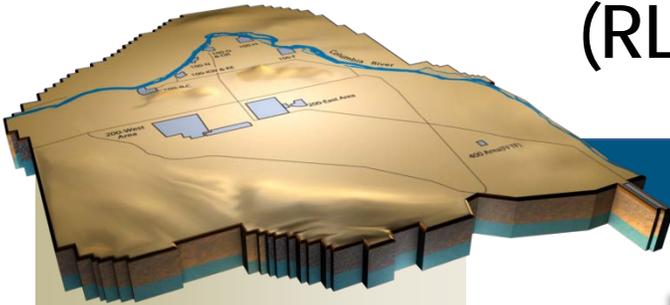


Section D

Soil and Groundwater Remediation Project (RL-0030)



Monthly Performance Report

D. L. Foss
Vice President and
Project Manager for
Soil and Groundwater
Remediation Project

M. N. Jaraysi
Vice President for
Environmental Program
and Strategic Planning

K. A. Dorr
Vice President for
Engineering, Projects
and Construction

April 2010
DOE/RL-2008-69, Rev. 18
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1



A worker rolls gravel over one of 13 recently installed road crossings that will protect high density polyethylene pipe as it connects groundwater wells to the 200 West Groundwater Treatment Facility. The facility is being designed to treat carbon tetrachloride and various other contaminants in the 200-ZP-1 and 200-UP-1 groundwater operable units.

PROJECT SUMMARY

American Recovery and Reinvestment Act (ARRA)

ARRA 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 April is summarized in the table below.

Activity	April		Cumulative	
	Planned	Completed	Planned	Completed
Well drilling	47	30	140	144
Well decommissioning	17	38	104	82
200 West P&T – Final Design	3%	16%	29%	47%
200 West P&T – Construction	1%	3%	10%	9%
200 West P&T – Testing/Startup	2%	1%	12%	12%
100 DX P&T – Construction/Startup	13%	15%	52%	70%

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 April include the following:

- 238 well locations were sampled with a total of 1,048 samples being collected
- 96 aquifer tube samples were collected from 29 tubes at 16 sites
- 10.1M gallons groundwater treated by ZP-1 treatment facility
- 20.7M gallons groundwater treated by KX treatment facility
- 8.6M gallons groundwater treated by KW treatment facility
- 11.7M gallons groundwater treated by KR-4 treatment facility
- 5.5M gallons groundwater treated by HR-3 treatment facility
- 0.84M 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	On schedule
		Construct 30 new wells for the P&T system	6/30/10	28 wells constructed
		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	259.7M gal treated as of 5/5/2010
		Treat up to 430M gallons of 100 Area groundwater	9/30/10	On schedule
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

TARGET ZERO PERFORMANCE

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	0	2	N/A
First Aid Cases	9	59	<p>4/5/10, cut occurred, elected to self-treat. (20876)</p> <p>4/16/10, employee hit his hand against an electrical panel causing a slight cut. Employee reported incident and elected to self-treat. (20877)</p> <p>4/16/10, an NCO scraped right arm while raking sediment in MODU tank #2. The NCO was taken to first aid for evaluation and was returned to work without restriction. (20859)</p> <p>4/16/10, employee struck hand on pipe while tightening a nut with a wrench, received a cut. Employee reported incident and elected to self-treat. (20889)</p> <p>4/19/10, employee hit her right knee on the edge of a door as she was transferring equipment from one vehicle to another. Employee was taken to AMH. (20866)</p> <p>4/21/10, employee caught his left finger in a clamp causing the finger nail to separate slightly from the finger. Employee reported incident and elected to self-treat. (20887)</p> <p>4/22/10, employee pinched the skin of his middle finger while turning a door knob resulting in a slight abrasion. Employee was taken to AMH and was released to work with no restriction. (20880)</p> <p>4/22/10, employee was tightening a spring and caught his finger on the tip of the wire resulting in a small scrape. (20888)</p> <p>4/23/10, employee was stung while moving a small pile of wood, incident was reported. (20886)</p>
Near-Misses	0	1	N/A

KEY ACCOMPLISHMENTS

EPC Projects in Support of S&GRP - ARRA

- The 200W Area Pump and Treat Project began focused reviews of BIO and RAD drawings to support construction activities, all 90% design drawings anticipated completion June 2010. Thirty-four road crossings have been completed. Welding activities for the transfer piping continued. Construction on the four BOP transfer buildings started; Engineering has released all drawings and specifications for construction of the four BOP transfer buildings. DOE approved contract for Skanska through DOE HQ.

