comments – 200-UP-1	Routine meetings are being held with regulators during document development.	●	↔	Routine meetings with Regulators will continue through document development. Numerous meetings were also held throughout the regulatory review and comment incorporation process for the RI/FS and PP, which are in the process of being finalized for release.
SGW-008J: Regulatory Document Comments - 300-FF-5	Routine meetings were held with the regulators and RL during document development. Additional meetings are being held during document review. No additional mitigation is feasible. Risk is accepted.	●	↔	EPA comments were received in February resulting in several meetings to resolve. Additional EPA comments were received in April, which have been resolved. No changes in risk until RL's and EPA's concurrence on the revised documents are received. Currently completing the incorporation of 100-K lessons learned. Note: the risk is realized and addressed in BCR-030-12-021R0.
SGW-017: Groundwater Flow Less Than Planned -200 West P&T	Well installation was accelerated to provide more definitive basis for well production rates. Since it was determined that additional wells would be required to meet 2000 gpm, resources have already been utilized to update the test plan and perform associated construction activities (e.g. installation of well racks, tie-in of wells, lay HDPE). If performance of facility is unacceptable during testing or startup of operations, new wells may be required to meet ROD requirements. Interim injection wells are being hooked up at this time for additional injection capacity.	●	↔	Modifications performed at ITB #2. Additional modifications may be required at other ITB #1. This issue will be addressed through acceptance testing process.
SGW-031A: P&T Design Changes - 200 West	Identify required design changes early in the process to minimize schedule impact. Work closely with the client and regulators to minimize impact to schedule. Incorporate design changes quickly to minimize cost impacts and avoid rework. Supplement Eng/QA/QC support and contracts for special inspection so as to finalize engineering requirements.	●	↔	Risk Passed – Turnover to Operations scheduled 6/28/2012. Residual Risk is addressed in SGW-135 and SGW-153.
SGW-083, River Corridor Characterization	Additional characterization wells are required to support the development of an RI/FS and Proposed Plan for the River Corridor groundwater operable units or to investigate findings from WCH data gathering.	●	↔	WCH is gathering data in and along the river. This data could result in the need to install additional characterization wells in the River Corridor operable units. Information and conclusions from WCH risk assessments is raising questions regarding the Riparian Zone and Columbia River component human health risk assessment.

Risk Title	Risk Strategy/Handling	Assessment		Comments
		Month	Trend	
RL-030/WBS 030				
SGW-086: 200 W P&T Startup	Operations and engineering input has been obtained on the operating system controls to standardize the controls to those used for other pump and treat systems to the extent possible. Corporate design team and technologists experienced in bioremediation have been deployed to support the design effort and system startup. Resident engineer from corporate will also be supplied to support startup and testing of the new process equipment. Initiate preparation of CAT/ATP/OTP early. Early integration with contractors for incremental testing (e.g. isolate transfer buildings for a more efficient CAT/ATP). Notify vendors of necessary reconfigurations as early as possible so as to minimize schedule and cost impact.	●	↔	Risk Passed – Turnover to Operations scheduled 6/28/2012. Residual Risk is addressed in SGW-135 and SGW-153
SGW-092: 200 West P&T Operating Requirements	As preventative maintenance packages proceed through the development process, staffing levels will be evaluated to ensure continuous P&T operation.	●	↔	Overtime is utilized to keep scope on schedule for readiness/turnover. As preventative maintenance packages proceed through the development process, staffing levels will be evaluated to ensure continuous P&T operation.
SGW-098: 200-W P&T - Schedule Impacts Due to Scope Increases	As these issues are identified, they will be listed with other emerging issues. At this point, further mitigation tactics will be determined.	●	↔	Risk Passed – Turnover to Operations scheduled 6/28/2012. Residual Risk is addressed in SGW-135 and SGW-153.
SGW-119: Integration of Lime system Vendor Package Equipment into Facility Construction	Send representatives to fabrication facilities to inspect processes. PRC is actively managing subcontractors by holding schedule accountability meetings twice per week. Project will retrofit as required to facilitate progress.	●	↔	Risk Passed – Turnover to Operations scheduled 6/28/2012. Residual Risk is addressed in SGW-135 and SGW-153.
SGW-121: 200 West P&T Work - Software Development & Verification/Validation	Monitor progress of software development and apply additional resources as necessary. Visit vendors or coordinate vendors' visits to the site as necessary to facilitate integration testing.	●	↔	Risk Passed – Turnover to Operations scheduled 6/28/2012. Residual Risk is addressed in SGW-135 and SGW-153.
SGW-131: 200 W P&T - Readiness Review and Turnover	Project strategy has been to include design authority resources early in development of processes/design. Once issues are identified, expedite design changes to support startup.	●	↔	Risk Passed – Turnover to Operations scheduled 6/28/2012. Residual Risk is addressed in SGW-135 and SGW-153.
SGW-135: Major Equipment Failure at 200W Pump & Treat	Utilize aggressive Corrective Maintenance program to ensure that staff is trained on new equipment. Perform design modifications/procedure revisions to accommodate unexpected conditions. Continue to work corrective maintenance issues as identified during acceptance testing.	●	↔	Continuing to resolve outstanding issues identified associated with construction risks. Ready for acceptance to operate.
SGW-153: 200W P&T Contract Closeout Claims	Continue to negotiate with subcontractors to minimize the financial impact.	●	↔	Continuing to work project closeout with the General Contractor and their subcontractors

