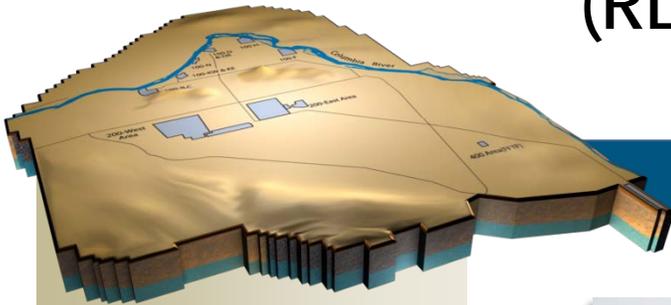


Section D

Soil and Groundwater Remediation Project (RL-0030)



Monthly Performance Report

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A bulldozer loads the fill material into a truck for transport to the 200 West Groundwater Treatment Facility construction site.

PROJECT SUMMARY

American Recovery and Reinvestment Act (ARRA)

Recovery Act dollars are at work across the Central Plateau and along the Columbia River, constructing two groundwater treatment facilities and drilling numerous wells that will be used for monitoring, extracting, and remediating groundwater near the Columbia River. Progress through the end of the fiscal month July is summarized in the table below.

Activity	July		Cumulative	
	Planned	Completed	Planned	Completed
Welling Drilling (# of wells)	36	9	241	256
Well Decommissioning (# of wells)	15	20	135	170
200 West P&T – Final Design (%)	14	8	63	77
200 West P&T – Construction (%)	3	6	18	21
200 West P&T – Testing/Startup (%)	1	2	8	10
100 DX P&T – Construction/Startup (%)	12%	3%	85%	97%

Base

Base work includes the pump-and-treat operations, CERCLA remedial processes, and documentation for the River Corridor and Central Plateau. Phase 2 realignment construction actions concluded at the KR4 system, and acceptance testing of affected components was completed. Phase 2 realignment construction actions were completed at the KX system and acceptance testing is 98% complete. The second of three rounds of risk assessment sampling for 100-HR-3 and 100-KR-4 decision units completed. Sampling and groundwater treatment completed in July include the following:

- 251 well locations were sampled with a total of 1,221 samples being collected
- 58 aquifer tube samples were collected from 14 tubes at seven sites
- 11.8M gallons groundwater treated by ZP-1 treatment facility
- 21.8M gallons groundwater treated by KX treatment facility
- 8.6M gallons groundwater treated by KW treatment facility
- 10.6M gallons groundwater treated by KR-4 treatment facility
- 1.7M gallons groundwater treated by HR-3 treatment facility
- 1.1M gallons groundwater treated by DR-5 treatment facility

EMS Objectives and Target Status

Objective#	Objective	Target	Due Date	Status
09-EMS-SGWR-OB1-T3	Take actions necessary to protect the Columbia River by 2012	Expand the HR-3 treatment system(s) to achieve a functional operational capacity of 500 gpm	12/31/10	On schedule
		Start construction for DX P&T facility	7/2/09	Complete (7/2/09)
		Construct DX P&T and transfer building	7/15/10	Complete (7/15/10)
		Construct 30 new wells for the P&T system	6/30/10	Complete (6/29/10)
		Finish construction of DX P&T system	10/31/10	On schedule
		Finish ATP for DX P&T system	12/30/10	On schedule
		The HR-3 Treatment systems are functional at 500 gpm	12/31/10	On schedule
09-EMS-SGWR-OB3-T2	Reduce the number of groundwater sampling events conducted annually	Reduce the number of sampling events by 2% in calendar year 2009	12/31/09	Complete
		Evaluate FY-end sample schedule relative to baseline planned sample schedule of 2,460 sample trips	10/31/09	Complete (5/30/09)
		Reduce the baseline planned sample schedule by at least 49 sample trips	12/31/09	Complete (10/12/09)
09-EMS-SGWR-OB3-T3	Reduce the number of groundwater sampling events conducted annually	Reduce the number of sampling events by 10% in calendar year 2010	12/31/10	On schedule
		Evaluate FY-end sample schedule relative to baseline planned sample schedule of 2,768 sample trips	10/31/10	On schedule
		Reduce the baseline planned sample schedule by at least 277 sample trips	12/31/10	On schedule
10-EMS-SGWR-OB1-T1	Take actions necessary to protect the Columbia River by 2012	Treat 430,000,000 gallons of 100 Area (D, H & K Area) groundwater	9/30/10	On schedule
		Review and tally total number of gallons treated	Monthly	402.3M gal treated as of 7/31/2010
10-EMS-SGWR-OB2-T1	Construct a new GW treatment facility that satisfies the P&T component of the 200-ZP-1 OU ROD selected remedy	Construct new 200 West Area P&T facility to remediate GW which was impacted from past 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
		Start construction of GW extraction buildings	3/30/10	Complete
		Complete treatment facility construction	12/31/11	On schedule
10-EMS-SGWR-OB3-T1	Initiate & sustain remediation of waste sites at 100-K by 11-30-09	Initiate & sustain progress toward waste site remediation	Quarterly	On Schedule
		Complete Group 1 waste site remediation		
10-EMS-SGWR-OB4-T1	Track and quantify waste avoidance activities	Track/quantify drill cuttings RTed	Quarterly	On Schedule
		ERDF cans used in lieu of drums		
		Purgewater avoidance		