- The 100-DX Pump-and-Treat construction is 70% complete. The final two Ion Exchange Skids were received on May 5, 2010 and all six skids have been moved inside the Treatment building. All PVC piping inside the M1 Transfer building is complete. All the vertical transfer, feed, and booster pumps are installed and anchored. Final tie-ins at the power poles are planned for after equipment installation is complete. Mechanical equipment installation is 75% complete, electrical installation is 50% complete. Electrical well racks are complete at nine extraction well sites. The 100-DX chemical treatment system civil/structural subcontractor completed concrete pours for the acid/caustic sump floors. Forming for sump walls and bases for the chemical tanks was initiated.

EPC Projects in Support of S&GRP – Base

- Work continues on the Phase 2 realignment of the KR4 and KX pump-and-treat systems. 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.
- MSA Transportation Services group initiated necessary road improvements to allow safe access to the 100-HX construction site. A design/build specification and RFP were issued for competitive bid for the 100-HX Treatment Building and construction of chemical treatment structures on May 4, 2010. A Statement of Work was issued to FFS Construction and pricing requested for initial outside scope (road crossings, HDPE pipe, power cable, and electrical racks).

Environmental Program and Strategic Planning - Base

The TPA Change Packages reflecting the Central Plateau Cleanup Strategy Tentative Agreement have been sent out for public review, with the comment period ending on June 30, 2010. Preparations are underway to support the public review process and supporting the project in developing implementation plans consistent with the strategy.

Risk and Modeling Integration Group

Vadose zone models in support of the groundwater protection calculations for the 200-PW-1/3/6 OU (three cross sectional models) have been completed. Alternatives evaluation calculation briefs for the 200-UP-1 FS report were finalized. Local capture zone model for B/BX/BY plumes have been finalized and presented to RL.

Revised the draft document DOE-RL-2007-34 (STOMP justification for the Hanford Site) and the plan for SIM 2005 release update to incorporate new information for PFP waste streams, tank leak update, and other new information.

Supported RL in developing responses to GAO interrogatories on modeling software management and its use. And, presented the graded approach for groundwater protection demonstration to EPA and Ecology.

Environmental Data Management

Sample Data Tracking Re-design (SDTR) Accelerated Project Plan has been drafted and sent to the customer for review and comment. The plan identifies new software modules to be included in the SDTR that are to be put on a fast track for early deployment. Sampling requirements are doubling due to increased work load especially from ARRA funding.

Well Drilling and Decommissioning – ARRA

	April		Cumulative	
	Planned	Completed	Planned	Completed
KR-4 RI/FS	2	0	2	0
100-NR-2 Barrier Emplacement	14	23	66	94
100-HR-3 H Area RPO	15	0	29	12
100-HR-3 D Area RPO	10	6	23	24
100-HR-3 RI/FS	1	0	1	0
200-BP-5 "K" Well	1	0	1	1
00-BP-5 "L" and "M" Well	0	0	2	2
200-ZP-1 West P&T Expansion 01.11	0	0	6	6
200-ZP-1 West P&T Expansion 01.12	2	0	4	0
M-24	2	1	2	1
100-BC-5 RI/FS	0	0	4	4
Drilling Total	47	30	140	144
Decommissioning Total	17	38	94	82

Notes:

- *100-HR-3 H Area:* Subcontractor did mobilize in April after Eagle Nesting
- *200-ZP-1 Expansion:* Currently, 12 of 17 wells have been initiated. Additional drill rigs mobilized to recover schedule.

