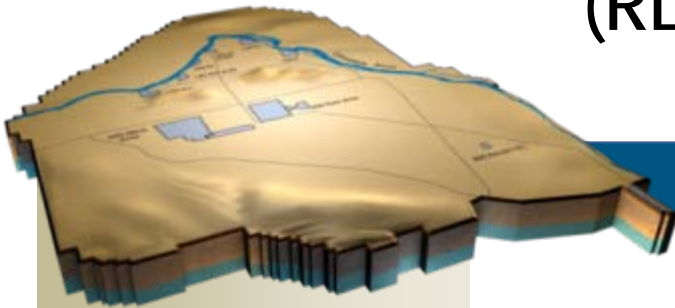


Section D

Soil and Groundwater Remediation Project (RL-0030)



Monthly Performance Report

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Deliverable C.3.1.3.1 - 1



200 West Groundwater Treatment Facility – Construction
Complete KPP completed on September 26, 2011

PROJECT SUMMARY

American Recovery and Reinvestment Act (ARRA)

Progress through the end of the fiscal month September is summarized in the table below.

Activity	September		Cumulative	
	Planned	Completed	Planned	Completed
Well Drilling (number of wells) -	0	0	303	303
Well Decommissioning (# of wells) -	0	0	280	280
100 DX Pump and Treat (P&T) – Construction/Startup (percent)	-	-	100	100
200 West P&T – Final Design (percent)	-	-	100	100
200 West P&T – Construction (percent)	12	6	100	100
200 West P&T – Testing/Startup (percent)	10	12	100	100

Base

Base 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 September includes the following:

- 378 samples were collected
- 52 aquifer tube samples collected from 18 tubes at 14 locations
- 16.1M gallons groundwater treated by ZP-1 treatment facility
- 19.8M gallons groundwater treated by KX treatment facility
- 4.6M gallons groundwater treated by KW treatment facility
- 5.6M gallons groundwater treated by KR-4 treatment facility
- 4.0M gallons groundwater treated by HX treatment facility
- 19.8M gallons groundwater treated by DX treatment facility
- 70.0M gallons of groundwater treated total

EMS Objectives and Target Status

Objective#	Objective	Target	Due Date	Status
11-EMS-SGWR-OB1-T1	Take actions necessary to protect the Columbia River by fiscal year (FY) 2012	Treat 500,000,000 gallons of 100 Area (D, H & K Area) groundwater	9/30/11	Complete (7/31/11)
		Review and tally total number of gallons treated	Monthly	Complete (7/31/11)
10-EMS-SGWR-OB2-T1	Construct a new GW treatment facility that satisfies the P&T component of the 200-ZP-1 Operable Unit (OU) Record of Decision (ROD) selected remedy	Construct new 200 West Area P&T facility to remediate GW which was impacted from past plutonium production operations	12/31/11	Complete (9/26/11)
		Start construction of road crossings	11/30/09	Complete (11/2/09)
		Start early civil construction	3/30/10	Complete (3/19/10)
		Start construction of GW extraction buildings	3/30/10	Complete (3/19/10)
		Complete treatment facility construction	12/31/11	Complete (9/26/11)
10-EMS-SGWR-OB4-T1	Reduce Project Waste Generation	Track & quantify project cost savings from on-going waste reduction initiatives	1/31/11	Closed (2/10/11)
		Track, quantify & report on drill cuttings RTED in lieu of disposal at ERDF	30 days after CY Qtr-end	Complete
		Track, quantify & report on use of ERDF boxes in lieu 55-gallon drums	30 days after CY Qtr-end	Complete
		Track, quantity & report on purgewater generation avoidance	30 days after CY Qtr-end	Complete