TARGET ZERO PERFORMANCE

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	0	1	N/A
First Aid Cases	9	74	<p>7/3/10 Ironworker in a scissor lift was tightening bolts. The wrench slipped and the handle struck the worker in the right upper cheek/jaw area, causing a laceration. Employee and superintendent were referred to Kadlec. Employee was released back to work with no restrictions. (21058)</p> <p>7/14/10 Employee was driving ground rod with manual ground rod driver. Rod and striker pinched the palm side of employee's hand causing a slight laceration. After discussion with Safety, employee decided to self-treat. (21002)</p> <p>7/20/10 Employee received an insect bite on right upper arm. Safety gave permission to self-treat. (21116)</p> <p>7/20/10 Employee felt insect bite on left wrist. Safety gave permission to self-treat. (21117)</p> <p>7/21/10 Employee received a cut when throwing garbage into a dumpster. (21122)</p> <p>7/22/10 Employee had been working around wind gusts up to 25 mph, and was instructed to don their enhanced safety glasses. Employee reported having foreign material in left eye and was taken to use eye wash. Employee was then taken to AMH for follow up. Employee returned to work with no restrictions. (21124)</p> <p>7/27/10 An NCO pinched finger while assembling a split spoon sample device. The individual was wearing appropriate gloves while performing the work. The pinch was self treated. (21148)</p> <p>7/27/10 Sampling NCO was taken to AMH for evaluation of eye irritation and was returned to work without restriction. (21145)</p> <p>7/28/10 Employee lowered a chain attached to T-posts to the ground to allow the vehicle to continue down the road to the well sampling location. When the vehicle's rear wheel went across the chain, the chain bounced up and was caught underneath the vehicle. An employee was standing to the side of the vehicle at this time and was struck on the shins by the chain. Employee went to AMH for treatment and was returned to work without restriction. (21152)</p>
Near-Misses	0	2	<p>6/21/10 At the 300 Area FF-5 drill site, actions were being taken to disconnect the drill head from a section of drill rod. The chain tong failed and pieces of the chain tong were found approximately 60 to 80 feet from the drill rig. There were no personnel injuries. (EM-RL--CPRC-GPP-2010-0009)</p>

KEY ACCOMPLISHMENTS

ARRA - GW CAPITAL ASSET

Drilling	July		Cumulative	
	Planned	Completed	Planned	Completed
M-24	1	2	4	5
200-ZP-1 West P&T Expansion	1	2	12	12
Drilling Total	2	4	16	17

EPC Projects in Support of S&GRP - ARRA

- Forty-four road crossings have been completed. All welding activities for the transfer piping are complete for the well to transfer building runs. Additional activities will be necessary once the six buildings are erected to connect building to building runs. Construction activities started for the BIO and RAD buildings. Long lead equipment are fabricating with the first to arrive in late September. Lime stabilization 60% overall design occurred in late July with a 90% design submittal from the lime system manufacturer due in mid-August.
- Construction of all three buildings for the 100-DX Pump-and-Treat is complete, with the exception of the pH adjustment system at the Process Building and punchlist items. Acceptance Testing began on the 100-DX Pump-and-Treat construction project on July 19, 2010 at the M2 Transfer Building. The Process Building was energized on July 22, 2010. The Ion Exchange trains at the Process Building have completed Construction Acceptance Testing (CAT). The final long lead specialty acid storage tank was received on July 22, which will allow the electrical and mechanical tie-ins of the pH adjustment system to the treatment system to progress.

EPC Projects in Support of S&GRP – Base

- Phase 2 realignment construction actions were completed at the KX system. Acceptance testing is 100% complete
- Modutank Subgrade Waterline construction is 100% complete. Modutank unloading dock and ramp modification are 95% completed. Expected completion is August 12, 2010.
- Construction has begun on the 100-HX Pump-and-Treat Construction Project. Footings have been excavated and poured for Treatment Building. Three of twenty six road crossings are complete. HDPE pipe laying and bonding is 5% complete. Fabrication of well racks is underway. Design activities continue to progress towards the 90% design review in October.