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

- The approved Rev. 0 versions of the 100-BC Operable Units RI/FS Work Plan Addendum and the associated SAP were transmitted to RL on April 27, 2010.
- Planning continues for recently approved RI/FS work plan field-investigation activities. This field work will support the development of the RI/FS Report and Proposed Plan that are due November 30, 2011 under TPA target milestone M-15-68-T01. In support of this effort, the first round of spatial and temporal groundwater sampling from existing wells for 100-BC will be initiated in May. Additionally, well-drilling contractor bids have been submitted and will be evaluated in early May.
- The final summary report for the 100-B-27 excavation-site field sampling activities was approved, released, and issued on April 7, 2010.

100-KR-4 Operable Unit - Base

- The monthly monitoring of cultural resources in the KR-4 Operable Unit occurred April 16, 2010. No problems were observed.
- Phase 2 realignment construction actions were completed at the KX system and acceptance testing is approximately 90% complete. Open items remaining include Wi-Fi outages interfering with wireless communications with extraction wells 199-K-153, 199-K-171, and 199-K-178.
- Average flow through the KR-4 Operable Unit pump-and-treat system during the month of April was approximately 970 gpm, or 88% of treatment capacity. Continued acceptance testing of KX pump-and-treat components impacted by Phase 2. The KW and KR4 pump-and-treat systems are operating at capacity (i.e., 200 and 300 gpm, respectively). The KX pump-and-treat system was operating at reduced capacity with intermittent outages to extraction wells 199-K-153, 199-K-171, and 199-K-178 for acceptance testing.
- The archaeological survey for three remedial investigation wells in culturally sensitive areas was completed on April 9, 2010 and a draft report was provided to RL on April 23, 2010 for

comment.

- RL comments incorporated into the draft revision to the KR4 pump-and-treat system cultural treatment plan (DOE/RL-96-44) and being prepared for issuance. This revision was conducted with consultation with Tribal Nations and revises the 1996 plan to include updated information about cultural and historic resources in the 100-K Area (and vicinity), as well as updated information about the ongoing groundwater remedial actions in the area.

100-NR-2 Operable Unit - Base

- The NR-1/2 OU Proposed Plan to Amend the Interim ROD was reviewed again by both Ecology and EPA. A meeting is scheduled with RL and the regulatory agencies on May 7, 2010, to finalize the document to Rev 0. An expedited schedule is being followed to meet a goal to have the IROD amended by September.
- The Draft B 100-N Operable Units RI/FS Work Plan Addendum and associated SAP documents were submitted to Ecology on April 21, 2010, meeting the 60-day turnaround time deadline of April 22. These documents are currently under Ecology review.
- Draft A of the 100-N Integrated Sampling and Analysis Plan was provided to RL for subsequent submittal to Ecology alongside the 100-N RI/FS Work Plan Addendum and SAP.
- Core samples collected (as part of the 171 well drilling campaign) in February to support evaluation of the Jet Injection were analyzed by Pacific Northwest National Laboratory (PNNL). All results are being incorporated into a final test report, which is being drafted.
- As of April 30, 2010, groundwater samples have been collected from 21 of the newly completed and accepted 171 wells, and additional GW sampling will continue.
- The Draft A Treatability Test Plan (TTP) for allowing the future apatite PRB expansion activities was transmitted to RL on April 28, 2010, for subsequent submittal to Ecology. The TTP is currently under Ecology review. The injection-system fabrication continues along with additional planning activities.
- Total petroleum hydrocarbon (TPH) studies are continuing with Pacific Northwest National Laboratory (PNNL) as planned. This work has been extended to summer 2010 to allow results from recently collected groundwater samples (collected from 21 new wells installed along the TPH portion of the river shoreline as part of the 171 well drilling campaign) to be included into the study. Additionally, samples were collected on April 23, 2010, from the TPH bio-sparging wells (prior to full-scale operation of the bio-sparging system; a WCH project) to further support this study.