TARGET ZERO PERFORMANCE

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	2	N/A
Total Recordable Injuries	1	16	9/01 – Employee was trimming edge of a PVC pipe, the pipe reamer came out of the pipe striking him in the forearm causing a superficial laceration. 22311 (EPC)
First Aid Cases	9	120	<p>9/01 – Sweat bee sting on back of neck. 22312 (EPC)</p> <p>9/01 – While moving a lift, employee struck left heel. 22316 (EPC)</p> <p>9/15 – Acetone was spilled on employee’s hand. 22356 (EPC)</p> <p>9/15 – Employee bumped his head against a shade structure causing neck pain. 22355 (S&GRP)</p> <p>9/16 - Employee strained mid back has he lifted a roto hammer from the back of a work truck. 22354 (S&GRP)</p> <p>9/25 – Employee cut his finger while wiping semidry glue from a PVC container. 22371 (S&GRP)</p> <p>9/27 – Employee aggravated an already sore shoulder by pulling electrical cord to an auto dialer. 22377 (S&GRP)</p> <p>9/28 – Employee was getting back in to his vehicle and bumped his head on the door ledge of the roof. Employee was wearing hard hat at the time, which contributed some of the force to the head. 22382 (S&GRP)</p> <p>9/29 – Laborer received a cut on his nose while disposing of lumber in a recycle bin. The piece of wood hit the corner of the bin and bounced back. 22381 (EPC)</p>
Near-Misses	0	0	

KEY ACCOMPLISHMENTS

ARRA - RL-0030.R1.1 Cleanup Operations

Drilling	September		Cumulative	
	Planned	Completed	Planned	Completed
M-24 -5 wells	0	0	5	5
200-ZP-1 West P&T Expansion -17 wells	0	0	17	17
Drilling Total	0	0	22	22

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

- 200 West Area Groundwater Treatment Facility –KPP scope is 100% complete. Completed the execution of the 29 KPP related Construction Acceptance Tests (CATs) on schedule. Continued working through the remaining construction punchlist items. Initiated the execution of five Acceptance Test Procedures.

ARRA – RL-0030.R1.2 Well Drilling Operations

Well Drilling and Decommissioning – ARRA

	September		Cumulative	
	Planned	Completed	Planned	Completed
KR-4 Remedial Investigation/Feasibility Study (RI/FS) – 13 wells	0	0	13	13
100-NR-2 Barrier Emplacement – 171 wells	0	0	171	171
100-HR-3 H Area Remedial Process Optimization (RPO) – 40 wells	0	0	40	40
100-HR-3 D Area RPO – 30 wells	0	0	30	30
200-BP-5 “K” Well – 1 well	0	0	1	1
200-BP-5 “L” and “M” Well – 2 wells	0	0	2	2
100-BC-5 RI/FS – 10 wells	0	0	10	10
100-FR-3 – 3 wells	0	0	3	3
300 FF-5 RI/FS – 11 wells	0	0	11	11
Drilling Total	0	0	281	281
Decommissioning Total	0	0	280	280

BASE - RL-0030.01 RL 30 Operations

EPC Projects in Support of S&GRP – Base

100-HX Groundwater Treatment Facility –Completed Acceptance Test Procedure, closed out construction work packages and completed turnover of HX facility to S&GW Operations Director September 29, 2011, three months ahead of the baseline schedule.

Environmental Strategic Planning:

- Incorporated Ecology comments into the 200-PO-1 Remedial Investigation Report (Chapters 5, 6), and revised the supporting environmental calculation files.
- Completed initial scoping discussions for sequencing geographical zone remediation activities that will be reported in the Central Plateau Remediation Optimization Plan.
- Completed a final comment resolution review with the Tri-Party Agencies on the graded approach document “Regulatory Basis and Implementation of a Graded Approach to Evaluation of Groundwater Protection,” (DOE/RL-2011-50).

Integration Management:

- **WIDS TPA MP-14 Revision:** Revision 2 of the TPA MP-14 for waste site assignment within the Waste Information Data System (WIDS) was approved by DOE-RL, Ecology and EPA. This revision simplifies the discovery checklist, provides clarification of data requirements and streamlines the overall process.

Document Review & Standardization

- Completed coordination and submittal of Environmental Program & Strategic Planning document reviews and consolidated responses for 18 environmental documents.
- Provided External Document Improvement Team (EDIT) comments on the 100-K Proposed Plan and the RI/FS ARARs and assisted project in incorporating revisions.

River Corridor

100-KR-4 Operable Unit - Base

- Delivered the *Remedial Investigation/Feasibility Study for the 100-KR-1, 100-KR-2, and 100-KR-4 Operable Units*, Draft A, and the *Proposed Plan for Remediation of 100-KR-1, 100-KR-2, and 100-KR-4 Operable Units*, DOE/RL-2011-82, Draft A to DOE on September 8, 2011. Both documents were delivered to EPA on September 19, 2011, two days ahead of the TPA Milestone M-015-66-T01.
- Operating KR-4, KW, and KX systems with 66 kg mass removed and 366 million gallons treated fiscal year to date.
- Loaded the SIR-700 resin at the KW P&T, replacing the Dowex.
- Completed the fourth and final Phase 3 RPO well (C7696/199-K-196) on September 29, 2011.
- Completed power installation at the KX trailers.