ARRA - GW OPERATIONS**Well Drilling and Decommissioning – ARRA**

	July		Cumulative	
	Planned	Completed	Planned	Completed
KR-4 RPO	1	0	1	0
KR-4 RI/FS	2	1	8	2
100-NR-2 Barrier Emplacement	24	0	126	171
100-HR-3 Bioremediation TT	1	0	1	0
100-HR-3 H Area RPO	0	4	40	29
100-HR-3 D Area RPO	0	0	30	30
100-HR-3 RI/FS	3	0	7	0
200-BP-5 “K” Well	0	0	1	1
200-BP-5 “L” and “M” Well	0	0	2	2
100-BC-5 RI/FS	1	0	5	4
100-FR-3	1	0	3	0
300 FF-5 RI/FS	1	0	1	0
Drilling Total	34	5	225	239
Decommissioning Total	15	20	135	170

BASE - GW OPERATIONS**Environmental Strategic Planning:**

- Developed first draft of responses to public comment on the Central Plateau Cleanup Completion Tentative Agreement and TPA change packages in coordination with MSA and delivered to RL
- Completed two “200 West Inner Area RI/FS Work Plan Scoping” meetings with regulatory agencies.

Risk and Modeling Integration Group:

- Completed revision of the Central Plateau Ecological Risk Assessment data package based on comments from RL
- Responses to the Composite Analysis and Performance Assessment annual update document reviews by DOE-HQ were provided
- Finalized the modeling-related write-ups to support the 200-PW-1/3/6 Proposed Plan

Integration Management:

- Presented the new WIDS application design to RL and CHPRC representatives. The new design offers many improvements, including a key feature that allows WIDS site managers to enter information directly into the database.
- Completed a series of technical issue discussions with the regulatory agencies on the path forward for completing the River Corridor RI/FS process
- Initiated DOE and inter-contractor meetings to define the Deep Vadose Zone program

Document Review and Standardization:

- Conducted kick-off meeting with External Document Improvement Team (EDIT) members. EDIT will be providing input on the 100 D/H RI/FS Report and the 200-West Inner Area Work Plan.

River Corridor**100-BC-5 Operable Unit - Base**

- As of August 11, 2010, the borehole C7508 was at 191 feet, with about 20 feet to go. This well is located near C Reactor and will be drilled to the top of the Ringold Upper Mud (RUM) and will then be screened at the depth of greatest Cr(VI) contamination.

- Drilling of well C7786, located north of 100-C-7 waste site, was begun and completed in July. This top-of-aquifer well is paired with a deeper well.
- Slug testing of existing wells began in July

100-FR-3 Operable Unit

- Drilling began on RI/FS well C7790 in July

100-KR-4 Operable Unit - Base

- The updated KR4 Pump-and-Treat System cultural resource treatment plan was sent to the Tribes on June 17, 2010 with a request for comments by July 23, 2010. Comment period has passed and only comment received was from SHPO requesting figures be redrafted. Plan is ready to go final.
- The third round of special/temporal well sampling for high river stage has been completed and awaiting sample analysis results
- Completed second SIR-700 resin test at the KX Pump-and-Treat facility with pH control between 6.3-6.7 reached breakthrough at approximately 15,000 and 30,000 BVs through the 10" and 5" columns, respectively. The tighter pH controls showed improved resin performance from the first test where breakthrough occurred after ~5,000 bed volumes (BVs). Preparation of the K Area resin alternatives report is in progress.

100-NR-2 Operable Unit - Base

- Draft A of the 100-N Integrated SAP (Sampling Analysis Plan) was submitted to Ecology in June, and is still under Ecology review. Comments were expected back by July 19, 2010, but have not yet been received.
- Well-sampling activities were scheduled and initiated with 17 of 26 wells sampled as of June 28, 2010. Eight of the nine remaining wells were sampled on July 9, 2010. The remaining well would not produce water and was unable to be sampled.
- A SAP was developed to allow for additional "upwelling" (river porewater) sampling to be conducted from the river bottom along specific portions of the 100-N river shoreline. This document is in the process of being released as a Draft A for transmittal to RL and subsequent submittal to Ecology.
- The Pacific Northwest National Laboratory (PNNL) core-sampling analytical report was issued in mid July. All results have been incorporated into the final Jet Injection test report, which is near finalization.
- A Treatability Test Plan (TTP) has been drafted to allow for a larger, demonstration-scale test of the Jet Injection technology in the vadose zone over the existing 300 foot apatite barrier. Internal reviews have been performed, and the document is now being produced as Draft A for regulatory review. Comments are being incorporated for a full CHPRC internal review.

100-HR-3 Operable Unit - Base

- HR-3 operated at near lower levels while two RUM wells are being connected to the HR-3 facility for long-term operation as extraction wells. The system is also being modified to remove an extraction well (199-H-4-3) impeding WCH excavation, and reconnect well (199-H-3-4) as an extraction well to capture the southeast flank of the plume.