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

WBS 030/RL-0030 Soil and Groundwater Remediation	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Base RL-0030.C1 GW Remedy Implement	2.0	2.0	1.5	(0.0)	-2.1	0.4	21.7
ARRA RL-0030.R1.1 Cleanup Operations	0.0	0.0	(0.0)	0.0	0.0	(0.0)	0.0
ARRA RL-0030.R1.2 Well Drilling Operations	<u>0.0</u>	<u>0.0</u>	<u>(0.0)</u>	<u>0.0</u>	0.0	<u>0.0</u>	0.0
Subtotal RL-0030.C	2.0	2.0	1.5	(0.0)	-2.1	0.4	24.2
Base RL-0030.O1 RL 30 (Operations)	7.0	8.3	5.9	1.3	18.2	2.4	29.2
ARRA RL-0030.R1.3 Support Operations	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	0.0	<u>(0.0)</u>	0.0
Total	9.0	10.3	7.4	1.2	13.6	2.9	28.3

Numbers are rounded to the nearest \$0.1M.

CM Schedule Performance

Current month schedule variances that exceed thresholds are as follows:

RL-0030.C (\$0.0M/-2.1%)

Base RL-0030.C1 GW Remedy Implementation (\$0.0M)

There is no current month schedule variance.

ARRA RL-0030.R1.1 Cleanup Operations (\$0.0M)

There is no current month schedule variance.

ARRA RL-0030.R1.2 Well Drilling Operations (\$0.0M)

There is no current month schedule variance.

RL-0030.O1

Base RL-0030.O1 RL 30 (Operations) (+\$1.3M)

100-BC-5 (+\$0.4M)

The favorable schedule variance is due to implementation of BCR-030-12-021R0 (RL-30 CERCLA Documentation Impacts). The BCR addressed realized risk for the RI/FS Documents. Revision to the subproject baseline had become necessary to resolve policy issues and address RL/Regulator comments. Remaining CERCLA work scope requirements have now been replanned.

100-NR-2 (+\$0.4M)

The favorable schedule variance is due to implementation of BCR-030-12-021R0 (RL-30 CERCLA Documentation Impacts). The BCR addressed realized risk for the RI/FS Documents. Revision to the subproject baseline had become necessary to resolve policy issues and address RL/Regulator comments. Remaining CERCLA work scope requirements have now been replanned.

100-HR-3 (+\$0.3M)

The favorable schedule variance is due to implementation of BCR-030-12-021R0 (RL-30 CERCLA Documentation Impacts). The BCR addressed realized risk for the RI/FS Documents. Revision to the subproject baseline had become necessary to resolve policy issues and address RL/Regulator comments. Remaining CERCLA work scope requirements have now been replanned.

100-FR-3 (+\$0.4M)

The favorable schedule variance is due to implementation of BCR-030-12-021R0 (RL-30 CERCLA Documentation Impacts). The BCR addressed realized risk for the RI/FS Documents. Revision to the subproject baseline had become necessary to resolve policy issues and address RL/Regulator comments. Remaining CERCLA work scope requirements have now been replanned.

200-ZP-1 (-\$0.3M)

Minor modifications and sampling analysis activities were delayed for the 200W Pump and Treat Facility due to the schedule slippage for construction completion and operations start-up. The P&T facility has now been turned over to operations for the OTP which should minimize additional schedule delays.