100-NR-2 Operable Unit - Base

- RI/FS well-drilling, sampling, and well-construction activities were completed at wells C8186, C8189, and C8190. All RI field work is now complete for 100-N.
- Work completed for expansion of the existing Apatite Barrier by 600 feet under the RL- and Ecology-approved design optimization study (DOS). Well injections were completed for the upriver and downriver sections (300 feet each) of this expansion effort. The overall volume of injected solution for the upriver section was approximately 1,560,000 gallons, for an average treatment of approximately 65,000 gallons per well. The overall volume of the injected solution for the downriver section was approximately 1,428,000 gallons, for an average treatment of approximately 59,500 gallons per well. Post-injection performance monitoring and sampling will continue as planned in the DOS.

100-HR-3 Operable Unit - Base

- Chapters 1, 2, and 3 of the D/H RI/FS report were delivered in September for DOE-RL in accordance with the revised delivery schedule for the report.

Central Plateau

200-UP-1 Operable Unit – Base

- The first (C8097, near S-13 crib) of 3 extraction wells was completed. Drilling of the 2nd well (C8096, southeast corner of SX) was completed and is undergoing well completion. Initiated drilling of the 3rd well (C8095, east of SSY).

200-ZP-1 Operable Unit - Base

- System is online pumping water at 381 gpm.
- FY2011 groundwater modeling runs are complete. RL comments on the draft modeling report have been addressed and the final report has been issued.

Deep Vadose Zone – Base

- Transmitted the Decisional Draft 200-DV-1 OU Sampling and Analysis Plan to DOE for review.
- Transmitted the Draft A Field Test Plan for the B Area Perched/Pore Water Test to DOE for

transmittal to Ecology.

- Continued with post operation rebound testing at the Desiccation Test Site and completed drilling of the two ground truthing boreholes and associated sampling. Additionally, the required modeling and data interpretation are underway as part of the Test Report that will be issued by June 30, 2012 as required by TPA M-015-110D.
- Continued operation of the Gravity Drain phase of the Perch Water Removal Project through September. This system will be operated by gravity filling of the well sump for the next ~two months prior to installation of a vacuum system that will apply ~85 inches water column to accelerate the removal of the perch water North of B-Farms. The Field Test Plan and SAP needed for this Vacuum Enhanced Recovery (VER) has been submitted to Ecology as Draft A.

MAJOR ISSUES

Issue: Recently identified an issue with the DX/HX autodialer. The auto dialer calls us if there is an alarm and no one is 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 uninterrupted 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.