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

- RL approved the revised Closure Plan, SAP, SEPA Checklist, and petition for LDR (Land Disposal Restrictions) variance for the Hexone Storage and Treatment Facility on July 16, 2010 and transmitted them to Ecology, thus meeting proposed TPA Milestone M-037-01, Submit Revised closure Plan to for the Hexone Storage and Treatment Facility (276-S-141/142) TSD Unit, Due December 31, 2010 ahead of schedule.

200-BP-5 Operable Unit - Base

- The Decisional Draft of the 200-BP-5 Treatability Test Plan was delivered to DOE on July 8, 2010 for review. DOE review comments have been received and are being incorporated into the Draft A.
- Issued the final 200-BP-5 conceptual model report for the B-Complex area

200-ZP-1 Operable Unit - Base

- Eleven of the fourteen groundwater extraction wells are on line pumping water at a rate of approximately 440 gpm. Extraction well 299-W15-36 will be kept offline due to very low flow rates. Extraction wells 299-W15-34 and 299-W15-765 are offline due to electrical problems that are currently being assessed.
- Extraction wells 299-W11-45 and 299-W11-46 are both running and are pumping at a combined rate of ~26 gpm to the Effluent Treatment Facility (ETF). A reduced flow rate is now required through the end of August 2010 to allow ETF to drain one of their other basins which is full.
- Rev. 0 of the Performance Monitoring Plan has been issued

200-PW-1 Soil Vapor Extraction (SVE) - Base

- Both PW-1 active SVE units are operating. Passive SVE operations are also ongoing.

Regulatory Decisions and Integration - Base

- 200-WA-1 RI/FS Work Plan Scoping Sessions:
 - Scoping sessions with DOE, EPA, and Ecology continued in July and the RI and FS scope discussions were completed. The team prepared for an August 10th presentation on Regulatory Integration/MCTA and the final meeting to address our proposed Work Plan Annotated Outline.
- 200-MW-1 Feasibility Study:
 - The response to comments from the Tribal Nations was completed and submitted to RL for review
- 200-PW-1/3/6 Feasibility Study:
 - The team supported DOE to prepare a letter on DOE's perspective on the proposed remedy for EPA's Remedy Review Board
- Burial Ground Sample and Analysis Quarterly Reporting:
 - TPA Milestone M-091-40L-027 Submit 3rd Quarter FY2010 Burial Ground Sample and Analysis Results was completed and submitted to Ecology on July 22, 2010
- The West Lake SAP was submitted to EPA/Ecology for comment July 14, 2010

200-DV-1 Deep Vadose Zone Operable Unit – Base

- Working with PNNL to integrate the 200-DV-1 OU with the overall Program Plan for the Deep Vadose Zone initiative. As part of this effort, participated in the Deep Vadose Zone Technical Forum to help scope the activities for the RI/FS work plan.

Deep Vadose Zone Treatability Test Project - Base

Work continues on the deep vadose zone project including the pilot test, desiccation lab testing, uranium sequestration, and soil flushing and grouting.

The following summarizes key accomplishments for July:

- The DQO for the Uranium Sequestration work was completed this month has been revised following input from the associated Expert Review Panel held on July 13-14, 2010

MAJOR ISSUES

Issue - The RI/FS drilling schedule at 300-FF-5 is being impacted due to lack of performance and safety related issues with the selected contractor.

Corrective Action – The contractor has replaced the drilling subcontractor with one that has worked at the Hanford site successfully and they have mobilized to the site and participated in a new drilling campaign kickoff meeting.

Status – The new subcontractor has begun drilling at the site and drilling is proceeding normally. A second rig from this subcontractor is scheduled to begin work at the site as well this month to help recover schedule. DOE is being kept informed on a weekly basis as to the schedule for this corrective action and status.