100-HR-3 Operable Unit - Base

- HR-3 operated at near normal levels as the H Area aquifer test continued. Two Ringold Upper Mud (RUM) wells are being reconfigured for long-term operation as extraction wells. Until these modifications are completed, the HR-3 system will run in its pre-test configuration. 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.
- DR-5 recommenced operations after a deep regeneration of all four ion exchange vessels. The earlier exceedances of the discharge criteria were a result of heavy chromium loading in the ion exchange media. This will be prevented in the future by additional use of regeneration chemicals and a more frequent regeneration schedule.
- Design activities continued on the HX pump-and-treat facility, with a 30% design review scheduled for May 18, 2010. The SHPO Notice to Proceed was received from RL on April, 27 2010.
- A Treatability Test Plan is being prepared to support design testing of in-situ bioremediation

within the area of the southern D “hot-spot” plume. Meetings were held with RL, Ecology, and EPA to present the approach for the test. Useful feedback was provided guide development of the treatability test plan required by newly approved TPA Milestone M-015-115. Design efforts continue, with a 30% design delivered on April 23, 2010.

- The transitional-stage spatial and temporal groundwater sampling event was completed, and aquifer tubes were installed as part of the RI activities at 100-D and 100-H.

100-FR-3 Operable Unit - Base

- The 100-F & IU-2/6 Operable Units RI/FS Work Plan Addendum and associated SAP (Rev. 0) were finalized and approved by RL and EPA on April 12, 2010.
- Planning is underway for RI/FS work plan field-investigation activities. This field work will support the development of the RI/FS Report and Proposed Plan that are due November 30, 2011 under TPA target milestone M-15-64-T01. As part of this effort, the first round of spatial and temporal groundwater sampling from existing wells for the IU-2/6 OUs was initiated, and as of April 30, 2010, a total of 33 of the 35 IU-2/6 wells have been sampled. The 100-F portion of the spatial and temporal groundwater sampling will be initiated in May.

300 FF-5 Operable Unit - Base

- The RI/FS Work Plan and SAP Rev. 0 were signed on April 8, 2010. Drilling is scheduled to begin on May 5, 2010. The PNNL tracer infiltration study was not successful after three attempts; alternatives are being evaluated for presentation to EPA. An engineered lithology is being emplaced at the bottom of the existing excavation at 618-1 in May and will be used in subsequent treatability test plans to evaluate remediation technology delivery mechanisms.

Central Plateau

200-UP-1 Operable Unit – Base

- Continued extraction system design for remediation of the Tc-99 plumes in the vicinity of Waste Management Area (WMA) S-SX. Reached concurrence with DOE on a three-well 80 gpm system.
- A meeting has been scheduled for May 17, 2010 with Ecology to review the U Plant extraction well cleaning effort and status the S-SX extraction system design effort.
- Continued preparation of the 200-UP-1 OU RI/FS report.

200-BP-5 Operable Unit – Base

- A meeting was held April 20, 2010 with Tribal, ODOE, DOE and EPA representatives to review the final draft of the 200-BP-5 conceptual model report and facilitate comments/feedback on the report. The written comment period was extended to May 4, 2010. Lab analyses for K, L and M well samples are complete.
- The sampling of all 14 wells, planned for depth discrete groundwater sampling, was completed. Lab analyses of samples continue.

200-PO-1 Operable Unit - Base

- Completed the DOE review of the decisional draft 200-PO-1 Groundwater OU RI Report, DOE/RL-2009-85. DOE comments have been dispositioned and are in the process of being incorporated to produce the Draft A.

200-ZP-1 Operable Unit - Base

- Ten of the 14 groundwater extraction wells are on line pumping water at a rate of approximately 206 gpm. Extraction well 299-W15-44 is offline as it is in the process of being replaced by new extraction well 299-W15-225. 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 ETF. A reduced flow rate is required for the next month or two to allow ETF to drain one of their other basins which is full.
- The Decisional Draft Remedial Design Report is current with RL for review and comment. This report was written based on the 90% design that was approved by EPA.
- Drilling and sampling of nine permanent extraction/injection wells is complete. Initiated drilling of three new FY 2010 extraction wells. Two of these wells have reached total depth and are currently being completed. The third well is at a depth of 269 feet.
- EPA comments have been received on the Draft A Performance Monitoring Plan and are currently being addressed.
- Subcontractor has mobilized to the field to support the hookup of the new ZP-1 extraction well 299-W15-225 (EW-1).
- Currently preparing two separate test plans to support laboratory testing of a variety of resins for uranium removal, as well as the testing of activated carbon as a less expensive way of removing Tc-99 from groundwater, as opposed to using resins.
- The Operations and Maintenance Plan for the 200-West Area Groundwater Treatment Facility has been issued to RL for transmittal to EPA for review. EPA comments are due back on May 14, 2010.