RISK MANAGEMENT STATUS




Unassigned Risk
Risk Passed
New Risk




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

















Risk Title	Risk Strategy/Handling	Assessment		Comments
		Month	Trend	
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-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-008U: Regulatory Document Comments for 200-SW-1 NRDWL	All deliverable have been given to RL; no additional funding is authorized in FY2011.	●	↔	Four SW-1 Agency workshops have been completed and the NRDWL/SWL closure plan was revised to incorporate Ecology comments. Ecology approval of this final closure plan is pending their final review of the revised plan and RL's NEPA determination.
SGW-008U: Regulatory Document Comments for 200-SW-2 Landfills	Meetings were held with regulators during the SW-2 Work Plan development; no additional mitigation is feasible at this time. No additional funding is authorized in FY2012 beyond the completion of the Draft A Work Plan.	●	↔	Because of funding limitations no additional activities are planned for FY12. The Draft A 200-SW-2 RI/FS Work Plan will be submitted to RL mid-October.
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-003A: Central Plateau Drilling - 200W P&T	Utilize rotary drilling and cable-tool; work closely to resolve subcontractor issues and manage schedule.	●	↔	Contractor has experienced a number of field delays (late start, re-tooling, birds nesting, slower rate of construction) although drilling rate has improved but still a concern with only three wells drilled to depth and one completed. A second contractor has started drilling the first of the remaining three wells, providing us with some confidence the project will complete by end of Dec. as needed by the pump and treat start up plan.
SGW-025: Industrial Accident During Drilling	Subcontractors are evaluated on safety performance prior to contract award and are required to work under CHPRC safety procedures, including using appropriate safety equipment and conducting pre-job briefings. No further mitigation is warranted. Risk is accepted.	●	↔	No issues or incidents this month. ARRA funded wells have been completed.
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-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 TPA schedule for BC-5 and FR-3. Decisional Drafts of the BC and FIU RI/FS documents have been delivered to DOE for review, and comments have been provided for BC. Contract direction from RL is also anticipated that will result in replanning of this work to a revised schedule.
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-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.
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-108J: 200-UW-1 Increased Characterization Required	Incorporate additional deep boreholes into the baseline.			This risk has been realized and the project is working the issue. Scope was included in Mod95 Proposal (but rejected); tentative period for funding is FY2013.
SGW-117, OPP: 100-KR-4 Resin Changes	The opportunity exists to replace the 100-KR-4 pump and treat systems resins with the SIR-700 resin, thus reducing the life-cycle operating costs for the pump and treat system.			The SIR-700 resins have been successfully tested at 100-HR-3. Minor modifications to the resin or P&T systems may enable the SIR-700 resin to be successfully used in the 100-KR-4 pump and treat systems. This is a likely probability opportunity.

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	9.1	8.0	5.3	(1.2)	-12.7	2.6	32.9
ARRA RL-0030.R1.2 Well Drilling Operations	4.7	2.6	2.5	(2.1)	-45.2	0.1	3.6
ARRA RL-0030.R1.3 Support Operations	<u>0.8</u>	<u>0.8</u>	<u>1.2</u>	<u>0.0</u>	<u>0.0</u>	<u>(0.4)</u>	<u>-42.5</u>
ARRA Total	14.6	11.4	9.0	(3.3)	-22.4	2.3	20.7
Base RL-0030.01 RL 30 (Operations)	16.0	16.6	17.6	0.6	3.6	(1.0)	-6.2
Base RL-0030.C1 GW Remedy Implement	<u>4.9</u>	<u>2.1</u>	<u>8.7</u>	<u>(2.8)</u>	<u>-56.9</u>	<u>(6.6)</u>	<u>-313.3</u>
Base Total	20.9	18.7	26.3	(2.2)	-10.7	(7.7)	-41.0
Total	35.5	30.0	35.3	(5.5)	-15.5	(5.3)	-17.7

Numbers are rounded to the nearest \$0.1M.

ARRA

CM Schedule Performance: (-\$3.3M/-22.4%)

Current month schedule variances that exceed thresholds are as follows:

ARRA RL-0030.R1.1 Cleanup Operations (-\$1.2M)

200-ZP-1 OU (-\$1.2M)

200W P&T construction was performed ahead of the baseline schedule, the negative schedule variance (SV) in the current month (CM) is the result of previously completed work with BCWS being realized in the CM.

ARRA RL-0030.R1.2 Well Drilling Operations (-\$2.1M)

200-ZP-1 OU (-\$2.0M)

200W P&T construction was performed ahead of the baseline schedule, the negative schedule variance (SV) in the current month (CM) is the result of previously completed work with BCWS being realized in the CM.

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

Current month variances are within threshold.

CM Cost Performance: (+\$2.3M/+20.7%)

Current month schedule variances that exceed thresholds are as follows:

ARRA RL-0030.R1.1 Cleanup Operations (+\$2.6M)

200-ZP-1 OU (+\$2.6M)

Final contract accruals for the period were made based on the fully negotiated change orders to contracts and the amount of remaining funds available, this resulted in a positive variance for the month.

ARRA RL-0030.R1.2 Well Drilling Operations (+\$0.1M)

Current month variances are within threshold.

ARRA RL-0030.R1.3 Support Operations (-\$0.4M)

RL-30 UBS, G&A, and Direct Distribution (-\$.5M)

The negative cost variance is discussed in Appendix C.

Base**CM Schedule Performance (-\$2.2M/-10.7%)**

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

Base RL-0030.01 RL 30 (Operations) (+\$0.6M)100 NR-2 Operable Unit (+\$2.0M)

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

100 HR-3 Operable Unit (-\$0.7M)

100HX P&T construction has performed work ahead of schedule, the negative variance is the result of realizing BCWS in the CM for work completed in previous periods.