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.	●	↔	Several design changes required due to changing requirements; BCRs being developed to cover realized risk.
SGW-050: Regulatory Strategy for Decision Docs	Continue to support RL in strategy negotiations with Agencies.	●	↔	Minimal public comments received; BCR to be developed to implement agreement.
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.	●	↔	Laboratory testing is nearing completion. The ISRM will not be amended with ZVI, but rather the 4 P&T wells installed. A regulatory analysis has been submitted to Ecology recommending this change is insignificant. Ecology agrees and will revise and submit to the Admin Record.
SGW-080: 100-BC-5 Pump and Treat Required	This risk is accepted as written and will be monitored throughout work execution.	●	↓	Additional characterization through the installation of RI/FS wells, aquifer tubes, and additional river-upwelling sampling is underway to further define the extent and concentration of chrome in the plume in order to determine if an active remedial measure is required. Currently a pump and treat is not planned for the OU. However, working with RL on the potential of conducting a Non-Time Critical Removal Action to implement a hydraulic barrier/pump and treat combination to mitigate chromium migration to the river. Additional details should be available in a few weeks at which point we would revisit this item.
SGW-081: 100-FR-3 Pump and Treat Required	This risk is accepted as written and will be monitored throughout work execution.	●	↓	Additional characterization through the installation of RI/FS wells is underway to further define the extent and concentration of chrome in the plume in order to determine if an active remedial measure is required. Concentrations of chromium are low at this site and no Pump and Treat is planned for the OU. However, working with RL on the potential of conducting a Non-Time Critical Removal Action to implement a hydraulic barrier/pump and treat combination to mitigate chromium migration to the river. Additional details should be available in a few weeks at which point we would revisit this item.
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 performance continue to exceed baseline schedule.
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.
SGW-008U: Regulatory Document Comments for 200-SW-1/2	Routine meetings are being held with regulators during document development; no additional mitigation is feasible.	●	↔	Agency workshops have been completed and the NRDWL/SWL closure plan is being revised to incorporate comments. Ecology approval of this final closure plan is pending their receipt of the revised document 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 failures to get the infiltration gallery functional, PNNL has developed a parallel approach with a deepening of the existing gallery along with shallow tests in other locations. A joint CHPRC/PNNL path forward has been developed and vetted by RL and EPA. Replanning efforts are underway.

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-018: 100-HR-3 P&T Operating Efficiency	Add four wells to the baseline to increase the likelihood of meeting production rates at startup. Connect DR-5 wells to HR-3 P&T. Test use of horizontal well for increased water flow. Add 100-H wells to HR-3 P&T. Construct HX P&T system.	●	↔	Beginning design to add one well to the HR-3 system to increase flow and remove mass during startup of DX and HX. Adds a transfer building and an eighth IX train to the HX design to accommodate additional capacity for optimization.
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 conduction pre-job briefings. No further mitigation is warranted. Risk is accepted.	●	↔	A series of events by one drilling contractor over the past two months caused a work stoppage and cure notice of all their work in HR-3 and Well Decommissioning. Work is on a slow phased restart to allow supervision and the work staff to refocusing on safely conduction work instead of production.
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.	●	↔	Project is ahead of schedule; no issues anticipated.
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.	●	↔	As of 8/4/10, 100% of drawings have been released via the site DCN process. Sludge handling award made with 60% design package due 7/21/10. Have developed a streamlined approach for handling contractor submittals and RFIs, third party inspections contract is awarded, and preparation for the conduct of services during construction.
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.	●	↔	Current CHPRC baseline has adjusted schedules to account for additional drilling durations.
SGW-037: 100-NR-2 Infiltration Gallery Pilot Test	Risk accepted without mitigation.	●	↔	Based on initiation problems encountered at the 300-FF-5 infiltration test, success at NR-2 is in question (likely to be worse field conditions). Alternative technology (jet injection) with higher likelihood of success has been successfully pilot tested and is being pursued for implementation.
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 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.	●	↔	Phase 1 Road Crossings = 92% complete. Phase 1 transfer Piping = 60% complete. Earth work continues. Skanska working RAD building plinths, installing anchor bolts at center crane footings and setting forms at the BIO building A-line footings. Site prep for transfer building ongoing with concrete scheduled to be poured the week of Aug 2-5.
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. Replanning of the baseline for these new activities is ongoing. Alternatives include jet injection, application of engineering lithology, and well injections.
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. Revised experimental design to increase probability for success.
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.	●	↓	In order to maintain the schedule, significant additional team resources are being added to assist with training, submittals, RFIs, QA/QC, third party testing, management and oversight, and other services during construction. Sludge handling system awarded and 60% design package is complete. 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. A BCR has been approved and the scope has been incorporated into the baseline.
WSR-042: Multi-Incremental Sampling Increased Waste Sites	MIS Project designed to meet requirements; no further mitigation warranted.	●	↔	No issues at this time.
WSR-043: Multi-Incremental Sampling Hazard Categorization	Adjust baseline cost/schedule to reflect Haz Cat III categorization.	●	↔	No issues at this time.

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	6.8	8.0	10.9	1.2	17.3	(2.9)	-36.0
ARRA RI-0030.R1.2 GW Operations	5.1	2.3	4.4	(2.8)	-53.7	(2.1)	-86.8
ARRA Total	11.9	10.3	15.3	(1.6)	-13.2	(4.9)	-47.6
Base	14.5	12.1	13.1	(2.4)	-16.3	(1.0)	-8.2
Total	26.4	22.5	28.4	(3.9)	-14.9	(5.9)	-26.4

ARRA

CM Schedule Performance: (-\$1.6M/-13.2%)

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

ARRA RL-0030.R1.1 GW Capital Asset (+\$1.2M)

Drilling (+\$0.3M)

The Current Month positive schedule variance is a result of utilizing multiple drill rigs for ZP-1 drilling as per the recovery plan. The CTD is also positive.