Deep Vadose Zone OU (-\$0.3M)

The unfavorable schedule variance is a result of the decision that was made to stop work on the BY Crib characterization activities due to funding constraints in FY12. Project work scope was prioritized and work was stopped on the BY Cribs. The work scope will be deferred to the out years in a future BCR.

RL-0030.R1.3

ARRA RL-0030.R1.3 Support Operations (+\$0.0M)

There is no current month schedule variance.

CM Cost Performance

Current month cost variances that exceed thresholds are as follows:

RL-0030.C (+\$0.4M/+24.2%)

Base RL-0030.C1 GW Remedy Implementation (+\$0.4M)

200-ZP-1 (+\$0.4M)

The current month positive cost variance is a result an under accrual of the Skanska contract. The corrected accrual/cost will be reflected in July with no overall impact to the total project cost.

ARRA RL-0030.R1.1 Cleanup Operations (\$0.0M)

All current month variances are within reporting thresholds.

ARRA RL-0030.R1.2 Well Drilling Operations (\$0.0M)

All current month variances are within reporting thresholds.

RL-0030.O1

Base RL-0030.O1 RL 30 (Operations) (+\$2.4M/29.2%)

GW Monitoring and Perf Assessments (-\$0.6M)

The current month cost overrun is a result of: 1) increased number of samples required for the month to recover the backlog of unsampled wells, 2) change in WSCF billing methodology – billing when the data packages are complete (there was a backlog of data packages that were completed), and 3) an approximate 25% increase in WSCF rates. It is anticipated that the WSCF lab costs will exceed the annual budget in this WBS but will be within overall S&GW WSCF budget for the fiscal year.

200-BC-5 (+\$0.6M)

The favorable cost variance is due to implementation of BCR-030-12-021R0 (RL-30 CERCLA Documentation Impacts). A point adjustment in the current month for prior month work performed resulted in a positive cost variance for the month. The BCR addressed realized risk for the RI/FS Documents. Revision to the subproject baseline had become necessary to resolve policy issues and address RL/Regulator comments. Remaining CERCLA work scope requirements have now been replanned.

100-KR-4 (+\$0.7M)

The favorable cost variance is due to implementation of BCR-030-12-021R0 (RL-30 CERCLA Documentation Impacts). A point adjustment in the current month for prior month work performed resulted in a positive cost variance for the month. The BCR addressed realized risk for the RI/FS Documents. Revision to the subproject baseline had become necessary to resolve policy issues and address RL/Regulator comments. Remaining CERCLA work scope requirements have now been replanned.

100-NR-2 (+\$0.3M)

The favorable cost variance is due to implementation of BCR-030-12-021R0 (RL-30 CERCLA Documentation Impacts). A point adjustment in the current month for prior month work performed resulted in a positive cost variance for the month. The BCR addressed realized risk for the RI/FS Documents. Revision to the subproject baseline had become necessary to resolve policy issues and address RL/Regulator comments. Remaining CERCLA work scope requirements have now been replanned.

100-HR-3 (+\$0.3M)

The favorable cost variance is due to implementation of BCR-030-12-021R0 (RL-30 CERCLA Documentation Impacts). A point adjustment in the current month for prior month work performed resulted in a positive cost variance for the month. The BCR addressed realized risk for the RI/FS Documents. Revision to the subproject baseline had become necessary to resolve policy issues and address RL/Regulator comments. Remaining CERCLA work scope requirements have now been replanned.

100-FR-3 (+\$0.3M)

The favorable cost variance is due to implementation of BCR-030-12-021R0 (RL-30 CERCLA Documentation Impacts). A point adjustment in the current month for prior month work performed resulted in a positive cost variance for the month. The BCR addressed realized risk for the RI/FS Documents. Revision to the subproject baseline had become necessary to resolve policy issues and address RL/Regulator comments. Remaining CERCLA work scope requirements have now been replanned.

200-ZP-1 (-0.3M)

The current month cost variance is a result the delay in turning over the 200 W Pump & Treat Facility to operations. The preventive/corrective maintenance and process monitoring accounts function somewhat like an LOE and therefore performance was taken without the associated costs resulting in a current month underrun. The underrun is expected to decrease as the facility has now been turned over to operations for OTP.

300-FF-5 (+\$0.3M)

The favorable cost variance is due to implementation of BCR-030-12-021R0 (RL-30 CERCLA Documentation Impacts). A point adjustment in the current month for prior month work performed resulted in a positive cost variance for the month. The BCR addressed realized risk for the RI/FS Documents. Revision to the subproject baseline had become necessary to resolve policy issues and address RL/Regulator comments. Remaining CERCLA work scope requirements have now been replanned.

