

Section D

Soil and Groundwater Remediation Project (RL-0030)



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PROJECT SUMMARY

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

- Collected 891 samples, resulting in 9,740 results being loaded into HEIS.
- 16.1M gallons groundwater treated by ZP-1 treatment facility
- 21.0M gallons groundwater treated by KX treatment facility
- 8.6M gallons groundwater treated by KW treatment facility
- 6.8M gallons groundwater treated by KR-4 treatment facility
- 24.0M gallons groundwater treated by HX treatment facility
- 21.8M gallons groundwater treated by DX treatment facility
- 98.4M 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	98.4M Gallons through 10/31/11

TARGET ZERO PERFORMANCE

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	2	N/A
Total Recordable Injuries	0	16	N/A
First Aid Cases	1	111	10/06 – Employee reported shoulder pain while lifting and installing piping. 22387 (EPC)
Near-Misses	0	2	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

- Completed the fire acceptance test in the Radiological Building and received occupancy permits for all six buildings. Continued working through the remaining construction punch-list items. Initiated mechanical flushing and continued the execution of Acceptance Test Procedures – completing 1 of 20.

BASE - RL-0030.01 RL 30 Operations

EPC Projects in Support of S&GRP - Base

- 100-HX Groundwater Treatment Facility - Continued working project closeout activities. All construction punch-list items are complete.

Integration and Assessments

- Technical Integration**
 - Delivered RL-2011-50 Rev 0, “Regulatory Basis and Implementation of a Graded Approach to Evaluation of Groundwater Protection” to RL to obtain regulator concurrence.
- Environmental Databases**
 - Developed specialized database tools to expedite diversion of environmental samples to offsite laboratories.
- Systematic Planning Integration**
 - Completed cost estimates for 100-DH and 300 Area RI/FS documents and updated 200-UP-1.
 - Developed the process to categorize/bin regulatory agency comments on decision documents to ensure quick turnaround for revising the documents and consistent responses across documents.

River Corridor**100-KR-4 Operable Unit - Base**

- Operating KR-4, KW, and KX systems with 5.3 kg mass removed and 36.4 million gallons treated FYTD.
- Continuing the SIR-700 resin test at the KW P&T; initiating replacement at other 100K pump and treats.

100-HR-3 Operable Unit - Base

- Draft A of the D/H RI/FS report was transmitted to RL in October for 30 day RL review in accordance with the revised delivery schedule for the report.
- Operating DX, and HX systems with 69.2 kg mass removed and 45.8 million gallons treated fiscal year to date.

300-FF-5 Operable Unit – Base

- Delivered the Decisional Draft Remedial Investigation/Feasibility Study Report to RL on October 11, 2011, with revised Chapters 6 and 7 provided on October 31, 2011. (TPA M-015-72-T01 due December 31, 2011).
- Reviewed and gained concurrence on risk assessment, CSM, and alternatives.

Central Plateau**200-UP-1 Operable Unit – Base**

- Two of three extraction wells are complete. The third extraction well (C8095, east of SSY) was advanced to 297 ft bgs (GWT @ 242 and TD @ 317 ft bgs). Groundwater samples collected at 10 and 30 ft below the water table had preliminary Tc-99 concentrations of 5,500 and 726 pCi/L, respectively.

200-ZP-1 Operable Unit - Base

- Operating ZP-1 system with 16.1 mass removed and 58.7 million gallons treated FYTD.
- Cleaning of new 200 West wells and installation of down-hole piping in injection wells is complete.
- FY2011 final groundwater modeling report has been issued, SGW-50390, Rev 0, “FY2011 Simulation-Optimization of the 200-ZP-1 Remedy Using the Central Plateau Model.”

200-PW-1 SVE – Base

- Active SVE units were turned off for the year on October 31, 2011.
- Passive SVE operations are ongoing.