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

The Current Month negative schedule variance is primarily due to installation of equipment inside the DX process and M2 transfer buildings ahead of schedule. Work scope planned in July was completed in prior months resulting in the current month negative variance. DX will complete ahead of schedule.

200-ZP-1 Operable Unit (+\$2.6M)

The Current Month positive variance is primarily related to early delivery of the microfiltration membranes, fluidized bed system activities, RAD building exterior work, and subcontractor materials/equipment/and technical submittals. These ahead of schedule activities will help ensure the project meets completion deadlines.

ARRA RL-0030.R1.2 GW Operations (-\$2.8M)

Drilling (-\$0.8M)

The Current Month negative schedule variance is due to contractor operational issues (proactive safety stop work) and is being resolved. The delays will impact RI/FS for 100-KR-4, 100-NR-2, 100-HR-3, and 300-FF-5 with some scope pushing into FY2011.

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

The current month negative schedule variance is a result of the Utilities and Buildings Erection contractor not performing as planned. The contractor is under-staffed for this project. The project has put in place several corrective actions to regain schedule.

CM Cost Performance: (-\$4.9M/-47.6%)

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

ARRA RL-0030.R1.1 GW Capital Asset (-\$2.9M)

100-HR-3 Operable Unit (-\$1.5M)

The current month negative cost variance is primarily due to lagging payments/accruals for work that was completed in earlier months. Projected completion is expected to be less than planned.

200-ZP-1 Operable Unit (-\$1.6M)

The current month negative cost variance is primarily due to the correction of a June over accrual of engineering services requiring an under accrual in July. This correction will not negatively impact CTD cost.

ARRA RL-0030-R.1.2 GW Operations (-\$2.1M)**Well Drilling (+\$0.3M)**

The current month positive cost variance is primarily due to efficiencies obtained in NR-2 and HR-3 well drilling and decommissioning activities. These savings are expected to continue and increase the current CTD positive cost variance.

Ramp-up and Transition (-\$2.1M)

The current month negative cost variance is a result of cost being realized for performance claimed in previous months. The overall CTD cost variance remains positive.

Base**CM Schedule Performance (-\$2.4M/-16.3%)**

The primary contributors to the negative schedule variance are as follows:

100 HR-3 Operable Unit (-\$0.9M)

The current month negative schedule variance is primarily due to delays in letting the contract to procure and install HX treatment building and delays to document revisions in the OU required to meet new TPA milestone M-015-115. While HX field work has been delayed no impact is expected to the completion of the HX Pump-and-Treat Facility. The delays in document revisions are not expected to continue.

Regulatory Decision/Closure (-\$0.7M)

The current month negative schedule variance is primarily a result of work scope that is in the current baseline that is changing as part of the new Central Plateau Closure Strategy. The new strategy will be implemented later this year.

CM Cost Performance (-\$1.0M/-8.2%)

The primary contributors to the negative cost variance are as follows:

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

The positive cost variance is primarily due to significant progress that was made and efficiencies achieved on the bench and intermediate scale tests. These current month efficiencies will recover some of the previous CTD cost overruns.

Regulatory Decision/Closure (-\$1.0M)

The current month negative cost variance is primarily due to impacts associated with the new Central Plateau Closure Strategy which has impacted work scope in the current plan that is changed. In addition, a current month cost correction for ERDF cost that had been inadvertently charged to a different account caused an overrun in the Multi-Incremental Sampling account. CTD cost variance remains positive. The new strategy will be implemented later this year.

PBS RL-30 UBS, G&A, and DD (-\$0.3M)

The CTD 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	44.7	52.1	49.5	7.4	16.5	2.6	5.0	171.1	171.1	0.0
ARRA RI-0030.R1.2 GW Operations	49.7	43.4	33.0	(6.3)	-12.7	10.4	23.9	84.5	77.6	6.9
ARRA Total	94.4	95.4	82.5	1.1	1.1	12.9	13.6	255.6	248.7	6.9
Base	236.5	227.6	219.1	(9.0)	-3.8	8.4	3.7	1,207.8	1,197.4	10.4
Total	330.9	323.0	301.6	(7.9)	-2.4	21.4	6.6	1,463.4	1,446.1	17.3

Numbers are rounded to the nearest \$0.1M.

ARRA

CTD Schedule Performance: (+\$1.1M/+1.1%)

The primary contributors to the ARRA CTD positive schedule variance are as follows:

ARRA RL-0030.R1.1 GW Capital Asset (+\$7.4M)

100-HR-3 Operable Unit (+\$3.1M)

The primary contributor to the CTD positive schedule variance is acceleration of procurement and construction for DX. With the implementation of AWA-PRC-10-017, work scope was scheduled to start at the beginning of FY2010. However, a significant amount of work had already been performed in FY2009 and that work scope is representative of the CTD positive schedule variance. The project is projected to complete ahead of schedule.

