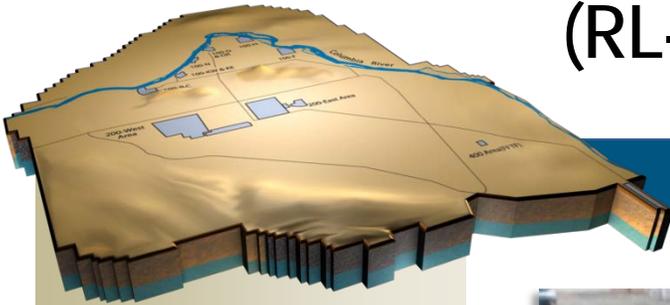


Section D

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

January 2010
DOE/RL-2008-69, Rev. 15
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1



A worker prepares support structures for installation in the process building for the DX Groundwater Treatment Facility. With the outer shells of the process building and the transfer buildings complete, the buildings are filling up quickly with equipment that will support facility operations, which are expected to begin in late 2010.

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. Columbia River levels continue to impact well development at 100-NR-2 where 40 wells have been drilled, but completion cannot be claimed until the river rises. Well decommissioning has been impacted by regulatory approval of wells slated for decommissioning.

Activity	January		Cumulative	
	Planned	Completed	Planned	Completed
Well drilling	10	22	62	72
Well decommissioning	14	9	58	10
200 West P&T – Final Design	13%	15%	26%	28%
200 West P&T – Construction	1%	1%	3%	3%
200 West P&T – Testing/Startup	1%	1%	7%	7%
100 DX P&T – Construction/Startup	5%	4%	20%	39%

Base

Base work includes the pump and treat operations, CERCLA remedial processes, and documentation for the River Corridor and Central Plateau. Construction and development of the final well supporting Phase 2 realignment of the KX and KR4 pump-and-treat systems were completed. Phase 2 realignment construction actions concluded at the KR4 system, and acceptance testing of affected components was initiated. The 100 Areas Integrated RI/FS Work Plan (DOE/RL-2008-46, Rev. 0) was approved by RL and the regulators on January 19, 2010. The 100-K Addendum to the integrated work plan was also approved on January 19, 2010.

Sampling and groundwater treatment completed in January include the following:

- 114 well locations were sampled with a total of 633 samples being collected
- 117 aquifer tube samples were collected from 44 tubes at 25 sites
- 10.8M gallons groundwater treated by ZP-1 treatment facility
- 17.9M gallons groundwater treated by KX treatment facility
- 8.84M gallons groundwater treated by KW treatment facility
- 2.95M gallons groundwater treated by KR-4 treatment facility
- 5.4M gallons groundwater treated by HR-3 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	12 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
		Treatment sys is 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	172.9M gal treated as of 1/31/2010
		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	On schedule
		Start construction of GW extraction buildings	3/30/10	On schedule
		Complete treatment facility construction	12/31/11	On schedule

TARGET ZERO PERFORMANCE

	CM Quantity	FYTD Quantity	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	3	18	<p>01/22/10 - While performing a walk-down of work being performed at MODU Tank #3 a S&GRP employee experienced a pain in their calf. At the time of the incident the individual felt the pain was temporary in nature and did not report the incident to management. The individual continued to experience discomfort over the weekend and reported the incident on Monday morning. Management took the individual to first aid for evaluation. The employee was returned to work with no work restrictions. (20661)</p> <p>01/21/10- An employee was carrying the KUTH source out of the storage conex by the weather station. The employee tweaked her knee when she caught her foot on the grating in the door of the conex as she was stepping down. The KUTH sources weigh approximately 64 lbs. The employee was taken to AMH for evaluation and returned to work without restriction. (20683)</p> <p>01/11/2010- An employee was holding his instrument up to his ear so that he could hear it beep. After doing this for 20 to 30 minutes, he experienced pain in his elbow. Received first aid treatment (cold pack, over-the-counter medication, and ace bandage) and returned to work without restrictions. (20643)</p>
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