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

- PW-1 active SVE operations continue.

Regulatory Decisions and Integration - Base

- The Tentative Agreement that provides the decision document framework for making cleanup decisions in the Central Plateau was signed in late March 2010. In accordance with this agreement and based on DOE's Contracting Officer letter (10-PRO-0214), work has stopped on the decision documents that are not part of the new framework and a proposal is underway to align the Performance Management Baseline to the new framework.
- Received DOE comments on the 200-CW-5 Feasibility Study Draft C and resolution is underway.
- Analysis of the Tier I samples is complete for the K, L, and M wells. Tier II sample analysis by PNNL continues for these wells.
- Ecology comments on the U-8 and U-12 SAP were received on April 2. Response was transmitted to Ecology on April 30, 2010.
- EPA requested an additional 30 days to provide comments on the 200-MW-1 FS. The new anticipated date to receive comments is May 17, 2010.
- The groundwater modeling technical basis document (RAGS 34) completed internal review and is scheduled to be delivered to DOE the third week in May.
- A subcontract was awarded to HGI to perform electrical resistivity study at the U-8 and U-12 cribs.
- Finalization of the NRDWL/SWL closure NEPA EA is expected to be completed and public comment initiated in mid May.
- Completed soil sampling of 200-CW-1 Outer Area Ponds and Gable Pond pipeline.
- Subsequent RL comments on the submitted West Lake Draft A SAP to RL are being resolved and incorporated prior to transmittal to Ecology for comment.
- Completed 200-MG-1 Action Memorandum for 37 waste sites in the Outer Area.
- Resolved RL's comments on the Closure Plan and SAP for the Hexone Storage and Treatment Facility and preparation of the Draft A document is underway.

- Completed Quarterly Burial Ground Sampling and Analysis Report for the period of January to March, 2010, per TPA Milestone M-91-40 Requirements.

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 April:

- Drilling of the 20 boreholes needed for instrumenting and logging for the pilot test was completed in April. This includes ten (10) four inch boreholes for logging and ten (10) six inch instrumented boreholes.
- Field work for the 13.8kv power supply to the BC Cribs Desiccation Pilot Test area continued in April. MSA performed the 13.8 line modifications in the field. The remaining work includes installation of two additional power poles and associated lines and transformers to the test site. This will operate the three phase 480 volt equipment used in the pilot test. Field work for the electrical upgrade will be completed in May.

MAJOR ISSUES

Issue – The NRDWL and SWL Closure Plans have been delayed. Public review of these documents continues to be impacted by delays in completion of the Environmental Assessment (EA).

Corrective Action – Work with RL to accelerate completion of the NRDWL/SWL EA. Following public review of the NRDWL/SWL EA, the closure plan can begin public review (see status).

Status – The regulatory path forward for the SWL Closure Plan has been resolved. Workshops with Ecology and EPA appear to have resolved comments on the combined NRDWL/SWL Closure Plan. The revised document will be sent to Ecology for their approval. A meeting has been scheduled with RL for May 6, 2010 to resolve any remaining comments on the EA before finalization, which will support a public review scheduled in mid-May. The public review period for the EA has been determined to be 30-days.