200-IS-1 Operable Unit – Base

- Transmitted the Draft A 200-IS-1 OU RFI/CMS & RI/FS Work Plan to RL on October 17, 2011 (TPA M-015-90 due December 31, 2011).

200-SW-2 Operable Unit – Base

- Transmitted the Draft A 200-SW-2 OU RFI/CMS & RI/FS Work Plan to RL on October 25, 2011 (TPA M-015-93A due December 31, 2011).

200-WA-1

- The decisional draft 200-WA-1 OU Work Plan is being revised to incorporate additional RL comments.

MAJOR ISSUES

Issue: Previously identified an issue with the DX/HX autodialer. The auto dialer called us if there was an alarm and no one was in the facility. There were two problems:

1. DX and HX have VOIP phones and we could not acknowledge the alarms. The auto dialer would continue to repeatedly call.
2. Also, we were not sure with the VOIP phones that we would be able to receive an alarm during a loss of power. This could result in plant damage.

Solution: Procured a cell phone module that allows the autodialer to call us via a cell phone. The cell phone is plugged into an uninterruptible power supply (UPS) battery backup. The autodialer also has an UPS. This combined with the cell phone amplifiers we installed for increased cell signal strength will ensure that we will get called during a loss of power and we will be able to acknowledge the alarms. The cell phone amplifiers are also plugged into the UPS. This issue has been resolved as an opportunity. This is the last report.

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	
SGW-001: 100-D Treatment Technology Selection Change	Review draft RD/RAWP with regulators; maintain close interface to minimize impact of changes.			No significant issues.
SGW-069: 100-HR-3 ISRM Barrier Amendment - Hexavalent Chromium Continues to Move Through Barrier	Monitor zero valence iron injection; add four wells to P&T.			DOE and Ecology have agreed to the strategy and signed a memorandum documenting the changes as insignificant. For wells will be used to supplement the barrier and capture down-gradient chromium. DX system is on line with extraction wells down gradient of the ISRM barrier.
SGW-080: 100-BC-5 Pump and Treat Required	This risk is accepted as written and will be monitored throughout work execution.			EPA concurred that need for pump and treat will be evaluated as part of RI/FS process; existing sample data and the draft feasibility study indicate a treatment system may be required as part of a final action under the future Record of Decision.
SGW-081: 100-FR-3 Pump and Treat Required	This risk is accepted as written and will be monitored throughout work execution.			EPA concurred that need for pump and treat will be evaluated as part of RI/FS process but based upon current sample data and the draft feasibility study, the need for treatment is not considered likely.
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.			Draft A comments are being received from the regulators in November. No issues are expected this month.
SGW-008B: Regulatory Document Comments for 100-HR-3	Routine meetings are being held with regulators during document development; no additional mitigation is feasible.			The Decisional Draft was reviewed by DOE. DOE comments from the K document are being incorporated into the D/H document.
SGW-008D: Regulatory Document Comments - 100-NR-2	Routine meetings are already held with the regulators and RL during document development. No additional mitigation is feasible. Risk is accepted.			No issues are expected this month.
SGW-008J: Regulatory Document Comments - 300-FF-5	Routine meetings are being held with the regulators and RL during document development. No additional mitigation is feasible. Risk is accepted.			No issues are expected this month.
SGW-008K: Regulatory Document Comments - 200-BC-1	Routine meetings are being held with the regulators and RL during document development. No additional mitigation is feasible. Risk is accepted.			No issues are expected this month.
SGW-017 - Groundwater Flow Less Than Planned - 200 West P&T (Phase I)	Project has accelerated drilling of 6 injection wells to ensure adequate injection capacity.			Hydraulic analysis was performed and as a result, project is revising pump header configuration to accommodate startup and operations at ITB #1 and ITB #2.
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.			The baseline has incorporated the realized risk from the final issuance of the "issued for construction" drawings. Construction is complete and project is entering acceptance testing phase. As these tests complete, risk associated with design will diminish.
SGW-041, Maintenance on the groundwater pump and treat systems is higher than planned due to reduced system reliability.	Shutdown of the older facilities as new facilities are brought on line.			No impacts at this time

RISK MANAGEMENT STATUS- Cont.

