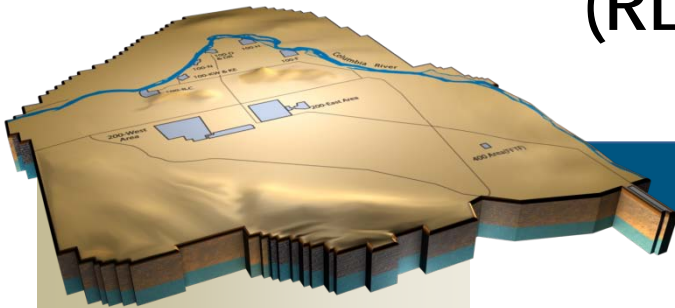


Section D

Soil and Groundwater Remediation Project (RL-0030)



Monthly Performance Report

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Aerial view of the 200W Groundwater Treatment Facility Biological and Radiological Process Buildings

PROJECT SUMMARY

American Recovery and Reinvestment Act (ARRA)

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

Activity	May		Cumulative	
	Planned	Completed	Planned	Completed
Well Drilling (number of wells) -303	0	3	303	303
Well Decommissioning (# of wells) -280	10	24	231	245
100 DX Packaging and Transportation (P&T) – Construction/Startup (percent)	-	-	100	100
200 West P&T – Final Design (percent)	-	-	100	100
200 West P&T – Construction (percent)	8	11	63	71
200 West P&T – Testing/Startup (percent)	7	7	59	65

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 May includes the following:

- 203 well locations were sampled with a total of 893 samples being collected
- 38 aquifer tube samples collected from 14 tubes at 9 locations
- 14.9M gallons groundwater treated by ZP-1 treatment facility
- 21.8M gallons groundwater treated by KX treatment facility
- 8.4M gallons groundwater treated by KW treatment facility
- 5.8M gallons groundwater treated by KR-4 treatment facility
- .6M gallons groundwater treated by HR-3 treatment facility; this facility was shut down in May, and it is being replaced by the HX system.
- 0.0M gallons groundwater treated by DR-5 treatment facility. The DR-5 system was replaced by the DX system.
- 14.4M gallons groundwater treated by DX treatment facility
- 65.95M 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	On schedule
		Review and tally total number of gallons treated	Monthly	Treated 434.7 M gal FY2011 through 5/31/11
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	On schedule
		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	On schedule
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	13	5/14/11 – Employee reported pain in lower back while bending down holding a 4 lb pipe sleeve. 21964 (EPC)
First Aid Cases	6	118	5/2/11 – Employee was descending staircase from upper parking lot and slipped on the grate and injured her knee. Employee was taken to CSC and was released with no restriction. 21941 (S&GRP) 5/2/11 – Employee had some discomfort days after intermittent workstation use. 21942 (EPC) 5/16/11 – Employee felt stinging on his left leg, had seen red ants when checking for what had bit/stung him. 21967 (EPC) 5/17/11 - While working in the splitter box pouring buckets of grout, employee scraped arm on wire causing laceration. 21970 (EPC) 5/20/11 - While working on roof, employee's eye became irritated by unknown substance. 21979 (EPC) 5/24/11 – Employee cut his left arm on a sharp edge of a garbage can while emptying it. 21990 (EPC)
Near-Misses	0	2	N/A

KEY ACCOMPLISHMENTS

ARRA - GW CAPITAL ASSET

Drilling	May		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 –Construction is 71% complete, with approximately 200 craft working to keep the installation of mechanical, electrical and process controls on schedule. Continued on schedule execution of Construction Acceptance Test (CAT) for the extraction wells, extraction transfer buildings #1 and #2 and injection transfer building #1.

EPC Projects in Support of S&GRP – Base

- 100-HX Groundwater Treatment Facility – Equipment installation in the Treatment and Transfer Buildings is on-going. Mechanical and electrical installation in the Treatment Building is 75%

complete. Electrical installation in the Transfer Building is complete; mechanical installation is 85% complete. Installation of all new power poles to bring electrical service to the buildings is complete. Two of eight total Construction Acceptance Test (CAT) procedures have been approved. The Acceptance Test Procedure (ATP) draft is 75% complete.

