

# Section D

## Soil and Groundwater Remediation Project (RL-0030)



**R.S. Popielarczyk**  
Vice President and  
Project Manager for  
Soil and Groundwater  
Remediation Project

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

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

## PROJECT SUMMARY

Work included pump-and-treat operations, Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) remedial process documentation for the River Corridor and Central Plateau. Sampling and groundwater treatment completed in January includes the following:

- Collected 1,128 samples, resulting in 2,629 analyses.
- 16.5M gallons groundwater treated by ZP-1 treatment facility
- 20.2M gallons groundwater treated by KX treatment facility
- 8.9M gallons groundwater treated by KW treatment facility
- 7.1M gallons groundwater treated by KR-4 treatment facility
- 26.2M gallons groundwater treated by HX treatment facility
- 21.7M gallons groundwater treated by DX treatment facility
- 7M gallon groundwater treated by TX/TY well pumps
- 101.3M gallons of groundwater treated total

## EMS Objectives and Target Status

Objective#	Objective	Target	Due Date	Status
12-EMS-SGWR-OB1-T1	Reduce the release of toxic and/or hazardous material	Treat 1 billion gallons of groundwater from all Pump & Treat systems during FY2012. This assumes that existing P&T facilities continue to operate at or near current production /through put levels.	9/30/12	On Schedule
		Review and tally total number of gallons treated	Monthly	404M Gallons through 1/31/12

## TARGET ZERO PERFORMANCE

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	0	N/A
Total Recordable Injuries	0	10	N/A
First Aid Cases	6	89	<p><b>1/10</b> – Employee slipped on a patch of ice exiting a government truck. 22600 (EPC)</p> <p><b>1/12</b> – Wrench slipped off of a bolt and struck employee in the mouth. 22603 (EPC)</p> <p><b>1/19</b> – Employee reported pain in elbow as a result of repetitive tasks. 22629 (SGRP)</p> <p><b>1/24</b> – While employee was working on a hat channel a shard of steel flew into their face and throat. 22613 (EPC)</p> <p><b>1/24</b> – Employee slipped and fell on ice. 22615 (SGRP)</p> <p><b>1/25</b> – Employee slipped and fell on ice, injuring right knee and scraping both palms of his hands. 22614 (SGRP)</p>
Near-Misses	1	3	<p><b>1/31</b> - During routine well drilling activities at a 200-ZP-1 well site, a section of drill casing tipped over as it was being removed from the borehole. The casing caught on a sling attached to the drill rig and remained suspended at a steep angle. There were no injuries and no equipment was damaged.</p>

## KEY ACCOMPLISHMENTS

### Base - RL-0030.C1 –GW Remedy Implementation

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

- 200WP&T: Continued Acceptance Test Procedures. Inoculated the Fluidized Bed Reactor (FBR) with heterotrophic facultative bacteria to start the biological colony. Continued construction on the Sludge Stabilization System (Lime addition).

### Base - RL-0030.01 RL 30 Operations

#### EPC Projects in Support of S&GRP - Base

- 100-HX Groundwater Treatment Facility - Continued working project closeout activities.

#### Strategic Integration

- In coordination with RL, ORP and prime contractors, developed material for the Hanford Senior Executive Council action item on “ARRA Lessons Learned.”

#### Technical Integration

- DOE/RL-2011-50 Rev. 0 “Regulatory Basis and Implementation of a Graded Approach to Evaluation of Groundwater Protection” (Graded Approach document) was completed and signed

by the Tri-Parties.

- Revision 1 of the Performance Assessments and Composite Analysis annual summary reports (DOE/RL-2011-108, -109, -110) are complete, are being cleared, and copies will be provided to DOE-RL for distribution.

#### **Systematic Planning Integration**

- Completed an evaluation of the 100-K Proposed Plan against EPA Guidance and implemented revisions.
- Completed the 200-UP-1 FS cost estimate.