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	
SGW-043A: P&T System Relocation - 100-KR-4	The 100-KR-4 Operable Unit Lead will work closely with the 100 K Area waste site remediation manager to minimize the impact to the groundwater pump and treat system. No additional mitigation is feasible. Risk is accepted.			No issues are expected this month.
SGW-049: 200 West Pump & Treat - New Technology	The ability of either resin (two different resins are being considered) to remove I-129 to target MCLs is not specifically understood; therefore, DOE has agreed that Phase I treatment will primarily target Tc-99. A test plan has been developed to define			No issues at this time.
SGW-051: Compressed Schedule for 200 West P&T Project Due to TPA Commitment	Project team will work closely with RL and the regulators to minimize the potential of unexpected design changes and to implement any required design changes quickly so as to minimize the schedule impact. Additional funding will be required to mitigate these issues. Contractor schedule compression will be supplemented with appropriate detail over time. Design schedule has been extended and has overlapped construction and no constructability reviews have occurred. Include funds to account for changes and claims in budget, compare design and estimate costs for changes, perform phased constructability reviews. Project is already exploring options to accelerate schedule more so than what was delivered in general contractor's proposal.			Agreed upon completion criteria with RL and Regulators. Project is utilizing additional resources and working overtime to mitigate this risk. The concern is reviewed daily with the General Contractor and testing personnel to recover critical path work activities.
SGW-082, BC/FR RI Impacts	Delays in preparing earlier River Corridor RI/FS/PP documents impact scheduled for 100-BC-5 and 100-FR-3 documents.			The 100-BC-5 and 100-FR-3 RI/FS and Proposed Plan documents are scheduled to follow the preparation of the 100-HR-3 and 100-KR-4 documents. Delays in the development of documents for those operable units are now being realized, but are not yet impacting the ability to meet the schedule for BC-5 and FR-3 according to 11-AMCP-0247. Incorporation of 100-K report comments is being completed prior to delivery to RL for review.
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
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.			No issues at this time.
SGW-091: Material Procurement - 200 West P & T	Work closely with the BTR to ensure timely placement of procurement contracts, including any necessary expediting. Supplement engineering support for RCI submittal resolution, on-site focus review including vendor participation as needed. Provide incentives for vendors to compress schedule.			All major long lead equipment (LLE) has been received and accepted. Significant interferences have been encountered in the field. On-site support has been employed to modify, replace, and/or repair the interferences. As testing continues, risk associated with long lead procurements will diminish.

RISK MANAGEMENT STATUS- Cont.