RL-0030.R1.3**ARRA RL-0030.R1.3 Support Operations (\$0.0M)**

All current month variances are within reporting thresholds.

Contract-to-Date (\$M)

WBS 030/ RL-0030 Soil and Groundwater Remediation	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)
Base RL-0030.C1 GW Remedy Implement	72.6	72.5	79.2	(0.0)	-0.0	(6.7)	-9.3	73.4	81.8	(8.4)
ARRA RL-0030.R1.1 Cleanup Operations	175.0	175.0	174.8	0.0	0.0	0.2	0.1	175.0	174.8	0.2
ARRA RL-0030.R1.2 Well Drilling Operations	<u>40.7</u>	<u>40.7</u>	<u>38.4</u>	<u>0.0</u>	0.0	<u>2.4</u>	5.8	40.7	38.4	2.4
Subtotal RL-0030.C	288.3	288.3	292.4	(0.0)	-0.0	(4.1)	-1.4	289.1	295.0	(5.8)
Base RL-0030.O1 RL 30 (Operations)	438.9	440.5	440.2	1.6	0.4	0.4	0.1	1,156.6	1,150.7	5.9
ARRA RL-0030.R1.3 Support Operations	<u>51.4</u>	<u>51.4</u>	<u>51.1</u>	<u>(0.0)</u>	-0.0	<u>0.3</u>	0.5	51.4	51.1	0.3
Total	<u>778.6</u>	<u>780.2</u>	<u>783.4</u>	<u>1.6</u>	0.2	<u>(3.2)</u>	-0.4	1,497.1	1,496.8	0.3

Numbers are rounded to the nearest \$0.1M.

CTD Schedule Performance

The primary contributors to the schedule variances that exceed the reporting thresholds are discussed below:

RL-0030.C (-\$0.0M/-0.0%)

Base RL-0030.C1 GW Remedy Implementation (-\$0.0M)

All CTD variances are within reporting thresholds.

ARRA RL-0030.R1.1 Cleanup Operations (+\$0.0M)

Scope is complete. There is no contract to date schedule variance.

ARRA RL-0030.R1.2 Well Drilling Operations (+\$0.0M)

Scope is complete. There is no contract to date schedule variance.

RL-0030.O1

Base RL-0030.O1 RL 30 (Operations) (+\$1.6M/+0.4%)

100 NR-2 Operable Unit (+\$2.6M)

Positive schedule variance has resulted from performing barrier expansion and sampling support that was planned in FY13 and performed in FY11 and FY12.

200-ZP-1 (-\$0.9M)

Minor modifications and sampling analysis activities have been delayed due to late completion of construction for the 200W Pump and Treat Facility. The P&T facility has now been turned over to operations for the OTP which should minimize additional schedule delays.

RL-0030.R1.3

ARRA RL-0030.R1.3 Support Operations (+\$0.0M)

Scope is complete. There is no contract to date schedule variance.

CTD Cost Performance

The primary contributors to the cost variances that exceed the reporting thresholds are discussed below:

RL-0030.C (-\$4.1/-1.4%)

Base RL-0030.C1 GW Remedy Implementation (-\$6.7M)

200-ZP-1 Operable Unit (-\$6.7M)

Major contributors to the variance are as follows:

- 200W P&T construction negative CV is associated with the CHPRC accrued costs for Construction Contractor's completed work scope defined in Change Notifications which are in the process of definitization. The costs are associated with the resources expended to complete the P&T facility by the end of FY2012 including added shifts, overtime, and logistics of working parallel activities.
- Sludge Stabilization System installation is costing more than budgeted. There have been significant delays in long lead equipment, field installation issues, design changes and schedule extensions that have resulted in cost overruns.
- 200W P&T project support, engineering and field supervision costs have increased due to the longer than expected schedule to complete construction punchlist and the impacts on ATP activities.
- Interim Operations reflects significant progress and cost underruns achieved to date for System Calibration.
- Design of the permanent hookup of well EW-1 was lower than planned as only minor changes were needed to an existing design.
- Cost for performing general operating and maintenance and minor modification activities have been lower than planned as the system has been running smoothly.
- Cost for collecting depth-discrete groundwater and soil samples during the installation of new wells was less than planned. This was largely due to drilling footage achieved per day which increased significantly since FY09, in turn required fewer labor hours.
- 200W P&T Remedial Design/Remedial Action work plan and preliminary design activities were completed with fewer resources than planned. This is due to fewer RL and EPA review comments being received than planned.