200-ZP-1 Operable Unit (+\$3.7M)

The CTD positive schedule variance is primarily related to early delivery of the microfiltration membranes, balance of design/project change notices, fluidized bed system activities, RAD building exterior work, and subcontractor materials/equipment/and technical submittals. These ahead of schedule activities will help ensure the project meets completion deadlines.

ARRA RL-0030.R1.2 GW Operations (-\$6.3M)

Drilling (-\$1.3M) The CTD negative schedule variance is due to contractor operational issues (proactive safety stop work) and is being resolved. The delays will impact RI/FS for 100-K-4, 100-NR-2, 100-HR-3, and 300-FF-5 with some scope pushing into FY2011.

Ramp-up & Transition (-\$5.1M)

The primary contributors to the CTD negative schedule variance are: 1) The construction contractor's performance is less than planned due to their ability to obtain required levels of staffing. 2) Limited engineering resources due to competing priorities. 3) The re-work that was required on the S&GW1 foundation due to incorrect placement. The contract is currently forecast to complete four months behind schedule.

CTD ARRA Cost Performance: (+\$12.9M/+13.6%)

The primary contributors to the ARRA CTD positive cost variance are:

ARRA RL-0030.R1.1 GW Capital Asset (+\$2.6M)

100-HR-3 Operable Unit (+\$2.3M)

CTD positive cost variance is due to efficiencies experienced during installation of HDPE piping, road crossings, and installation of equipment in the process and M2 transfer buildings. It is anticipated that DX will underrun at project completion.

ARRA RL-0030.R1.2 GW Operations (+\$10.4M)**Drilling (+\$3.9M)**

The positive cost variance is due to efficiencies/savings obtained in drilling for 100-NR-2, 100-HR-3, and 200-BP-5 wells. Cost efficiencies are being obtained through an aggressive drilling schedule with savings in support personnel, faster drilling methods and the fact that the HR-3 well depths have been less than originally planned. Efficiencies in NR-2 and HR-3 are expected to continue resulting in additional positive cost variance.

Regulatory Decision & Closure Integration (+\$1.7M)

The positive cost variance is due to completing work scope more efficiently than planned; primarily in the areas of multi-incremental sampling, borehole drilling, landfill characterization, and document preparation. Funds will be available to support other activities.

Ramp-up and Transition (+\$2.9M)

The CTD cost variance is due to the overstated performance being compared against actuals resulting in a large positive cost variance. The project support continues to underrun, but this will be offset by the increased cost for the Internal fit-out of the four shop/warehouse buildings. The project is anticipated to complete with a small positive cost variance.

PBS RL-30 UBS, G&A, and DD (+\$1.5M)

The CTD positive cost variance is discussed in Appendix C.

Base**CTD Schedule Performance (-\$9.0M/-3.8%)**

The following schedule variances exceed the reporting thresholds:

100-HR-3 Operable Unit (-\$4.2M)

The negative CTD schedule variance is primarily due to delays in HX design activities that have also now impacted field work (distribution of electricity and piping, erection of HX process building and full scale bioremediation). While initial field work has been delayed, no impact is expected to the scheduled completion dates of the HX Pump-and-Treat facility.

Regulatory Decision/Closure (-\$2.0M) The CTD negative schedule variance is primarily a result of work scope that is in the current baseline that is changing as part of the new Central Plateau Closure Strategy. The new strategy will be implemented later this year.

CTD Cost Performance (+\$8.4M/+3.7%)

Primary contributors to the positive variance that exceed reporting thresholds are as follows:

GW Monitoring & Performance Assessments (-\$2.4M)

The CTD negative cost variance is primarily due to WSCF cost for FY2009 and FY2010 coming in higher than what was planned. The primary drivers for the increase are rate increases and G&A adders that are charged to the direct account that were not in the plan. Overrun in this WSCF account is expected to continue and will be managed by funds within the project.

100-KR-4 OU (+\$1.5M)

The primary contributor to positive cost variance are efficiencies obtained with the KR-4 Operations and Maintenance accounts, which are expected to continue throughout the fiscal year.

100-NR-2 OU (+\$1.8M)

The positive CTD cost variance resulted from performing chemical treatment and maintenance scope, jet grouting pilot test work and RI/FS Work Plan and Interim Proposed Plan Reporting more efficiently than planned. It is anticipated that this underrun can be funds managed for other project scope.