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	
SGW-092: 200 West P&T Operating Requirements	The operating requirements and waste disposition requirements will be evaluated further at the 30, 60, and 90 percent design phases to determine whether operational planning needs to be adjusted. Risk is accepted without further mitigation at this time.			As preventive maintenance is more clearly defined adjustment in staffing will have to be updated. Currently it is believed that are understaffed by one pipe fitter, one millwright and one electrician.
SGW-095: Well Relocation or Acceleration - 200 West P&T	Wells will be installed as necessary to support system startup, with design changes incorporated as they are identified. Risk is accepted without further mitigation.			No issues at this time.
SGW-098: 200-W P&T - Schedule Impacts Due to Scope Increases	Contractor will hold periodic discussions with client and regulators to maintain a clear understanding of scope changes. As these issues are identified, they will be listed with other emerging issues. At this point, further mitigation tactics will be determined.			OT and additional shifts have been utilized in certain areas to ensure schedule requirements are met. Work continues to support acceptance testing procedure.
SGW-101, 100-NR-2 Strontium Downstream From Barrier	Strontium contaminants located downstream from the apatite barrier must be treated.			The 100-NR-2 apatite barrier is designed to control and treat the strontium in the soil and groundwater to prevent migration to the river. There is a very low probability risk that strontium that is downstream from the barrier will require additional treatment.
SGW-119: Integration of Lime system Vendor Package Equipment into Facility Construction	The Lime system design cannot be accommodated into facility design without significant facility modification.			Procurement of sludge stabilization components have experienced delays due to design changes. This has created an adverse schedule and cost impact on construction work scope. Project has extended contractor's general conditions and is adding resources/working overtime to provide appropriate oversight.
SGW-120: 200 West Safety Considerations	CHPRC oversight including site safety, IH, and construction management will work with the contractor on a daily basis to reduce this risk potential.			Successful completion of the project is contingent upon ongoing implementation of safety and health practices. Recently, project has implemented 3-point process to alleviate risk of dropped tools. Additionally, project is conducting daily coordination meetings to ensure craft is not concentrated in any area of the job site.
SGW-107: Unplanned New Wells Required	Annual well drilling plans reflect current knowledge. Risk is accepted without mitigation.			Wells in FY2012 can only be added if funds are approved by DOE/Sr. Management. BCR would be initiated to incorporate any new wells that have approved funds.
SGW-121: 200 West P&T Work - Software Development & Verification/Validation	Accelerate software design to complete prior to ATP. Project will send key engineering personnel to Denver to support integration of software development into existing design package. Monitor progress of software development and reassess after completion.			There have been issues with package vendors that have been mitigated. Probability of occurrence remains until system is fully operational.
SGW-124: 200 W P&T Long-Lead Equipment Fabrication to Site Standards & Requirements	Fabrication of LL vendor equipment is not in compliance with site standards (e.g., hoisting and rigging manual) and other relevant codes/standards (e.g., NEC, NRTL, NFPA, welding codes) are not met and require re-work after shipment to the site.			Structural steel interferences, which can be traced back to integration difficulties between LLE vendor and design team. Equipment supplied by LLE vendor not fabricated to specifications. Project HAS sent reps to facilities to inspect processes and mitigate further issues. PRC is actively managing subcontractors by holding schedule accountability meetings twice per week.

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 (%)
ARRA RL-0030.R1.1 Cleanup Operations	0.0	0.0	0.6	0.0	0.0	(0.6)	
ARRA RL-0030.R1.2 Well Drilling Operations	0.0	0.0	(0.2)	0.0	0.0	0.2	
ARRA RL-0030.R1.3 Support Operations	<u>0.0</u>	<u>0.0</u>	<u>(0.2)</u>	<u>0.0</u>	<u>0.0</u>	<u>0.2</u>	
ARRA Total	0.0	0.0	0.2	0.0	0.0	(0.2)	0.0
Base RL-0030.01 RL 30 (Operations)	4.9	6.1	4.8	1.2	24.1	1.3	21.8
Base RL-0030.C1 GW Remedy Implement	<u>2.2</u>	<u>2.8</u>	<u>2.9</u>	<u>0.6</u>	<u>27.7</u>	<u>(0.1)</u>	<u>-3.9</u>
Base Total	<u>7.1</u>	<u>8.9</u>	<u>7.7</u>	<u>1.8</u>	<u>25.2</u>	<u>1.2</u>	<u>13.7</u>
Total	<u>7.1</u>	<u>8.9</u>	<u>8.0</u>	<u>1.8</u>	<u>25.2</u>	<u>1.0</u>	<u>11.0</u>

Numbers are rounded to the nearest \$0.1M.

ARRA

CM Schedule Performance: (\$0.0M/0.0%)

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.

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

There is no current month schedule variance.

CM Cost Performance: (-\$0.2M/0.0%)

Current month schedule variances that exceed thresholds are as follows:

ARRA RL-0030.R1.1 Cleanup Operations (-\$0.6M)

HR-3 OU (-\$0.04M)

Closeout costs for GPP projects.

200-ZP-1 OU (-\$0.6M)

Closeout costs on contracts and an accrual against the remaining available funds for contract change orders.