ARRA - GW OPERATIONS

Well Drilling and Decommissioning – ARRA

	May		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	3	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	3	281	281
Decommissioning Total	10	24	221	245

BASE - GW OPERATIONS

Environmental Strategic Planning:

- Delivered the Central Plateau Ecological Risk Assessment Data Package Report and Tier 1 Ecological Preliminary Remediation Goal (PRG) Report to RL
- A presentation was made by the Risk and Modeling organization in support of Washington River Protection Solutions (WRPS) for the Waste Management Area C Performance Assessment scoping effort. Topics included: modeling software configuration management, modeling quality assurance and the extent of Subsurface Transport Over Multiple Phases (STOMP) validation, verification and benchmarking.

Integration Management:

- Completed the restructuring of the Deep Vadose Zone Multi-Project Team to focus on cross-cutting technical topics impacting multiple contractors

Document Review & Standardization

- Completed coordination and submittal of Environmental Program and Strategic Planning document reviews and consolidated responses for six environmental documents
- Completed validation and verification of the cost estimating template for the River Corridor RI/FS alternatives analysis. The template will greatly enhance the project’s ability to quickly analyze cost impacts to changes of the proposed alternatives.

River Corridor

100-BC-5 Operable Unit - Base

- The RI/FS report internal draft was completed, and the internal review was initiated with comments due in early June.
- All RI/FS field work is complete.

100-KR-4 Operable Unit - Base

- Completed construction of the second of four, Phase 3 RPO wells for KR-4 and initiated drilling of third well.
- Transmitted the 100K Area RI/FS Decisional Draft for RL Review on May 23, 2011

100-NR-2 Operable Unit - Base

- RI/FS well drilling activities initiated at wells C8184 and C8188; drilling was temporarily suspended to allow for additional radiological controls to be put in place before resuming. Well construction completed at well C8185. All other RI/FS field work is complete.
- The high-river stage performance monitoring at the existing apatite Permeable Reactive Barrier was initiated and is expected to be complete in June.

100-HR-3 Operable Unit - Base

- The 100-D/H RI/FS Report internal draft was reviewed, and staff are working on the preparation of the decisional draft.
- The HR-3 system was removed from service to transfer extraction wells to the new HX system.

100-FR-3 Operable Unit - Base

- The RI/FS report internal draft was completed with the internal review scheduled for June.
- All RI/FS field work is complete.

Central Plateau**200-BP-5 Operable Unit – Base**

- Completed the final design package for the 200-BP-5 Treatability Test extraction system
- Installation of the water leveling monitoring system in existing wells was completed and the baseline water level monitoring is initiated in support of the 200-BP-5 Treatability Test.

200-UP-1 Operable Unit – Base

- Additional EPA comments on the 200-UP-1 OU Proposed Plan were received and are being dispositioned.
- Continued construction of internal S/SX transfer building including the installation of mechanical and electrical equipment. Installation of the fiberglass transfer tank was completed. Drilling was completed (TD 286 feet below ground surface (ft bgs)) at the first monitoring well C8241 on May 26, 2011. Currently drilling extraction well 8097.

200-ZP-1 Operable Unit - Base

- System is online pumping water at 390 gpm
- The 2010 annual performance summary report has been revised based on RL review comments.
- Injection well C8064 is at 93 feet and injection well C8065 is at total depth. Injection well C8066 is at 80 feet.

Deep Vadose Zone - Base

- Completed the Data Quality Objective (DQO) scoping session for the B Area waste sites with Ecology on May 10, 2011; working through comments.
- Submitted the DQO information package for the T Area waste sites to Ecology on May 31, 2011 in preparation for the June 14, 2011 DQO session
- Posted the Deep Vadose Zone 101 Module and Remediation Technology Tables on the RL website in preparation for the June 7, 2011 public information exchange
- The Desiccation Test is now 85% complete. All responses to date indicate the process is working as anticipated.

200-OA-1 - Base

- Comment resolution on the Decisional Draft Work Plan (WP) and Sampling Analysis Plan (SAP) is in progress. RL reviewed draft comment responses for the Decisional Draft WP and SAP. Comment incorporation is underway

200-CB-1 - Base

- Completed author review of the work plan, sampling and analysis plan, and data quality objectives
- Initiated the Internal CHPRC review of the WP, SAP and DQO

MAJOR ISSUES

Issue: The 200W Pump-and-Treat Project is currently forecasting a negative Variance at Completion for RL0030-R1.1 ARRA subproject due to increased ARRA contingent scope and the baseline does not fully account for the corresponding budgeted cost of work scheduled (BCWS).