EPC Projects in Support of S&GRP - ARRA

Work continues on the 200W Area Pump and Treat Project 90 percent designs for the Process Facility and Balance of Plant. Additional design work is required to incorporate changes in the equipment sizing and the lime addition system; this is being handled as a separate design contract with a specialized firm. Thirteen road crossings have been completed and grubbing for transfer piping has started for 200W pump and treat. Contract awarded for construction of the extraction and injection buildings. The request for

expression of interest for the Process and Radiological facilities has been released. The plan is to get a single general contractor for the entire project, and a bidder meeting scheduled for February 10, 2010. The 100-DX Pump and Treat construction is 40% complete. Construction of the process building and two transfer buildings by the fixed price contractor is 98% complete, with the exception of a small punch list of items remaining. Electrical service tie-ins will be complete no later than February 12, 2010. Installation of equipment inside the process building began on January 25, 2010.

In order to maximize initial throughput at DX, four new extraction wells that were previously planned to tie into the new HX facility, will be routed to the DX Transfer Building M2. Design changes for these four new wells are complete. A 30% design review for the chemical addition system required for the new Resin Tech SIR-700 resin was completed on January 12, 2010. A 90% design review on the chemical addition system will be held on February 9, 2010.

Procurement and receipt of materials for the facilities is on-going. The first two skids are scheduled to arrive on site March 5, 2010. Delivery of the vertical transfer and booster pumps is scheduled for March 31, 2010. The procurement specification for the dual laminate Fiberglass Reinforced Plastic (FRP) Polyvinylidene fluoride (PVDF) lined, vertical tank for storage of sulfuric acid for the chemical addition system was completed January 29, 2010. This tank has an 18-22 week lead time.

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 construction was completed at the KR4 system during January.

Environmental Programs and Strategic Planning - Base

Tri-Party Agreement change packages to implement the new Central Plateau decision architecture have been drafted. These change packages incorporate regulator input and have been provided to them for review and comment.

The Best Management Plan for NPDES Permit WA-002591-7 in support of K Area cleanup has been completed and EPA Region 10 was notified in late January via letter.

Well Drilling and Decommissioning – ARRA

	January		Cumulative	
	Planned	Completed	Planned	Completed
100-NR-2	8	18	35	42
100-HR-3 H Area	0	0	12	12
100-HR-3 D Area	1	3	5	12
200-BP-5	0	0	1	0
200-ZP-1	1	0	5	4
100-BC-5	0	1	4	2
Total	10	22	62	72

Notes:

- *200-BP-5:* The “K Well” construction has completed and the metric will be claimed in early February. The “M Well” drilling is in process.
- *200-ZP-1:* Drilling and construction of wells taking longer than planned. The completion of the fifth metric is expected in February and the sixth metric is on target for a March completion.
- *200-ZP-1 Expansion:* Currently, twelve of 20 wells have been initiated with nine wells drilled to total depth and constructed and eight wells have been developed.

- *100-BC-5*: The remaining two wells are in process with the third well in construction and the fourth well is being drilled.

River Corridor

100-BC-5 Operable Unit - Base

Comment responses on Draft A of the 100-BC Operable Units Work Plan Addendum and Sampling Analysis Plan have been provided to EPA. Extensive reorganization of the work plan document is underway to satisfy the EPA requested format, and comment responses are being incorporated into the Rev. 0 versions through a collaborative process with RL and EPA.

Sampling work (base funded) for the four-well drilling campaign continues. Sampling activities were completed for the third well, C7507 (total depth of 195.0 feet below ground surface (ft bgs)) on January 29, 2010. Sampling has been initiated on the fourth well, C7665, and as of January 29, 2010, the sampling of the borehole was complete to 70 ft bgs.

All field work for collecting samples from the base of the 100-B-27 excavation site located directly south of the C7505 well-drilling location was completed in January. All initially-planned soil-sample (both near-subsurface and saturated subsurface) results were received on January 14, 2010. These results show very little, if any, hexavalent chromium concentrations in the soil. Upon receipt and initial evaluation of the data, a decision was made on January 14, 2010, by RL and EPA to discontinue any further sampling. The site was subsequently returned to Washington Closure Hanford control. Further work includes the production of a summary report for this sampling effort, and this work is now underway.