ARRA RL-0030.R1.2 Well Drilling Operations (+\$0.2M)

Drilling (-\$0.06M)

Contract reconciliations against previously accrued values have resulted in a credit for the current period.

200-ZP-1 OU (+\$0.2M)

Final contract reconciliations against prior month's accruals resulted in a credit cost and a positive cost variance for the month.

ARRA RL-0030.R1.3 Support Operations (+\$0.2M)

RL-30 UBS, G&A, and Direct Distribution (+\$0.2M)

The negative cost variance is discussed in Appendix C.

Base

CM Schedule Performance (+\$1.8M/+25.2%)

The primary contributors to the schedule variance that exceed the reporting thresholds are as follows:

Base RL-0030.01 RL 30 (Operations) (+\$1.2M)

200 UP-1 Operable Unit (+\$0.8M)

The current month positive cost variance is a result of the implementation of BCR-060-12-001R0 for the definitization of the S-SX project. There is no impact to the overall completion date and cost for S-SX as a result of this change.

Base RL-0030.C1 GW Remedy Implementation (+\$0.6M)

200 ZP-1 Operable Unit (+\$0.6M)

The overall Sludge Stabilization System is behind schedule. As a result, work performed in the current period reports as a current period positive variance.

CM Cost Performance (+\$1.2M/+13.7%)

The primary contributors to the cost variance that exceed the reporting thresholds are as follows:

Base RL-0030.01 RL 30 (Operations) (+\$1.3M)

100 HR-3 Operable Unit (+\$0.5M)

Contract reconciliations against previously accrued values have resulted in a credit for the current period.

Also, the Operation Test Procedure (OTP) activities for the start-up of HX were performed for less than planned. Lessons learned from the DX construction were incorporated in HX resulting in significantly fewer issues to be addressed in the OTP of the facility.

200 ZP-1 Operable Unit (+\$0.3M)

Cost for performing general operating and maintenance and minor modification activities for the interim treatment facility were significantly lower than planned as the system has been running very smoothly.

Base RL-0030.C1 GW Remedy Implementation (-\$0.1M)

All current month cost variances are within threshold.

Contract-to-Date (\$M)

WBS 030/ 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)
ARRA RL-0030.R1.1 Cleanup Operations	175.0	175.0	175.0	0.0	0.0	0.0	0.0	175.0	175.0	0.0
ARRA RL-0030.R1.2 Well Drilling Operations	40.7	40.7	38.1	0.0	0.0	2.6	6.4	40.7	38.1	2.6
ARRA RL-0030.R1.3 Support Operations	<u>51.4</u>	<u>51.4</u>	<u>50.9</u>	<u>0.0</u>	<u>0.0</u>	<u>0.5</u>	<u>0.9</u>	<u>51.4</u>	<u>50.9</u>	<u>0.5</u>
ARRA Total	267.2	267.2	264.0	0.0	0.0	3.1	1.2	267.2	264.0	3.1
Base RL-0030.01 RL 30 (Operations)	380.1	380.5	387.2	0.4	0.1	(6.7)	-1.8	1,221.5	1,238.4	(16.9)
Base RL-0030.C1 GW Remedy Implement	<u>47.5</u>	<u>44.5</u>	<u>46.7</u>	<u>(3.0)</u>	<u>-6.4</u>	<u>(2.2)</u>	<u>-4.9</u>	<u>60.4</u>	<u>68.4</u>	<u>(8.0)</u>
Base Total	<u>427.6</u>	<u>425.0</u>	<u>433.9</u>	<u>(2.6)</u>	<u>-0.6</u>	<u>(8.9)</u>	<u>-2.1</u>	<u>1,281.9</u>	<u>1,306.8</u>	<u>(24.9)</u>
Total	<u>694.8</u>	<u>692.1</u>	<u>697.9</u>	<u>(2.6)</u>	<u>-0.4</u>	<u>(5.8)</u>	<u>-0.8</u>	<u>1,549.1</u>	<u>1,570.9</u>	<u>(21.8)</u>

Numbers are rounded to the nearest \$0.1M.