Corrective Action: The ARRA contingent scope was transferred from the R1.1 to R1.2 subproject in May and BCWS incorporated into R1.2 for the increased scope.

Status: This issue has been resolved, this is the last report.




Issue – During routine groundwater sampling activities, a nuclear chemical operator sampler received a low voltage shock while operating a dedicated electrical well pump. The subsequent investigation determined the network of monitoring wells having dedicated electrical pumps did not meet the National Electrical Code (NEC) standard for grounding all exposed non-current carrying metallic parts that could become energized. A temporary grounding strap has been approved by the NEC authority and has been deployed to the field allowing sampling of some dedicated electric pumps. Sampling with non-electrical pumps and portable electrical pumps is continuing.




Corrective Action – The available pneumatic pumps deployed to the field were redeployed to most efficiently support near-term sampling needs. Wells requiring electrical pumps to support sampling activities will be properly grounded per NEC requirements. A temporary grounding strap has been approved for use on some monitoring wells with dedicated electric pumps. Grounding design for well heads has been completed.























Status – This issue has been resolved, 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-050: Regulatory Strategy for Decision Docs	Continue to support RL in strategy negotiations with Agencies.			CPCS and Mod 95 Proposal and BCR are being evaluated and developed.
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 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, the need for treatment is not considered likely.
SGW-003: Central Plateau Well Drilling Demands	Adjust drilling schedules; cross-train workforce; evaluate sample parameters.			No significant issues.
SGW-003A: Central Plateau Drilling - 200W P&T	Utilize rotary drilling and cable-tool; work closely to resolve subcontractor issues and manage schedule.			Drilling, construction and development has been completed on the first 20 wells. The next 6 (4 with option of 2 more wells) contract has been awarded to a new subcontractor to Hanford. The drillers performance has been impacted by equipment problems and delayed by nesting migratory birds on the drill rig. Performance is expected to improve over the next 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 RI/FS Work Plan Addendum and SAP were approved and issued; nothing else to report. Field activities are almost complete, and work is progressing on the RI/FS Report.
SGW-008U: Regulatory Document Comments for 200-SW-1/2	Routine meetings are being held with regulators during the SW-2 Work Plan development; no additional mitigation is feasible. For SW-1 the project team is supporting RL in the revised Interim EA and MOA for the Borrow Area C.			For 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-016: 300-FF-5 Infiltration Barrier Treatability Test	Review BPA river level projections to time treatability test; accept risk.			After multiple unsuccessful attempts to get the infiltration gallery functional, PNNL has developed a parallel approach, looking for shallow test sites in other locations and alternative emplacement technology development. A joint CHPRC/PNNL path forward has been developed and vetted by RL and EPA. Infiltration work has been deferred to FY12 – this does not support development of the PP or ROD. It is best positioned as a Treatability Test specified in the ROD or abandoned as part of a Technical Impracticability argument in the RI/FS.
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.

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-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.
SGW-031: P&T Design Changes - 100 D	Minimize parallel design/construct/ regulatory activities; finalize design prior to contract award; coordinate well locations with WCH.			DX project was turned over to operations on 12/17/2010. HX design has been modified to include transfer building and an eighth train.
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. As the scope is being constructed in the field the impact of design changes continues to be monitored.
SGW-033: Well Casing Size/Screen Length	Ensure that sufficient budget is provided to cover drilling cost increases for larger diameter completion. Adjust schedules to account for additional drilling durations.			No issues at this time.
SGW-037: 100-NR-2 Infiltration Gallery Pilot Test	Risk accepted without mitigation.			Alternative technology (jet injection) with higher likelihood of success has been successfully pilot tested and is being optimized for larger-scale implementation under an approved design optimization study (DOS) (this optimization work is currently being deferred to FY12 due to RL funding prioritization). The ability of this method to treat the soil evenly is in question and will not be pursued to support interim remedial action. Instead, jet-injection technology will be pursued to treat the upper vadose zone (as currently proposed in a Draft A revision to the NR-2 RD/RA Work Plan for Interim Action, submitted to the regulators on March 25, 2011).
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.			Progress is consistent but delays associated with the issuance of IFC have been experienced. Project is utilizing additional resources and working overtime to mitigate this risk. The concern is reviewed daily with the General Contractor to recover critical path work activities.
SGW-056A: 300-FF-5 Infiltration Not Feasible for Wide-Spread Application	An infiltration test is being performed at 300-FF-5 for the contaminants of concern.			Alternatives to widespread application of infiltration from the surface are being developed in parallel with searching for candidate sites for surface infiltration tests. None of the candidate technologies can be tested in time to support the PP or ROD. Alternative technology testing has been deferred to FY12. Recommend focusing available funding on one technology approach with a Technical Impracticability argument for the OU should it not prove feasible.