100-KR-4 Operable Unit - Base

Work continues on the Phase 2 realignment of the KR4 and KX pump-and-treat systems. Phase 2 construction was completed at the KR4 system, and acceptance testing of affected components was initiated by SGRP during January. Flow through KR4 transfer building 1 was reinitiated at the end of January. Repair of freeze damage sustained earlier in the winter to KR4 transfer building 1 components was also underway. KX transfer building 1 continued to operate at reduced flow due to construction. Construction and development of the final well supporting Phase 2 realignment of the KX and KR4 pump-and-treat systems were completed.

Consultation with Tribal Nations regarding proposed locations of three of the four planned Phase 3 realignment wells continued this month. A revised draft of the KR4 pump-and-treat system cultural treatment plan (DOE/RL-96-44) was completed and provided for internal review. This revision 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.

Preparation of an excavation permit request to support installation of the four Phase 3 wells was initiated at the end of the month. Phase 3 realignment will impact all three 100-KR-4 pump-and-treat systems by adding three new extraction wells to the KW and KR4 systems, realigning wells from the KR4 system to the KX system, reducing long line lengths associated with four KX system wells to improve operability, and providing spare extraction well connection capacity to the KX system. Phase 3 implementation is necessary to support attainment of the 2012 Tri-Party Agreement target for river protection. RL was briefed regarding the scope of the Phase 3 realignment at the end of January in preparation for briefing EPA in early February.

The 100 Areas Integrated Remedial Investigation/Feasibility Study (RI/FS) Work Plan (DOE/RL-2008-46, Rev. 0) was approved by RL and the regulators on January 19, 2010. The 100-K Addendum to the integrated work plan was also approved on January 19, 2010. Paperwork to support installation of the 100-K Area RI wells is in preparation. Two of the proposed RI wells cannot be drilled in the approved locations due to cultural issues, and alternative locations are being evaluated.

Tri-Party discussions to address EPA and Ecology comments on the Draft A, In Situ Remediation Focused Feasibility Study/Proposed Plan (FFS/PP), continued through the month. Revision of the FFS/PP to address the comments is in progress. Based on December discussions with EPA, a bio-infiltration treatability test is being planned for implementation at the 183.1-KW head house as work continues on the FFS/PP. Development of the infiltration test conceptual design and components of the treatability test plan is underway.

100-NR-2 Operable Unit - Base

The NR-1/2 OU Proposed Plan to Amend the Interim ROD (Draft B), as transmitted from RL to Ecology in December, was reviewed by both Ecology and EPA. Joint regulator comments were received on January 28, 2010. Draft comment responses to these regulator comments were initially provided to RL on February 2, 2010. Document revisions to address these comments are underway.

Draft A of the 100-N Operable Units Work Plan Addendum and SAP, as transmitted from RL to Ecology in December, are currently under review by Ecology. A meeting to go over some initial regulator comments was held with RL and the regulators on January 19, 2010. A workshop process for resolving comments will likely be implemented, with an initial information-sharing workshop to be tentatively held on February 17, 2010. Official comments are still expected by the end of the 60-day regulator-review period.

Primary field activities for the Jet Injection Treatability Test began were completed in December, with all three of the test plots being installed. Site clean-up activities and contractor demobilization is mostly complete. The associated weekly-based aquifer-tube sampling (as required by the Jet Injection Treatability Test Plan (TTP)) is complete, and the final aquifer-tube sampling event will be held approximately three months after the initiation of the test (early March). Core sampling (as part of the 171 well drilling campaign) is tentatively planned to begin on February 4, 2010, to support the evaluation of the Jet Injection test.

Engineering continues on the design for an injection system for the Apatite Barrier expansion. The final design is expected to be complete on February 3, 2010. Design components have been itemized, and primary items are being identified for immediate procurement. The associated TTP for allowing the future expansion activities is being produced, with an internal draft expected in mid-February. Additional planning activities are underway.

Total petroleum hydrocarbon studies are continuing with Pacific Northwest National Laboratory (PNNL) as planned. All field data-collection work is complete, and the final report is being produced. This report is expected to be complete in February.

100-HR-3 Operable Unit - Base

HR-3 operated at near normal levels as the H Area aquifer test continued. The rebound study was extended to examine the influence of the river at high water. Due to the chromium concentrations measured in the RUM wells, two RUM wells are being reconfigured for long-term operation as extraction wells. Until these modifications are completed, the HR-3 system will be run in its pre-test configuration.