#### **Environmental Databases**

- Implemented new database application that streamlines work flow and reduces processing time for analytical data reviews.
- Issued listing of newly identified Solid Waste Management Units and other areas of concern (all new entries in Waste Information Data System) for calendar year 2011 meeting Hanford RCRA Permit Condition II.Y.3.b.

#### **Central Plateau**

##### **200-BP-5 Operable Unit – Base**

- Drilling of the extraction well and monitoring well was completed. Well completion activities are underway and are expected to be complete by mid-February 2012. All seven crossings are complete and all above-ground pipeline has been placed (~8500 ft total). Remaining pipeline work will be completed pending well completions.

##### **200-UP-1 Operable Unit – Base**

- Construction and ATP of the WMA S-SX extraction system was completed, except for final pipeline connects to the 200 West Treatment Facility and the well racks, which are scheduled to be made by March 2012.

##### **200-ZP-1 Operable Unit - Base**

The interim P&T system is currently operating at 377 gpm.

## **MAJOR ISSUES**

**Issue** - The number of comments on CERCLA document comments and the need for technical decisions is impacting contractual delivery due dates and decreasing float on major TPA Milestone M-015-005 “DOE shall complete the RI/FS process through the submittal of a Proposed Plan for all 100 and 300 Area operable units”.

#### **Corrective Action** -

- Development of detailed Field Execution Schedules
- Engagement of AMCP Management for technical decisions
- Identified additional resources necessary to meet schedule
- Partnering sessions between RL and CHPRC

**Issue** - The 200 West Groundwater Treatment Facility Project has experienced an increase in several work activities due to realization of risks previously established, resulting in an increased ETC and therefore an increased VAC. The changes in work activities have cost and schedule impacts beyond the cost of the mitigating action itself and in some cases compounding effects (e.g., changes in work activities caused delay to construction completion, which in turn results in weather issues during testing that were

not previously expected). Another common cost impact is retaining staff beyond the project's ramp down/closeout plan to manage work that was delayed. The impacts occur in the following areas:

- Equipment Impacts due to Weather
- Well capacity
- Fiber Optic Cable in place of wireless
- Touch-up Painting/Trade Damage
- Sludge Stabilization System (Lime)
- Programming Support/ Integration of Package Software Systems
- Tank Repairs
- Piping Supports/Repairs
- Procedure/As-Building Development
- MBR Recirculation Loop & Chemical Skid Modifications

**Corrective Action** - The Project will work with SGW Ops to mitigate the impact of realized risks by:

- Develop BCRs by type of change to the project and implement into PMB utilizing Management Reserve (MR).
- Re-evaluate cost savings efforts across the project
- Evaluate viability of Credits and Back Charges against subcontractors who own some of the responsibilities.
- Evaluate need for potential deferral of SGW FY2012 scope