ARRA RL-0030.R1.1 Cleanup Operations (+\$0.2M)

Contract to Date variances are within threshold.

ARRA RL-0030.R1.2 Well Drilling Operations (+\$2.4M)

Drilling (+\$2.4M)

The positive cost variance is due to efficiencies and savings obtained in drilling for 100-NR-2 and 200-BP-5 wells. Cost efficiencies have been obtained through an aggressive drilling schedule with savings in support personnel and faster drilling methods. Well decommissioning has also been completed for less than planned.

RL-0030.O1

Base RL-0030.O1 RL 30 (Operations) (\$0.4M/0.1%)

Integration & Assessments (+\$4.7M)

Due to higher priority River Corridor work, Central Plateau decision documents and related strategy development have been delayed from the initial schedule in the CHPRC contract (originally CP decisions were to be completed in FY 2012 - and now they are out beyond FY 2014).

Drilling (-\$2.5M)

Radiological contamination encountered on five NR-2 wells has caused additional supporting resource requirements (Health Physics Technicians). In order to recover schedule additional well drilling rigs were used, resulting in additional overruns to the project. Also, cost for remaining casing at the completion of the project was accrued as it cannot be released to the contractor.

100-NR-2 OU (+\$3.0M)

Barrier expansion and sampling scope, chemical treatment and maintenance scope, jet grouting pilot test work, RI/FS work plan and interim proposed plan reporting were performed more efficiently than planned leading to the positive cost variance.

100-HR-3 OU (-\$3.1M)

Primary contributors to the negative cost variance are as follows:

- 100 DX- Extensive effort required to design the pH adjustment system as the design components were more difficult and required more resources than budgeted, cost overruns in completing the OU Remedial Process Optimization studies.
- 100 DX -The acceptance test plan (ATP) and the operational test plan (OTP) was more involved than planned with resource requirements exceeding the budget for the scope, additionally the work was performed in freezing weather requiring 24/7 attention to prevent freezing of pipes to continue water flow to and from wells.
- Cost of realigning wells from DR-5 to 100 DX was greater than planned as a result of continuing operation of DR-5, until DX was fully operational.
- 100 HX- Copper material costs increased significantly between estimate and procurement of materials resulting in cost over-runs. Additionally the ATP was more involved than planned with resource requirements exceeding the budget for the scope.
- Additional time and resources being spent on internal CERCLA (RI/FS) document development as a result of extensive RL comments.

200-ZP-1 OU (+\$1.4M)

Labor and subcontract cost for general operations and minor modifications support for 200-ZP-1 interim pump & treat facility is significantly less than planned. The system is running very smoothly with less adjustment than had been anticipated. Efficiencies are expected to continue with the interim facility operations until startup of the new 200 West Pump & Treat facility.

200 PW-1 OU (+\$1.3M)

Labor and subcontract cost for general operations and minor modifications support is less than planned. In addition, efficiencies and savings experienced with the Soil Vapor Extraction (SVE) system testing prior to March 2010 as well as the removal of two old SVE units.

Ramp-up and Transition (-\$2.8M)

The negative cost variance was driven by prior year increased Project Services Distribution to RL-0030.

RL-0030.R1.3**ARRA RL-0030.R1.3 Support Operations (+\$0.3M/+0.5%)**Regulatory Decision and Closure Integration (+\$1.7M)

The positive cost variance is primarily due to completing work scope more efficiently than planned, primarily in the areas of multi-incremental sampling (using existing documentation and direct haul rather than staging), and borehole drilling and landfill characterization (competitive subcontracting of drilling support and efficient field support).

Ramp-up and Transition (-\$2.0M)

The negative cost variance was driven by increased prior year Project Services Distribution to RL-0030.

Estimate at Completion (EAC)

ARRA – The projected variance at completion is +1.1%.

Base – The projected variance at completion of -0.2% is spread among several operational areas and is not considered significant.

ARRA – The EAC change from the previous month is within reporting thresholds.

Base – The EAC change from the previous month is within reporting thresholds.

FUNDS vs. SPEND FORECAST (\$M)

WBS 030/ RL-0030 Soil and Groundwater Remediation	FY2012		
	Projected Funding	Spending Forecast	Spend Variance
ARRA	0.6	0.6	0.0
Base	124.6	124.6	0.0
RL-0030 Total	125.2	125.2	0.0

Numbers are rounded to the nearest \$0.1M.