DR-5 was not operational because the system is being realigned to extract water from the "hot-spot" in the southern D area plume using extraction well 199-D5-104. Additionally, repairs were being made to replace an air compressor that had failed earlier. Construction activities were completed in late January, and acceptance testing is expected to be completed in early February.

Design activities continued on the HX pump and treat facility, with progress continuing on the walk-down, routing and design of HDPE pipe runs and road crossings. Efforts continued to address comments raised during the cultural review of the HX building location. These comments are expected to be resolved in February.

Treatability Test Plans are being prepared to support design testing of in-situ bioremediation and a sub-

grade bioreactor technology within the area of the southern D “hot-spot” plume. Design efforts for these tests are expected to begin in February.

Groundwater sampling results from the October (low river stage) decision unit risk assessment sampling event are being evaluated to support the planned February (transitional stage) sampling event.

100-FR-3 Operable Unit - Base

Formal EPA comments on Draft A of the 100-F & IU-2/6 Operable Units Work Plan Addendum and SAP were received on November 25, 2009. Comment responses have been provided to EPA. Extensive reorganization of the work plan document is underway to satisfy the EPA requested format, and comment responses are being incorporated into the Rev. 0 versions through a collaborative process with RL and EPA.

Planning and preparation work has been initiated for upcoming RI/FS work plan field-investigation activities. Production of a draft drilling-contract statement of work and a draft drilling description of work has been initiated. The processing of an excavation permit, to include both cultural and ecological evaluations, has also been initiated.

300 FF-5 Operable Unit - Base

EPA final comments to the RI/FS Work Plan and SAP Draft A have been received and are being reviewed. Formal comments have also now been received from the Nez Perce Tribes and State of Oregon. Geophysical testing will continue prior to initiation of infiltration testing during low river stage anticipated to be in February or March, 2010.

Central Plateau

200-UP-1 Operable Unit - Base

Revision 3 to the 200-UP-1 OU Groundwater Remedial Design/Remedial Action Work Plan (DOE/RL-97-36) was finalized and is in the process of being issued. A meeting was held with DOE on January 21, 2010 to review capture zone analyses for the Tc-99 plumes near WMA S-SX and to define well locations for the remedial design effort. A two well extraction system at 50gpm total is sufficient to capture the plumes.

The U Plant pump and treat system remained shut down and is undergoing well redevelopment to enhance extraction well production. Camera surveys of both wells indicated significant fouling of the well screen. Scrubbing of the well screens is planned.

200-ZP-1 Operable Unit - Base

Twelve of 14 groundwater extraction wells are currently online pumping water at a rate of approximately 255 gpm.

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

Active SVE operations have ended for the winter months; passive SVE operations are ongoing. Heaters within the active SVE units are operating to prevent freezing. Granulated activated carbon heater units are on order to help the units operate more efficiently in colder temperatures. SVE units are scheduled to come on-line the end of February 2010.

Regulatory Decisions and Integration - Base

- Submitted the 200-MW-1 Feasibility Study (Draft A) to RL for review. This document is being transmitted to meet the TPA milestone date of February 28, 2010 for the 200-MW-1 FS (TPA M-015-44B).
- Received RL comments on the 200-CW-5 Feasibility Study (Draft C).
- Issued the 200-BC-1 Treatability Test Report Rev. 0. RL requested additional modifications to the

document and Rev 1 will be issued in February 2010.

- RL comments were received on the West Lake Sampling and Analysis Plan (Decisional Draft)., Draft A of the document will be provided to RL in February 2010.
- Developed a draft work plan for the Non-Operational Areas evaluation in the Outer Area. A workshop will be held with RL in February to discuss the approach.
- Completed Ecology's review of 200-MG-1 Action Memorandum (Draft A) for 37 remaining waste sites in the Outer Area.
- Submitted the 200-MG-1 Removal Action Work Plan (Decisional Draft) for 37 remaining waste sites in the outer area to RL for review and comment.
- Completed the quarterly letter report for Burial Ground Sampling and Analysis for the period of October to December 2009 in support of TPA Milestone M-91-40, Requirement 2; RL transmitted this letter to the regulator on January 26, 2010.