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.	●	↔	RD/RAWP approval behind schedule, but no issues identified to date. The subject document is under revision to update to the current and proposed remedy for HR-3.
SGW-050: Regulatory Strategy for Decision Docs	Continue to support RL in strategy negotiations with Agencies.	●	↔	The Tentative Agreement has been signed by all three parties which provides the regulatory strategy for decision documents. Finalization of this strategy requires public involvement, which is schedule to begin in May.
SGW-069: 100-HR-3 ISRM Barrier Amendment - Hexavalent Chromium Continues to Move Through Barrier	Monitor zero valent 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.
SGW-080: 100-BC-5 Pump and Treat Required	Risk accepted.	●	↔	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.
SGW-081: 100-FR-3 Pump and Treat Required	Risk accepted.	●	↔	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.
SGW-003: Central Plateau Well Drilling Demands	Adjust drilling schedules; cross-train workforce; evaluate. sample parameters.	●	↔	No significant issues will preclude completion of well drilling.
SGW-003A: Central Plateau Drilling 200W P&T	Utilize rotary drilling and cable-tool; work closely to resolve subcontractor issues and manage schedule.	●	↔	Work on the final eleven wells of twenty started in December, 2009. New drilling subcontractor experiencing learning curve and mechanical breakdown delays due to drilling difficulty. Drilling metrics behind schedule but on recovery plan. Recovery expected in June 2010.
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.	●	↑	Based on several meetings, Agency comments have been resolved and the NRDWL/SWL closure plan is under revision. Ecology approval of this final closure plan is pending their receipt of the revised document.
SGW-016: 300-FF-5 Infiltration Barrier Treatability Test	Review BPA river level projections to time treatability test; accept risk.	●	↔	Although the test began in March, infiltration has been much slower than anticipated. The infiltration gallery has been deepened once and the design infiltration rate cannot be obtained. Options are being looked at. The current impact is that we won't get the information we need to support the treatability test plan for polyphosphate infiltration scheduled for later this year or that infiltration is not practical at all.
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 three wells 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-031: P&T Design Changes - 100 D	Minimize parallel design/construct/ regulatory activities; finalize design prior to contract award; coordinate well locations with WCH.	●	↔	100% design and installation of buildings is completed. Installation of the process equipment is underway as is the power supply to each of the buildings. Project remains ahead of

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-031A: P&T Design Changes - 200 West	Finalize design prior to contract award.			Architectural and civil drawings are ready to be issued by CHPRC in support of the start of the earthwork and site civil by Skanska. The remaining drawing packages (structural, mechanical, electrical, etc.) are being incrementally released through mid-June 2010 to match up with the General Contractors construction schedule. The Sludge Handling proposals were received by late April 2010; currently working on clarifications which are due from the bidder by the end of May 2010 with an award immediately following. Have developed a stream-lined approach for handling contractor submittals and RFIs, third party inspections being issued for bid, and preparation for the conduct of services during construction is in process.
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-035: 200 W P&T Single Wall Piping	Discuss alternate leak detection in RD/RAWP; engage regulators early.			The safety basis documentation has been developed and approved and as such double wall piping is not required for 200 West HDPE piping traversing the burial grounds.
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 being pursued.
SGW-051: Compressed Schedule for 200 West P&T Project Due to TPA Commitment	Concurrent document/procurement process.			Approximately 60% of Phase 1 road crossings are installed and 60+% of HDPE pipe laid. Contractor is mobilized for the construction of the four transfer buildings. A general contractor award is imminent. Long lead procurements are behind, but the expected delivery dates match up with the general contractor's draft schedule. In order to mobilize the general contractor as quickly as possible significant additional team resources are added to assist with training, submittals, RFIs, QA/QC, third party testing, management and oversight, and other services during construction. Planning a sludge handling system kickoff meeting in Denver upon contract award. Also kicking off software, simulator, procedures, and CAT/ATP development.
SGW-056A: 300-FF-5 Infiltration Not Feasible for Wide-Spread	An infiltration test is being performed at 300-FF-5 for the contaminants of concern.			No issues this month.
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.
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 will be developed, approved and implemented that will the necessary additional deep boreholes to the current 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	10.5	11.9	8.2	1.4	13.4	3.7	30.7
Base	15.3	13.5	12.2	(1.8)	-11.9	1.2	9.2
Total	25.7	25.3	20.5	(0.4)	-1.6	4.9	19.3

ARRA

CM Schedule Performance: (+\$1.4M/+13.4%)

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

100 HR-3 Operable Unit (+\$0.6M)

The positive schedule variance is primarily due to installation of equipment inside the DX process and transfer buildings ahead of schedule.