200 UP-1 Operable Unit (-\$0.7M)

The negative schedule variance is due to contractual issues with the S-SX construction subcontractor. The continuation of construction activities has been delayed pending resolution of contractor's increased estimate to complete the project.

RL 30 Regulatory Decisions and Closure Int (-\$0.3M)

The primary contributor to the current month negative schedule variance is work planned in September for the SW-2 Work Plan that was completed early in prior months. The SW-2 work plan remains ahead of schedule and is expected to complete about 2 months early.

Base RL-0030.C1 GW Remedy Implementation (-\$2.8M)200 ZP-1 Operable Unit (-\$2.8M)

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

CM Cost Performance (-\$7.7M/-41.0%)

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

Base RL-0030.01 RL 30 (Operations) (-\$1.0M)Drilling (-\$0.5M)

Radiological contamination encountered on two NR-2 wells has caused additional HPT delays and additional support resource requirements (HPTs). In order to recover schedule and complete the wells by the end of the fiscal year 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 Operable Unit (+\$0.5M)

The positive cost variance this month is due to efficiencies obtained in performing the recent barrier expansion scope.

100 HR-3 Operable Unit (-\$1.7M)

The 100HX ATP and construction closeout costs were greater than the budgeted amount for this work scope.

PBS RL-30 Reg Dec & Closure Int (+\$0.3M)

BCR -030-11-017R0 'Bioassay Activities Change Order 135, Mod 177' was implemented in September which resulted in a BCWS/BCWP point adjustment causing a current month positive cost variance.

There is no impact to overall project cost for Bioassay work scope.

RL-30 UBS, G&A, and Direct Distribution (+\$0.3M)

The positive cost variance is discussed in Appendix C.

Base RL-0030.C1 GW Remedy Implementation (-\$6.6M)**200-ZP-1 Operable Unit (-\$6.6M)**

The 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 FY11 including added shifts, overtime, and logistics of working parallel activities. The negative cost variance was partially offset by cost correction that was processed in September that resulted in a current month positive cost variance within ZP-1 Operations and Maintenance.

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)
ARRA RL-0030.R1.1 Cleanup Operations	175.0	175.0	174.4	0.0	0.0	0.6	0.3	175.0	175.0	0.0
ARRA RL-0030.R1.2 Well Drilling Operations	40.7	40.7	38.3	0.0	0.0	2.4	6.0	40.7	38.3	2.4
ARRA RL-0030.R1.3 Support Operations	51.4	51.4	51.1	(0.0)	-0.0	0.3	0.6	51.4	51.1	0.3
ARRA Total	267.2	267.2	263.8	0.0	-0.0	3.4	1.3	267.2	264.4	2.8
Base RL-0030.01 RL 30 (Operations)	375.1	374.3	382.4	(0.8)	-0.2	(8.1)	-2.2	1,225.8	1,246.6	(20.7)
Base RL-0030.C1 GW Remedy Implement	45.4	41.7	43.8	(3.6)	-8.0	(2.1)	-5.0	62.5	69.7	(7.2)
Base Total	420.5	416.0	426.2	(4.4)	-1.1	(10.1)	-2.4	1,288.3	1,316.2	(27.9)
Total	687.6	683.2	690.0	(4.4)	-0.6	(6.8)	-1.0	1,555.4	1,577.7	(22.3)

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)**ARRA RL-0030.R1.2 Well Drilling Operations (\$0.0M)****ARRA RL-0030.R1.3 Support Operations (\$0.0M)****CTD ARRA Cost Performance: (+\$3.4M/+1.3%)**

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

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

Contract to Date variances are within threshold.

100 HR-3 Operable Unit (-\$0.8M)

The negative cost variance for 100DX is the result of increased installation costs on the pH adjustment system, the impacts of weather on completing construction punch-list items, and the Acceptance Test Plan for the facility/process.

200-ZP-1 Operable Unit (+\$1.9M)

Final contract accruals were made based on the fully negotiated change orders to contracts and the amount of remaining funds available, this resulted in a positive CV.

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 decommissionings have also been completed for less than planned.