ARRA

CTD Schedule Performance: (\$0.0M/0.0%)

CTD schedule variances are all within thresholds

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

There is no contract to date schedule variance.

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

There is no contract to date schedule variance.

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

There is no contract to date schedule variance.

CTD ARRA Cost Performance: (+\$3.1M/+1.2%)

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

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

Contract to Date variances are within threshold.

ARRA RL-0030.R1.2 Well Drilling Operations (+\$2.6M)

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 decommissionings have also been completed for less than planned.

ARRA RL-0030.R1.3 Support Operations (+\$0.5M)

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 (-\$1.8M)

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

Base

CTD Schedule Performance (-\$2.6M/-0.6%)

The primary contributors to the Base CTD schedule variance that exceed the reporting thresholds are:

Base RL-0030.01 RL 30 (Operations) (-\$0.4M)

100 NR-2 Operable Unit (+\$1.8M)

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

Base RL-0030.C1 GW Remedy Implementation (-\$3.0M)

200 ZP-1 Operable Unit (-\$3.0M)

Negative schedule variance is due to delays associated with Sludge Stabilization System subcontractor submittals, fair cost estimates, award of contracts and design changes.

CTD Cost Performance (-\$8.9M/-2.1%)

Primary contributors to the CTD negative cost variance that exceed the reporting thresholds are as follows:

Base RL-0030.01 RL 30 (Operations) (-\$6.7M)

Integration & Assessments (+\$3.8M)

Primary drivers for this positive cost variance are as follows:

- Less subcontractor support required for Central Plateau strategy development and integration
- Sample Management and Reporting has performed work scope more efficiently than planned
- Less cleanup document reviews were required than originally planned, requiring less contract support. Also efficiencies/savings were realized in establishing document templates, reviewing procedures, and software procurements.

Drilling (-\$2.3M)

Radiological contamination encountered on two NR-2 wells has caused additional HPT delays and additional support resource requirements (HPTs). In order to recover schedule additional well drilling rigs have been 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 (+\$2.1M)

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 Operable Unit (-\$4.0M)

Primary contributors to the negative cost variance are as follows:

- 100 DX extensive effort required to design the pH adjustment system, cost overruns in completing the OU Remedial Process Optimization studies.
- 100 DX higher than expected cost to complete acceptance test plan and the operational test plan
- Cost of realigning wells from DR-5 to 100 DX

- 100 HX Construction Material procurement costs were high and ATP resources to complete exceeded the plan.
- Additional time and resources being spent on internal CERCLA (RI/FS) document development that will be recovered in completed Draft A document

200 PW-1 OU (+\$0.9M)

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.

Usage Based Services (-\$1.5M)

Increased cost associated with training due to the additional ARRA work in FY2010 and fleet services costs that occurred in FY2009 and FY2010. Overruns will continue to be funds-managed within the S&GRP project.

Base RL-0030.C1 GW Remedy Implementation (-\$2.2M)

200-ZP-1 Operable Unit (-\$2.2M)

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 FY2011 including added shifts, overtime, and logistics of working parallel 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
- 200W Pump-and-Treat Remedial Design/Remedial Action work plan and preliminary design activities were completed with fewer resources than planned

Estimate at Completion (EAC)

ARRA – The projected variance at completion is positive 1.2%.

Base – The projected variance at completion of negative 1.9% 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	121.5	116.3	5.2

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

BCR-030-12-001R0 – WMA S-SX- Incorporation of Definitized Change Order #107

BCR-030-12-002R0 – Implementation of the Regulator Interest List in PBS RL-30

BCR-030-12-003R3 – Incorporation of Contract Modification 109 – Change Order #72 for the 200W Pump and Treat O&M

BCRA-PRC-12-002R0 – Admin BCR for October

BCR-PRC-12-003R0 – October FY2012 Rate Changes

FY2011 Management Reserve (Funded):

ARRA = \$0.0M

Base = \$2.8M

Approximately \$7.6M of MR was used in October as a result of implementing of BCR-030-12-003R0 for the incorporation of Contract Modification 189 – Change Order #72 for the 200W Pump and Treat O&M

See management reserve table in the CHPRC Overview.