200-ZP-1 Operable Unit (+\$2.3M)

The current month positive schedule variance is primarily due to the implementation of BCR-R30-10-001R0 (200-ZP-1 Incorporated Project Final Design). With the implementation of this BCR, the cumulative BCWS through April 2010 decreased from \$13,043K to \$10,949K, resulting in a positive point adjustment that led to the current month positive schedule variance.

Ramp-up and Transition (-\$1.6M)

The current period negative schedule variance is primarily due to the following: The Soil & Groundwater building concrete foundation which was placed in February 2010 required removal and replacement. The foundation had been installed incorrectly due to misinterpretation of drawings; continuing contractor staffing issues on the EPC1 shop construction activities; and delays in finalizing layout of Phase IV mobile units. The project team meetings have taken place and corrective actions identified to avoid further slips.

CM Cost Performance: (+\$3.7M/+30.7%)

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

Well Drilling (+\$0.5M)

NR-2 well drilling efficiencies are being realized with the drilling subcontract by using faster and less expensive well drilling technology (sonic drilling). Savings are achieved in the well drilling activities as well as the corresponding support cost.

100 HR-3 Operable Unit (+\$1.6M)

The positive cost variance is primarily due to efficient performance of work during installation of equipment inside the DX process and transfer buildings. The DX project continues to underrun and a positive cost variance is expected at project completion.

200-ZP-1 Operable Unit (+\$1.7M)

The current month positive cost variance is primarily due to cost efficiencies experienced during construction of road crossings and the installation of HDPE transfer piping. The project was able to take performance for completion of several road crossings in April that were near completion in March.

Ramp-up and transition (-\$0.3M)

The CM negative cost variance is primarily a result of an over accrual by two of the trailer supply vendors. No impact to total contract completion cost.

Base**CM Schedule Performance (-\$1.8M/-11.9%)**

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

Integrated Field Work (+\$0.3M)

The current month positive schedule variance is due to delivery of the borehole logging truck in April that was originally planned to be delivered last September. This scope was carried over into FY 2010.

100 KR-4 Operable Unit (-\$0.3M)

The negative variance is primarily due to delays to the PLC upgrade work scope. Much of the significant upgrade work is being coordinated to take place during the KR-4 outage that is to begin in June. No overall impact to project completion is expected.

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

The negative 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 project completion dates for the HX pump and treat facility.

Regulatory Decision/Closure (-\$0.5M)

The current month negative schedule variance is largely attributed to delays associated with implementation of the Multi-Incremental Sampling and suspension of decision document activities to align with the Central Plateau tentative agreement. The project is in the process of preparing a BCR to align with the new Central Plateau Closure strategy.

CM Cost Performance (+\$1.2M/+9.2%)

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

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

The positive cost variance is primarily due to lower cost for sample documentation, collection, and data validation than planned. Some of the positive cost variance may be reduced by trailing invoices for WSCF and the simulator training.

Regulatory Decision/Closure (+\$0.5M)

The current month positive cost variance is primarily due to subcontractor accruals that were overstated in March due to delays in getting to the field to begin work. These accruals were reversed and realigned with the actual work that was performed in April. CTD cost variance for these overall activities remains positive.

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	62.0	63.9	52.5	1.9	3.1	11.4	17.8	202.3	233.3	(31.1)
Base	<u>197.8</u>	<u>193.9</u>	<u>182.9</u>	<u>(3.9)</u>	-2.0	<u>11.0</u>	5.7	<u>1,203.7</u>	<u>1,198.7</u>	<u>5.0</u>
Total	259.8	257.8	235.4	(2.0)	-0.8	22.4	8.7	1,406.0	1,432.0	(26.1)

Numbers are rounded to the nearest \$0.1M.

ARRA

CTD Schedule Performance: (+\$1.9M/+3.1%)

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

100-HR-3 Operable Unit (+\$3.8M)

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 FY 2010. However, a significant amount of work had already been performed in FY 2009 and that work scope is representative of the CTD positive schedule variance.