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-065: Bio/Chemical Remediation Fails	A design test is being planned for 100-D Area. This should eliminate some of the uncertainties with the potential side effects.			Well alignment for the test was revised to accommodate new modeling results and increase potential performance for the pump and treat system. The bioremediation TTP has been postponed until FY13, since the TTP is a post-ROD design test, and new data is not yet required to make remedial decisions in support of the FS.
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 in the field.
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.			The project is working closely with subcontractors to understand and work through impacts from design changes and maintain the accelerated project schedule. OT and additional shifts have been utilized in certain areas to ensure schedule requirements are met. Work continues to support software, simulator, procedures, and CAT/ATP development.
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.
SGW-108L: 200-IS-1 Increased Characterization Required	Work closely with the regulators to expedite resolution of characterization requirements in order to minimize cost and schedule impacts.			Disagreement regarding lead regulatory agency authority and acceptability of existing characterization; expectation that additional characterization will be required.

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 GW Capital Asset	11.5	17.6	13.3	6.1	53.0	4.3	24.2
ARRA RL-0030.R1.2 GW Operations	1.8	2.0	2.1	0.1	7.7	(0.1)	-6.5
ARRA Total	13.3	19.5	15.4	6.2	46.8	4.1	21.1
Base	14.6	13.1	13.9	(1.5)	-10.0	(0.8)	-6.2
Total	27.9	32.6	29.3	4.8	17.1	3.3	10.1

Numbers are rounded to the nearest \$0.1M.

ARRA

CM Schedule Performance: (+\$6.2M/+46.8%)

Current month schedule variances that exceed thresholds are as follows:

ARRA RL-0030.R1.1 GW Capital Asset (+\$6.1M)

200-ZP-1 OU (+\$6.1M)

The positive schedule variance is due to realignment of subcontractor's schedule ensuring performance is claimed upon receipt of material procurements.

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

All current month schedule variances are within thresholds.

CM Cost Performance: (+\$4.1M/+21.1%)

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

ARRA RL-0030.R1.1 GW Capital Asset (+\$4.3M)

200-ZP-1 OU (+\$4.2M)

The positive cost variance is the result of BCWP claimed in the current period that was costed in previous months. The contractor's schedule has been realigned to ensure performance is claimed upon receipt of material procurements.

ARRA RL-0030-R.1.2 GW Operations (-\$0.1M)

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

The negative cost variance is due to a cost correction that was completed in May for BCWP claimed in a previous month.

PBS RL-30 G&A and Direct Distributables (+\$0.3M)

The positive cost variance is discussed in Appendix C.

Base**CM Schedule Performance (-\$1.5M/-10.0%)**

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

Drilling (-\$0.6M)

Drilling of ZP-1 wells was delayed due to a broken 16" casing, shipment delays in receiving the under reamer tool for the 12" casing, and nesting of a protected bird species in the mast of one of the rigs. It is anticipated that some of the ZP-1 drilling will slip into FY2012.

100 HR-3 Operable Unit (+\$0.4M)

HX construction activities for Procure/Install Equipment, Distribution of Electricity and Piping, and Transfer Building Construction are being performed ahead of schedule to support the completion of construction activities and acceptance testing by September 2011. Project is currently forecast to complete ahead of baseline schedule.

200-UP-1 Operable Unit (-\$0.3M)

The variance is primarily associated with progress taken with the S-SX subcontractor. The S-SX work scope has increased based on the 100% design as compared to the 60% design that was originally baselined. Performance was taken based on the work scope identified by the 100% design and has resulted in a current month negative schedule variance. RL has provided an increased Not-To-Exceed (NTE) value of \$5.2M for this work scope. A BCR will be processed to increase the BCWS by \$1.2M to align to the contract mod.