Deep Vadose Zone Treatability Test Project - Base

Work continues on the deep vadose zone project including the pilot test, characterization test report, desiccation lab testing, uranium sequestration, soil flushing and grouting. The following summarize key accomplishment for January:

- The contract for 20 boreholes needed for instrumenting and logging for the pilot test was issued on January 6, 2010.
- A statement of work has been drafted and will be issued as a request for proposal for procurement in mid to late February for a dry air delivery system for the project.
- Radiological down-posting has been completed at the BCCA area that will allow the Mission Support Alliance contractor access for field work for the 13.8 KV power supply needed to operate the three phase 480 volt equipment used in the pilot test. Field work for the electrical upgrade is scheduled to be completed in March.
- The test report on Uranium Sequestration has been completed and was formally transmitted to RL on January 21, 2010, satisfying TPA-015-54 due January 31, 2010.

MAJOR ISSUES

Issue - Cultural reviews are impacting roads and pads, well locations, decommissioning and planning documents.

Corrective Action - Project initiated drilling on the non-sensitive area within each respective drilling campaign.

Status – Well locations are staked immediately after identification to begin the document planning process.

Issue - Well decommissioning ARRA metrics are not being achieved.

Corrective Action - Project plans to recover for this fiscal year by supplementing additional wells for decommissioning to meet the 175 well ARRA metric for FY 2010.

Status - Regulators and Operable Unit leads are very reticent to relinquish old wells for decommissioning until after the RI/FS decisions are completed. Currently have 190 wells approved for abandonment ready to process for decommissioning. Continue to work the issue with RL on available wells to decommission.

Issue – Agencies have requested additional characterization data from the deep vadose zone boreholes be included in the revised 200-UW-1 Proposed Plan due June 30, 2010 (TPA M-015-83). Even with expedited drilling, this data will not be available to support the 200-UW-1 Proposed Plan Milestone.

Corrective Action – Develop a new schedule to obtain requested data and process a TPA change package to establish a new TPA date for submittal of the Proposed Plan.

Status – A schedule for the additional characterization and incorporation of the results into the 200-UW-1 Proposed Plan was provided to RL. A meeting will be scheduled in February to discuss with Ecology.

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.
SGW-050: Regulatory Strategy for Decision Docs	Continue to support RL in strategy negotiations with Agencies.			Revised cleanup strategy will translate to a revised regulatory document approach.
SGW-080: 100-BC-5 Pump and Treat Required	Risk accepted.			Additional characterization through the installation of RI/FS wells and aquifer tubes 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.			Concentrations of chromium are low at this site and no Pump and Treat is planned.
SGW-003A: Central Plateau Drilling - 200W P&T	Accelerate FY 2010 wells into FY 2009; utilize rotary drilling vs. cable-tool; modify vadose zone sampling approach.			Have experienced well construction problems on a number of the first nine wells installed.
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-051: Aggressive Schedule for 200 West P&T [Also addresses SGW-098: 200 West P&T - Schedule Impacts Due to Scope Increases.]	Concurrent document/procurement process.			On schedule with procurements; behind schedule on design but have a recovery plan in place.
SGW-083: River Corridor Characterization	Baseline includes eight characterization wells for each operable unit. The wells planned in the baseline reflect a reasonable number of characterization wells for the operable units.			RI/FS wells and boreholes (WCH is doing the test pits) are planned along the river corridor in the 100 areas. Well drilling will begin in the near future. Biweekly meetings are held with WCH to track progress and resolve any issues. Also have a team setup to review data as it is generated to determine if it is sufficient.
SGW-004: Culture Resources	Obtain cultural and ecological reviews before design progresses.			Cultural reviews are ongoing. RL has indicated they are adding resources to expedite these
SGW-008B, D, G: Regulatory Document Comments for 100-HR-3, 10-NR-2, and 200-PO-1	Routine meetings are being held with regulators during document development; no additional mitigation is feasible.			Nothing to report this month.
SGW-103: Contaminated Drill Casing	Risk accepted without mitigation. The drilling contractors supply their own well casings used in well drilling. Once the well is drilled to depth, the casing is removed as the well is completed. There is a risk that the casing could become radiologically contaminated during the drilling process. Although the contaminated casings could be used for other Hanford wells, the casings cannot be released to the contractor. As a result, CHPRC will have to buy the contaminated casings from the contractor; this would be an unplanned cost. Experience has shown that this risk will occur, albeit infrequently.			Nothing to report this month.
WRS-043: Multi-Incremental Sampling - Hazard Characterization	Revise the baseline assumptions to address Haz cat III or less and adjust cost and schedule accordingly. This leaves the residual risk that the hazard categorization will be greater than Haz Cat III.			This risk has been realized and the project is working the issue.
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.