MILESTONE STATUS

The Tri-Party Agreement (TPA) milestones represent significant events in project execution. RL Enforceable Agreement milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The PRC Annual Baseline Update, implemented in August 2011, and subsequent approved BCRs define CHPRC planning with respect to TPA milestones. The following table is a one year look ahead of key milestones:

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-015-70-T01	Submit Feasibility Study Report and Proposed Plan for 100-HR-1/2/3 and 100-DR-1/2 OUs	TPA	1/12/12		1/12/12	Submittal date to regulators delayed based on RL Letter 11-AMCP-0247, received from RL.
M-015-68-T01	Submit CERCLA RI/FS Report and Proposed Plan for the 100-BC-1, 100-BC-2 and 100-BC-5 Operable Units for groundwater and soil.	TPA	3/15/12		3/15/12	Submittal date to regulators delayed based on RL Letter 11-AMCP-0247, received from RL.
M-091-40L-032	Submittal Jul-Sep 4th Qtr FY11 Burial Ground Sample Results	TPA	12/15/11		11/30/11	On Schedule

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
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		5/14/12	Submittal date to regulators delayed based on RL Letter 11-AMCP-0247, received from RL on 10/3/2011.
M-015-72-T01	Submit RI/FS Report and PP for 300-FF-2/5 OUs for GW and Soil	TPA	12/31/11		12/29/11	On Schedule
M-015-90	Submit RCRA Facility Investigation /Corrective Measures Study (RFI/CMS) and RI/FS work plan for 200-IS-1 OU to Ecology	TPA	12/31/11		12/15/11	On Schedule
M-015-91A	Submit RI/FS Work Plan for the 200-WA-1 OU to U.S. Environmental Protection Agency (EPA)	TPA	12/31/11		12/31/11	On Schedule

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-015-93A	Submit Rev'd RFI/CMS & RI/FS Work Plan for SW-2 to Ecology	TPA	12/31/11		12/31/11	On Schedule
M-016-122	Begin Phase 1 Operation of 200W Pump-and-Treat System	TPA	12/31/11		12/31/11	On Schedule
M-091-40L-033	Submit Oct-Dec 1 st Quarter Burial Ground Sample Results	TPA	3/15/12		2/28/12	On Schedule
M-037-03	Submit revised closure plans to support TSD closure of two TSD Units: 216-B-3 Main Pond system and 216-S-10 Pond and Ditch	TPA	4/30/12		4/30/12	Milestone is at risk and not funded. Ecology may take lead on producing document.
M-024-58E	Initiate Discussions of Well Commitments.	TPA	6/1/12		6/1/12	On Schedule

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-091-40L-034	Submit January to March 2nd Quarter FY-12 Burial Ground Sample Results.	TPA	6/15/12		5/31/12	On Schedule
M-016-120	GW Treatment System <50 gpm for Tc-99 Plume at S/SX Tank Farm	TPA	8/31/12		4/31/12	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		8/1/12	On Schedule
M-016-120	GW Treatment System <50 gpm for Tc-99 Plume at S/SX Tank Farm	TPA	8/31/12		4/31/12	On Schedule

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-015-62-T01	Submit a FS/PP for the 100 NR-1 and 100-NR-2 Operable Units including groundwater and soil.	TPA	9/17/12		9/17/12	On Schedule
M-091-40L-035	Submit April to June 3 rd Quarter FY-12 Burial Ground Sample Results	TPA	9/15/12		8/31/12	On Schedule
M-015-110D	Submit Technicium-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		6/30/12	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.