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

BCWS for the sludge stabilization (lime) system that was planned in May was completed in earlier months, resulting in the current month negative schedule variance.

CM Cost Performance (-\$0.8M/-6.2%)

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

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

Primary drivers for the current month cost variance are as follows:

- Additional time and resources being spent on internal CERCLA (RI/FS) document development that will be recovered in the completed Draft A document
- Alignment of wells from the DR-5 System to the DX System and corrective maintenance on the acid and caustic lines as well as trouble shooting pH probe issues
- HX design increase in level of support to construction due to schedule acceleration and complexities of the project
- 100 HX outside work and erection of buildings is being performed with less craft labor and construction materials than budgeted.

200-UP-1 OU (-\$0.7M)

The variance is primarily associated with progress taken with the S-SX subcontractor. The work scope has increased based on the 100% design as compared to the 60% design that was originally baselined. Performance was taken based on the work scope identified by the 100% design and has resulted in a current month negative cost variance. RL has provided an increased Not-To-Exceed (NTE) value of \$5.2M for this work scope. A BCR will be processed to increase the BCWS by \$1.2M to align to the contract mod.

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

The negative cost variance is due to an under-accrual in April for the Vapor Phase Granular Activated Carbon (VPGAC) procurement, the accrual was corrected in the current month resulting in the negative CV.

PBS RL-30 UBS, G&A, and DD (-\$0.5M)

The negative cost variance is discussed in Appendix C.

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 GW Capital Asset	136.6	142.5	147.8	5.9	4.3	(5.3)	-3.7	175.0	174.9	0.0
ARRA RL-0030.R1.2 GW Operations	<u>73.2</u>	<u>73.1</u>	<u>68.1</u>	<u>(0.0)</u>	-0.1	<u>5.0</u>	6.8	<u>92.1</u>	<u>88.5</u>	<u>3.6</u>
ARRA Total	209.8	215.6	215.9	5.8	2.8	(0.3)	-0.2	267.1	263.4	3.7
Base	<u>357.8</u>	<u>359.1</u>	<u>366.0</u>	<u>1.3</u>	0.4	<u>(6.8)</u>	-1.9	<u>1,283.4</u>	<u>1,229.0</u>	<u>54.5</u>
Total	567.6	574.7	581.9	7.1	1.3	(7.2)	-1.3	1,550.5	1,492.4	58.1

Numbers are rounded to the nearest \$0.1M.

ARRA**CTD Schedule Performance: (+\$5.8M/+2.8%)**

All Variances are within thresholds.

ARRA RL-0030.R1.1 GW Capital Asset (+\$5.9M)200-ZP-1 Operable Unit (+\$5.9M)

The positive schedule variance is the result of managing the primary contractor to an accelerated completion date.

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

All Variances are within thresholds.

CTD ARRA Cost Performance: (-\$0.3M/-0.2%)

The primary contributors to the ARRA CTD cost variance that exceed the reporting thresholds are:

ARRA RL-0030.R1.1 GW Capital Asset (-\$5.3M)200-ZP-1 Operable Unit (-\$4.1M)

The negative cost variance is due to increased costs associated with civil/site work and procurement/installation of prefabricated metal buildings impacted by design changes, changes to long lead procurements and project management costs associated with increased project scope.

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.

ARRA RL-0030.R1.2 GW Operations (+\$5.0M)**Drilling (+\$2.5M)**

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.

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

The positive cost variance is due to efficiencies experienced on well rack and high-density polyethylene piping installation, primarily with engineering and oversight resources.

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 & Transition – Trailers/Maintenance Facilities (-\$2.0M)

The negative cost variance was driven by design corrections/clarifications that resulted in increased construction costs for the shop buildings.

PBS RL-30 UBS, G&A, and DD (+\$2.1M)

The positive cost variance is discussed in Appendix C.

Base**CTD Schedule Performance (+\$1.3M/+0.4%)**

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

100 HR-3 Operable Unit (+\$3.4M)

HX construction activities for Procure/Install Equipment, Distribution of Electricity and Piping, and Transfer Building Construction are being performed ahead of schedule to support the completion of construction activities and acceptance testing by September 2011. The project is currently forecast to complete ahead of baseline schedule.

CTD Cost Performance (-\$6.8M/-1.9%)

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

Integration & Assessments (+\$2.8M)

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.