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 (%)	Budget at Completion (BAC)
ARRA	7.7	7.2	3.9	(0.5)	-6.2	3.3	45.4	201.8
Base	<u>11.2</u>	<u>11.1</u>	<u>9.2</u>	<u>(0.1)</u>	-1.2	<u>1.9</u>	17.1	<u>1,202.9</u>
Total	18.9	18.3	13.1	(0.6)	-3.2	5.2	28.2	1,404.7

Numbers are rounded to the nearest \$0.1M.

ARRA

CM Schedule Performance: (-\$0.5M/-6.2%) is within reporting thresholds:

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

100-HR-3 Operable Unit (-\$0.3M)

The work scope planned in the current month was completed in earlier months resulting in a negative cost variance for the current month. No impact to total contract schedule as the project continues with a significant CTD positive schedule variance.

CM Cost Performance: (+\$3.3M/+45.4%)

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

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

The positive cost variance is due to previously submitted accruals that were erroneously overstated. The reversal in January caused the current month positive cost variance. No impact to overall contract EAC.

Ramp-up and Transition (+\$2.6M)

The large current month positive cost variance is primarily due to procurement and installation of mobile offices and project staffing charges that were incorrectly charged to trailer mobilization rather than construction. These charges will be corrected in February. No significant variance is anticipated at completion for this account.

Base

CM Schedule Performance (-\$0.1M/-1.2%)

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

100 HR-3 Operable Unit (-\$0.3M)

Current month schedule variance primarily due to additional time required to incorporate comments on the treatability test plan which has also impacted the procurement of the design contract within HR-3 Field Studies and Deployment activities. The project intends to utilize additional engineering resources to recover the schedule during the design effort.

Regulatory Decision/Closure (-\$0.4M)

The current month negative schedule variance is primarily due to the following delays: 1) Start of excavation at 216-S-19 waste site as a result of need to take additional sampling to ensure that the area is not a Hazardous Category 3 area. This delay will result in a day for day slip in the completion of the sampling process; resources will be other site remediation work scope to minimize non-productive cost. 2) Preparation of the Outer Area RI/FS, in order to coordinate with Outer Area work scope. Actions are

being taken to recover the schedule, including acquiring additional resources to mitigate the slippage.

CM Cost Performance (+\$1.9M/+17.1%)

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

Integration & Assessments (+\$0.3M)

The current month underrun is primarily associated with under accrual of contractor cost for Environmental Database support and an inadvertent overstatement of BCWP in Remedial Decision Support. With the correction/adjustment of these issues, the remaining cost variance is not significant. Corrections/adjustments will be made in February.

Regulatory Decision/Closure (+\$0.4M)

The current month positive cost variance is primarily attributed to efficiencies associated with: drilling the M-Well boreholes, as less contamination has been encountered than planned; preparation of removal action documentation; and planned work in the outer area RI/FS report. These savings will result in available funds to support other activities within the project.

PBS RL-30 UBS, G&A, and DD (+\$1.1M)

The current month 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)
ARRA	33.6	37.7	26.9	4.1	12.1	10.7	28.5	201.8
Base	161.0	161.2	149.0	0.2	0.1	12.3	7.6	1,188.5
Total	194.6	198.8	175.9	4.2	2.2	22.9	11.5	1,392.7

Numbers are rounded to the nearest \$0.1M.

ARRA

CTD Schedule Performance: (+\$4.1M/+12.1%)

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

100-HR-3 Operable Unit (+\$3.9M)

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 workscope is representative of the CTD positive schedule variance.