200-ZP-1 Operable Unit (+\$2.4M)

The positive CTD cost variance is largely the result of the following factors: 1) Interim Operations reflects significant progress and cost underruns have been achieved to date for Annual System Calibration. 2) Design of the permanent hookup of well EW-1 (C7017) was lower than planned as only minor changes were needed to an existing design. 3) Cost for performing general operating and

maintenance and minor modification activities have been lower than planned as the system has been running smoothly. 4) Cost for collecting depth-discrete groundwater and soil samples during the installation of new wells was less than planned. This positive cost variance is expected to be available for funds management within other areas of the project.

Regulatory Decision & Closure Integration (+\$2.0M)

The positive cost variance is due to completing work scope more efficiently than planned; primarily in the areas of multi-incremental sampling, borehole drilling, landfill characterization, and document preparation. The project is currently preparing a BCR to implement the new Central Plateau Closure Strategy and will develop the new budget requirements.

Usage Based Services (-\$1.4M)

The negative CTD cost variance is primarily due to the increased cost associated with training due to the additional ARRA work and fleet services cost that occurred in FY2009. Overruns will continue to be funds managed within the S&GRP project.

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

FUNDS vs. SPEND FORECAST (\$M)

WBS 030/ RL-0030 Soil and Groundwater Remediation	FY2010		
	Projected Funding	Spending Forecast	Variance
ARRA	108.4	102.2	6.2
Base	<u>176.4</u>	<u>144.3</u>	<u>32.1</u>
Total	284.8	246.5	38.3

Numbers are rounded to the nearest \$0.1M.

Funds/Variance Analysis

Funding has been adjusted to reflect the FY2010 funding levels for RL-0030 ARRA and Base activities.

Critical Path Schedule

Critical path analysis can be provided upon request.

Estimate at Completion (EAC)

The BAC and EAC now include FY2009 through FY2018, the PRC contract period.

Baseline Change Requests

BCR-030-10-017R0, Revision to Integrated Field Work Spares & Training, RL-30

BCRA-030-10-018R0, ZP-1 Pump Setting Truck Purchase, Capital

BCR-PRC-10-049R0, Adjust Schedule Activities with Budget and No Resource Units

BCRA-PRC-10-051R0, General Administrative Changes for July 2010

MILESTONE STATUS

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, submitted in January, defines CHPRC planning with respect to TPA milestones.

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-015-83	Submit Proposed Plan for 200-UW-1	TPA	6/30/10		N/A	Milestone is on hold per CHPRC1000454A R1, 4/13/10, Clarification on Implementation of Mod 95 and the Central Plateau Tentative Agreement (CPTA).
M-024-61-T01	Conclude Discussions of Well Commitments	TPA	8/1/10	7/28/10		Complete
M-015-115	DOE will submit to Ecology a Treatability Test Plan for Hexavalent chromium of groundwater at 100-D/H	TPA	8/30/10		8/30/10	On schedule; draft is undergoing informal review by RL and Ecology.
M-015-116	DOE will submit to EPA a Treatability Test Plan for Hexavalent chromium of groundwater at 100-K	TPA	8/30/10		8/30/10	On schedule
M-016-124	Submit 200-ZP-1 Remedial Design Report	TPA	8/31/10	8/2/10		Complete
M-091-40L-027	Submit 3 rd Quarter FY10 Burial Ground Sample Results	TPA	9/15/10	7/22/10		Complete
M-015-51	Submit Revised FS Report and Proposed Plan to EPA for 200-BC-1 OU	TPA	9/30/10		N/A	Milestone is on hold per CHPRC 1000454A R1, 4/13/10, Clarification on Implementation of Mod 95 and the CPTA.
M-015-17A	Submit a 200-UP-1 OU Combined Remedial Investigation and FS Report and Proposed Plan	TPA	9/30/10		9/30/10	On schedule
M-015-38B	Submit a Revised FS Report & Revised	TPA	11/30/10		11/30/10	Milestone is on hold per CHPRC 1000454A

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
	Proposed Plan for 200-CW-1					R1, 4/13/10, Clarification on Implementation of Mod 95 and the CPTA.
M-091-40L-028	Submit 1st Quarter FY11 Burial Ground Sample Results	TPA	12/15/10		11/30/10	On Schedule
M-016-111B	Expand Pump-and-Treat System at 100-HR-3 OU to 500 gpm Capacity	TPA	12/31/11		12/31/10	On schedule; this milestone will be met by the total pump-and-treat capacity of the HR-3 OU to include HR-3, DR-5 and DX.
M-015-82A	Submit Treatability Test Plan as Amendment of 200-BP-5 Work Plan	TPA	12/31/10		9/31/10	On Schedule
P-015-110C	Submit Uranium Treat. Tech. Treatability Test Plan for 200-DV-1 OU to Ecology	TPA	12/31/10		12/31/10	On Schedule. Proposed by Approved Tentative Agreement.
P-037-01	Submit Revised Closure Plan for Hexone Storage & Treatment Facility	TPA	12/31/10	7/16/10		Complete

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.