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

The CTD negative schedule variance is the result of several different factors. Most notable is the issue with the Soil and Groundwater building concrete foundation being poured in a different orientation than as designed due to misinterpretation of drawings. This issue has caused a schedule slip of several weeks. Also causing the schedule variance are the subcontractor delays of the building erection (approximately three months behind) and the installation of utilities (nearly two months behind). These delays are due in part to the quality, workmanship and staffing inadequacies. Delays in finalizing layout of the Phase IV mobile units have also caused schedule delays. Project Team meetings with selected subcontractors have taken place to address the schedule slips and other issues. Corrective actions are being identified to avoid further slips and resolution of noted issues. Project Team has also been given further guidance on proper charging practices for labor and subcontract procurements.

CTD Cost Performance: (+\$11.4M/+17.8%)

The primary contributors to the CTD positive cost variance are:

Drilling (+\$2.7M)

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.

100-HR-3 Operable Unit (+\$3.0M)

CTD positive cost variance is due to efficiencies experienced during installation of HDPE piping and road crossings.

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 (+\$1.6M)

The positive cost variance is due to the following: Project support functions (PM, CM, Engr, etc.) continue to perform with staffing levels below estimated levels; contracted costs for the four shop buildings are currently below estimated values; and initial site prep, utilities and trailer procurements/placement contracts are below estimated values. Some subcontract and labor costs were misapplied to the Mobile Offices project (000.19.01.01.06) and corrections continue to be processed to redirect the appropriate costs to this project.

PBS RL-30 UBS, G&A, and DD (+\$1.6M)

The CTD positive cost variance is discussed in Appendix C.

Base**CTD Schedule Performance (-\$3.9M/-2.0%)**

The following schedule variances exceed the reporting thresholds:

100-HR-3 Operable Unit (-\$1.8M)

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.

CTD Cost Performance (+\$11.0M/+5.7%)

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

100-KR-4 OU (+\$1.9M)

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 favorable 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 (+\$2.0M)

The positive 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. This positive cost variance is expected to be available for funds management within other areas of the project.

Regulatory Decision & Closure Integration (+\$1.9M)

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.

Usage Based Services (-\$0.9M)

The CTD negative cost variance is primarily due to the historical overrun carried over from FY 2009 associated with the under budgeted Fleet Services in this account.

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	FY 2010		
	Projected Funding	Spending Forecast	Variance
ARRA	125.7	108.4	17.4
Base	<u>177.1</u>	<u>155.4</u>	<u>21.7</u>
Total	302.8	263.8	39.1

Numbers are rounded to the nearest \$0.1M.

Funds/Variance Analysis

Funding has been adjusted to reflect the FY 2010 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 FY 2009 through FY 2018, the PRC contract period.

Baseline Change Requests

AWA-030-10-009R0, TPA Tentative Agreement Changes per Mod 095.

BCR-R30-10-001R0, 200-ZP-1 Incorporate Project Change Notice for Final Design.

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-024-58C	Initiate Discussions of Well Commitments	TPA	6/1/10		6/1/10	On schedule
M-091-40L-026	Submit 2 nd Qtr FY10 Burial Ground Sample Results	TPA	6/15/10	4/29/10		Complete
M-015-83	Submit Proposed Plan for 200-UW-1	TPA	6/30/10		6/30/10	Proposed for deletion by approved Tentative Agreement. Not being worked due to contractor redirection. (BCR in process).

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-024-61-T01	Conclude Discussions of Well Commitments	TPA	8/1/10		7/30/10	On schedule
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			On schedule.
M-015-116	DOE will submit to EPA a Treatability Test Plan for Hexavalent chromium of groundwater at 100-K	TPA	8/30/10			On schedule, created by change request M-16-09-10.
M-016-124	Submit 200-ZP-1 Remedial Design Report	TPA	8/31/10			On schedule
M-091-40L-027	Submit 3 rd Quarter FY10 Burial Ground Sample Results	TPA	9/15/10		8/30/10	On schedule
M-015-51	Submit Revised FS Report and Proposed Plan to EPA for 200-BC-1 OU	TPA	9/30/10		N/A	Proposed for deletion by approved Tentative Agreement. Not being worked due to contractor redirection. (BCR in process).
M-015-17A	Submit a 200-UP-1 OU Combined Remedial Investigation and FS Report and Proposed Plan	TPA	9/30/10			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.