CTD Cost Performance: (+\$10.7M/+28.5%)

The primary contributors to the CTD positive cost variance are:

Drilling (+\$1.7M)

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 (+\$2.9M)

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, especially 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 (+\$2.3M)

The large CTD positive cost variance is primarily due to procurement and installation of mobile offices and project staffing charges that were incorrectly charged to trailer mobilization rather than construction. These charges will be corrected in February. Additionally, accruals for the construction contractor for the 4 shop buildings are understated. No significant variance is anticipated at completion for this account.

PBS RL-30 UBS, G&A, and DD (+\$1.8M)

The contract to date cost variance is discussed in Appendix C.

Base**CTD Schedule Performance (+\$0.2M/+0.1%)**

No variances exceed reporting thresholds.

CTD Cost Performance (+\$12.3M/+7.6%)

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

Integration and Assessments (+\$1.5M)

The cumulative underrun can be primarily attributed three control accounts: Remediation Science and Technology horizontal drilling was completed for less than planned; Systematic Planning Integration has achieved efficiencies and used less subcontract resources than planned; and Sample Management and Reporting activities are being performed for less labor than planned. Other efficiencies that have been achieved in Systematic Planning Integration and Sample Management and Reporting are expected to continue.

Project Management (+\$1.0M)

The CTD positive cost variance is primarily due to the following: 1) PRC Transition cost in FY 2009 was significantly less than planned and 2) labor underruns in FY 2010. Labor underruns are being reviewed as a potential source for funds management within the project.

GW Monitoring & Performance Assessments (-\$1.5M)

CTD overruns are primarily due to FY 2009 WSCF costs that were higher than planned and will be handled through funds management within the S&GRP project.

100-KR-4 OU (+\$1.7M)

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 (+\$1.4M)

The favorable CTD cost variance resulted from performing chemical treatment & maintenance scope 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.

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

Major contributor to the CTD positive cost variance is efficiencies experienced including project management, operations and maintenance, and field study deployments.

200-ZP-1 Operable Unit (+\$1.5M)

The positive cost variance is largely the result of the following factors: 1) Interim Operations reflects significant progress and cost under runs 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, and 4) Efficiencies to-date pertaining to design/construction of the 200W Area P&T, primarily in the areas of Remedial Design/Remedial Action Work Plan preparation, construction of the Aquifer Test System as well as Aquifer Testing and Balance of Plant design preparation. This positive cost variance is expected to be available for funds management within other areas of the project.

Regulatory Decision & Closure Integration (+\$1.8M)

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

PBS RL-30 UBS, G&A/DD (+\$2.4M)

The positive cost variance is discussed in Appendix C.

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		Variance
	Projected Funding	Spending Forecast (Actuals)	
ARRA	142.9	134.4	8.5
Base	<u>177.4</u>	<u>154.1</u>	<u>23.3</u>
Total	320.3	288.5	31.8

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

BCR-PRC-10-011, PRC Baseline, Revision 2

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-015-54	Submit Report on Reactive Gas Testing for Sequestration of Uranium	TPA	1/31/10	1/26/10		Complete
M-015-40E	Parties Will Complete Negotiations And DOE Will Submit Change Packages W/New Milestones For RI/FS Process For Specified Operable Units	TPA	2/28/10			On schedule
M-015-44B	Submit 200-MW-1 OU FS to EPA	TPA	2/28/10			On schedule
M-91-40L-025	Submit Oct-Dec 1 st Quarter FY10 Burial Ground Sample Results	TPA	3/15/10	1/26/10		Complete
M-024-58C	Initiate Discussions of Well Commitments	TPA	6/1/10			On schedule
M-091-40L-026	Submit 2 nd Qtr FY10 Burial Ground Sample Results	TPA	6/15/10		5/30/10	On schedule
M-015-83	Submit Proposed Plan for 200-UW-1	TPA	6/30/10			On schedule
M-016-155	Submit Revised RD/RA Work Plans for 100A in Accordance With M-016-150 ROD	TPA	6/30/10		9/30/11	On schedule. Change number M-16-09-10, in draft, to change due date.
M-024-61-T01	Conclude Discussions of Well Commitments	TPA	8/1/10		7/30/10	On schedule
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			On schedule

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-015-17A	Submit a 200-UP-1 OU Combined Remedial Investigation and FS Report and Proposed Plan	TPA	9/30/10		6/28/10	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.