ARRA RL-0030.R1.3 Support Operations (+\$0.3M)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 (-\$1.9M)

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

Base**CTD Schedule Performance (-\$4.4M/-1.1%)**

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

Base RL-0030.01 RL 30 (Operations) (-\$0.8M)100 NR-2 Operable Unit (+\$1.7M)

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

Base RL-0030.C1 GW Remedy Implementation (-\$3.6M)200 ZP-1 Operable Unit (-\$3.6M)

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 (-\$10.1M/-2.4%)

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

Base RL-0030.01 RL 30 (Operations) (-\$8.1M)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 (-\$2.2M)

Radiological contamination encountered on two NR-2 wells has caused additional HPT delays and

additional support resource requirements (HPTs). In order to recover schedule and complete the wells by the end of the fiscal year 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 (-\$4.6M)

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 (-\$2.1M)

200-ZP-1 Operable Unit (-\$2.1M)

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 1.0%.

Base – The projected variance at completion of negative 2.2% 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	FY2011		
	Projected Funding	Spending Forecast	Spend Variance
ARRA	157.6	157.1	0.5
Base	181.9	173.4	8.5

Numbers are rounded to the nearest \$0.1M.

Funds/Variance Analysis

Funding includes FY2010 carryover and FY2011 new Budget Authority.

Critical Path Schedule

Critical path analysis can be provided upon request.

Baseline Change Requests

BCR-000-11-003R0, Definitization of CO 83 and CP-009 (June 2011)

BCR-030-11-017R0, Bioassay Activities Change Order 135, Mod 177

BCRA-PRC-11-045R0, Administrative & Schedule Coding Changes Sept 2011

BCRA-PRC-11-048R0, September 2011 Yearend Admin Changes, FOC et al

BCR-PRC-11-049R0, CHPRC Displaced Worker Medical Benefits – Alignment

FY2011 Management Reserve (Funded):

ARRA = \$0.0M

Base = \$0.0M

See management reserve table in the CHPRC Overview.

MILESTONE STATUS

The 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 PRC Baseline Revision 2 Update, implemented in September 2010, 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-015-66-T01	Submit CERCLA RI/FS Report and PP for the 100-KR-1, 100-KR-2 and 100-KR-4 Operable Units for groundwater and soil	TPA	9/21/11	9/19/11		Complete
M-016-111C	Expand P&T System at 100-HR-3 OU to 800 gpm Capacity	TPA	12/31/11		9/29/11	Complete; letter to RL is in progress.
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 DOE Letter 11-AMCP-0247, received from RL on 10/3/2011.
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 DOE Letter 11-AMCP-0247, received from RL on 10/3/2011.

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-091-40L-032	Submittal Jul-Sep 4th Qtr FY11 Burial Ground Sample Results	TPA	12/15/11		11/30/11	On Schedule
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		5/4/12	Submittal date to regulators delayed based on DOE 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		12/15/11	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	On Schedule
M-024-58E	Initiate Discussions of Well Commitments	TPA	6/1/12		6/1/12	On Schedule
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

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	12/31/11		12/31/11	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 to Incorporate New Well Installations Needed to Maintain a Three-year Rolling Prioritized Drilling Schedule.	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-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	On Schedule
M-015-38B	Submit a revised Feasibility Study Report and revised Proposed Plan (s) for the 200-CW-1, 200-CW-3 and 200-OA-1 OU for Waste Sites in the Outer Area of the Central Plateau to EPA	TPA	4/30/12		4/30/12	On Schedule
M-015-62-T01	Submit a Feasibility Study Report and Proposed Plan for the 100 NR-1 and 100-NR-2 Operable Units including groundwater and soil.	TPA	9/17/12		9/17/12	On Schedule

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
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

RL Concurrence on RI/FS Report and PP Submittal Dates

Letter 11-AMCP-0247 received from RL on October 3, 2011, concurs with the revised schedule set forth at the request of letter CHPRC-1104577, "Contract Number DE-AC06-08RL14788 – Request for Clarification Direction Regarding River Corridor Remedial Investigation/Feasibility Study and Proposed Plan Documentation Schedule," dated September 14, 2011 as identified below:

Operable Unit	TPA #	Current Tri-Party Agreement Target Date	Submittal Date to Regulators
D/H	M-015-70-T01	11/24/11	1/12/12
BC	M-015-68-T01	11/30/11	3/15/12
FIU	M-015-64-T01	12/17/11	5/14/12

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.