100-KR-4 OU (-\$2.3M)

The unfavorable cost variance has resulted from increased analytical cost and use of additional resources to expedite the remedial investigation sampling and the accompanying RI/FS report efforts. Additional risk assessment and modeling costs have been included in the forecast. The negative cost variance will continue through preparation of Draft A of the RI/FS report.

100-NR-2 OU (+\$1.6M)

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 (-\$2.7M)

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 unplanned modifications on the system after completion of construction and 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 cable cost increased due to increases in copper prices
- Additional time and resources being spent on internal CERCLA (RI/FS) document development that will be recovered in completed Draft A document

200-UP-1 Operable Unit (-\$1.2M)

The variance is primarily associated with progress taken with the S-SX subcontractor. The work scope has increased based on the 100% design as compared to the 60% design that was originally baselined. Performance was taken based on the work scope identified by the 100% design that has resulted in the negative cost variance. RL has provided an increased Not-To-Exceed (NTE) value of \$5.2M for this work scope. A BCR will be processed to increase the BCWS by \$1.2M to align to the contract mod.

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

Major contributors to the variance are as follows:

- 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

200 PW-1 OU (+\$0.8M)

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 (-\$1.7M)

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.

PBS RL-30 UBS, G&A, and DD (-\$2.1M)

The negative cost variance is discussed in Appendix C.

Contract Performance Report Formats are provided in Appendices A and A-1.

Estimate at Completion (EAC)

ARRA – The projected variance at completion is positive 1.4%. Efforts are in place to maintain this positive variance at completion.

Base – The small projected variance at completion of positive 4.2% 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.** To reduce spending, efforts have been made to reduce cost where practical. The forecast has been modified to reflect these reductions. The primary areas where the reductions have occurred are as follows:

- Environmental Programming and Strategic Planning forecast was adjusted to reflect reduced resource requirements.
- UP-1 S-SX forecast was reduced due to work scope being suspended as a result of funding limitations

FUNDS vs. SPEND FORECAST (\$M)

WBS 030/ RL-0030 Soil and Groundwater Remediation	FY2011		
	Projected Funding	Spending Forecast	Spend Variance
ARRA	157.6	156.7	0.9
Base	174.9	171.8	3.1

Numbers are rounded to the nearest \$0.1M.

Funds/Variance Analysis

Funding includes FY2010 carryover and FY2011 new Budget Authority. “Projected Funding” for Base PBSs was changed in May, 2011 to reflect a reallocation among PBSs and a reduction of \$7.3 to align with the final FY 2011 Appropriations Act (RL-0030 Base: +4.9M).

Critical Path Schedule

Critical path analysis can be provided upon request.

Baseline Change Requests

BCR-030-11-013R0, Deferral of STOMP & Aquifer Tube Data (ATD) Evaluation

BCRA-PRC-11-035R0, General Administrative Changes for May 2011

BCR-R30-11-004R0, 200W Pump & Treat Scope Addition

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-024-58D	Initiate Discussions of Well Commitments	TPA	6/1/11	5/12/11		Complete
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		12/30/11	On Schedule
M-015-82B	Initiate 200-BP-5 Aquifer Tests Within 6 months of TTP Approval	TPA	8/1/11		8/1/11	On Schedule
M-024-62-T01	Conclude Discussions of Well Commitments	TPA	8/1/11		8/1/11	On Schedule
M-091-40L-031	Submit April to June 3rd Quarter FY2011 Burial Ground Sample Results.	TPA	9/15/11		8/30/11	On Schedule
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		9/13/11	On Schedule
M-015-70-T01	Submit Feasibility Study Report and Proposed Plan for 100-HR-1/2/3 and 100-DR-1/2 OUs	TPA	11/24/11		9/15/11	On Schedule
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	11/30/11		11/29/11	On Schedule
M-091-40L-032	PMM 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	12/17/11		12/15/11	On Schedule
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-015-91A	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
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-016-111C	Expand P&T System at 100-HR-3 OU to 800 gpm Capacity	TPA	12/31/11		10/15/11	On Schedule
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-016-122	Begin Phase 1 Operation of 200W Pump-and-Treat System	TPA	12/31/11		12/31/11	On Schedule
M-085-10A	Submit RI/FS Work Plan for 200-CB-1 Operable Unit	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-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

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.