Funds/Variance Analysis

Funding includes FY2011 carryover and FY2012 new Budget Authority.

Critical Path Schedule

Critical path analysis can be provided upon request.

Baseline Change Requests

BCRA-030-12-022R0 - *RL-30 June General Administrative Changes*

BCR-030-12-021R0 - *RL-30 CERCLA Documentation Impacts*

FY2012 Management Reserve (Funded):

ARRA = \$0.0M

Base = \$0.0M

\$2.4M of MR was used in June, see Management Reserve table in the CHPRC Overview.

SELF-PERFORMED WORK

The Section H. clause entitled “Self-Performed Work” is addressed in the Overview.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.

MILESTONE STATUS

Tri-Party Agreement (TPA) milestones represent significant events in project execution. DOE Enforceable Agreement milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The PMB Revision 3, implemented in November 2011, and subsequent approved BCRs define CHPRC planning with respect to TPA milestones. The following table is a one year look ahead of commitments and TPA enforceable milestones and non-enforceable target due dates.

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-015-110D	Submit Technicum-99 Pilot-scale Treatment Study Test Report as an element of the Remedial Investigation for the 200-WA-1 OU to EPA.	TPA	6/30/12	6/20/12		Complete: CHPRC-1202082 letter to RL. RL transmittal letter to EPA 12-AMRP-0067 dated June 20, 2012
M-091-40L-034	Submit January to March 2nd Quarter FY-12 Burial Ground Sample Results.	TPA	6/15/12	6/11/12		Complete Presented at 4/26/12 PMM, signed by RL on 6/11/12
M-015-70-T01	Submit RI/FS Report & PP for 100-HR-1/2/3 and 100-DR-1/2 OUs	TPA	1/12/12 (Original Due Date: 11/24/11)		12/14/12	Missed. Working with RL regarding a recovery schedule and path forward.
M-015-68-T01	Submit RI/FS Report & PP for 100-BC-1/2/5 OUs	TPA	3/15/12 (Original Due Date: 11/30/11)		12/28/12	Missed. Working with RL regarding a recovery schedule and path forward.
M-015-64-T01	Submit RI/FS Report and PP for 100-FR-1/2/3 and 100-IU-2/6	TPA	5/14/12 (Original Due Date: 12/17/11)		12/28/12	Missed. Working with DOE regarding a recovery schedule and path forward

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-016-120	GW Treatment System <50 gpm for Tc-99 Plume at S/SX Tank Farm	TPA	8/31/12		8/1/12	On Schedule
M-024-63-T01	Conclude Discussions of Well Commitments Initiated Under M-024-058 and Add a New Interim M-024 Milestone Commitment for 12/31/15	TPA	8/1/12		7/20/12	On Schedule
M-091-40L-035	Submit April to June 3 rd Quarter FY-12 Burial Ground Sample Results	TPA	9/15/12		9/15/12	On Schedule
M-016-110-T01	Take Actions to Contain or Remediate Hexavalent Cr 100A GW Plumes	TPA	12/31/12		9/28/12	On Schedule White paper providing basis for acceptance is being reviewed by RL.
M-015-62-T01	Submit a FS/PP for 100-NR-2-1/2 Operable Units Including groundwater and soil.	TPA	9/17/12		12/28/12	In Jeopardy
M-085-01	Submit a change package to establish a date for major milestone M-085-00.	TPA	9/30/12		9/30/12	On Schedule
M-091-40L-036	PMM Submittal Jul-Sep 4th Qtr FY12 Burial Ground Sample Results	TPA	12/15/12		12/15/12	On Schedule
M-015-00D	Complete RI/FS Process by Submitting PPs for all 100 & 300 Area OUs	TPA	12/31/12		12/28/12	On Schedule

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-091-40L-37	PMM Submittal Oct-Dec 1st Qtr FY13 Burial Ground Sample Results	TPA	3/15/13		3/15/13	On Schedule
M-037-03	Submit Revised Closure Plans for 216-B-3 and 216-S-10	TPA	4/30/13		4/30/13	Being worked by Ecology. Funding being evaluated.
M-024-58F	Initiate Discussions of Well Commitments	TPA	6/1/13		6/1/13	On Schedule
M-091-40L-038	PMM Submittal Jan-Mar 2nd Qtr FY13 Burial Ground Sample Results	TPA	6/15/13		6/15/13	On Schedule

SELF-PERFORMED WORK

The Section H. clause entitled "Self-Performed Work" is addressed in the Overview.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.