### RISK MANAGEMENT STATUS

Unassigned Risk  
Risk Passed  
New Risk

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

Risk Title	Risk Strategy/Handling	Assessment		Comments
		Month	Trend	
<b>SGW-002: RL or Regulator Personnel Changes</b>	Work with RL to document agreements and to obtain appropriate formal approvals (RL and regulators) for the agreements that could result in a schedule delay of greater than 3 months or a cost impact of more than \$500K in the event the agreements were to change.	●		Currently experiencing this issue with turnover of RL and Regulator staff. Training was conducted with S&GRP management team to reinforce documentation of meetings and agreements to minimize this risk. Training was conducted with S&GRP management team to reinforce documentation of meetings and agreements to minimize this risk.
<b>SGW-062: WSCF Availability or Performance</b>	Realized risk in the areas of WSCF lab analysis. A future BCR will drawdown Management Reserve to increase BCWS in the affected areas of the PMB Baseline.	●		Due to the issues at WSCF thousands of samples had to be sent to offsite labs for analysis. Due to the requirements of repackaging and shipping these samples offsite additional costs have been incurred. Costs have increased due to the overtime required to recover schedule.
<b>SGW-080: 100-BC-5 Pump and Treat Required</b>	This risk is accepted as written and will be monitored throughout work execution.	●		EPA concurred that need for pump and treat will be evaluated as part of RI/FS process; existing sample data and the draft feasibility study indicate a treatment system may be required as part of a final action under the future Record of Decision.
<b>SGW-081: 100-FR-3 Pump and Treat Required</b>	This risk is accepted as written and will be monitored throughout work execution.	●		EPA concurred that need for pump and treat will be evaluated as part of RI/FS process but based upon current sample data and the draft feasibility study, the need for treatment is not considered likely.
SGW-008A: Significant Regulatory Comments - 100-KR-4	Routine meetings are already held with the regulators and RL during document development. No additional mitigation is feasible. Risk is accepted.	●		EPA has policy related comments that are being evaluated and considered for impacts to not only K, but other related projects. Example include the addition of irrigation within the unrestricted land use which has overarching impacts on other projects.
SGW-008B: Regulatory Document Comments for 100-HR-3	Routine meetings are being held with regulators during document development; no additional mitigation is feasible.	●		DOE completed their review and set expectations that we also address resolutions from the 100-K EPA comments.
SGW-008D: Regulatory Document Comments - 100-NR-2	Coordinating with RL to conduct routine meetings with Ecology during document development. No additional mitigation is feasible at this time. Risk is accepted with monitoring.	●		No issues are expected this month.
SGW-008J: Regulatory Document Comments - 300-FF-5	Routine meetings were held with the regulators and RL during document development. Additional meetings are being held during document review. No additional mitigation is feasible. Risk is accepted.	●		Preliminary EPA comments do not indicate significant changes to the document. Final EPA and Ecology comments are expected in February. No change in risk until final comments are received.
SGW-031A: P&T Design Changes - 200 West	Identify required design changes early in the process to minimize schedule impact. Work closely with the client and regulators to minimize impact to schedule. Incorporate design changes quickly to minimize cost impacts and avoid rework. Supplement Eng/QA/QC support and contracts for special inspection so as to finalize engineering requirements.	●		The baseline has incorporated the realized risk from the final issuance of the "issued for construction" drawings. Construction is complete and project is entering acceptance testing phase. As these tests complete, risk associated with design will diminish.

### RISK MANAGEMENT STATUS- Cont.

Unassigned Risk  
Risk Passed  
New Risk

● Working - No Concerns    ↑ Increased Confidence  
● Working - Concern    ↔ No Change  
● Working - Critical    ↓ Decreased Confidence

Risk Title	Risk Strategy/Handling	Assessment		Comments
		Month	Trend	
SGW-083: River Corridor Characterization	Additional characterization wells are required to support the development of an RI/FS and Proposed Plan for the River Corridor groundwater operable units or to investigate findings from WCH data gathering.	●	↔	WCH is gathering data in and along the river. This data could result in the need to install additional characterization wells in the River Corridor operable units. Information and conclusions from WCH risk assessments is raising questions regarding the Riparian Zone and Columbia River component human health risk assessment.
SGW-086: 200 W P&T Startup	Operations and engineering input has been obtained on the operating system controls to standardize the controls to those used for other pump and treat systems to the extent possible. Corporate design team and technologists experienced in bioremediation have been deployed to support the design effort and system startup. Resident engineer from corporate will also be supplied to support startup and testing of the new process equipment. Initiate preparation of CAT/ATP/OTP early. Early integration with contractors for incremental testing (e.g. isolate transfer buildings for a more efficient CAT/ATP). Notify vendors of necessary reconfigurations as early as possible so as to minimize schedule and cost impact.	●	↔	Integration of FBR/MBR during startup is a unique process and challenges are current being experienced. Design changes are required to cease the movement of carbon media downstream.
SGW-092: 200 West P&T Operating Requirements	As preventative maintenance packages proceed through the development process, staffing levels will be evaluated to ensure continuous P&T operation.	●	↔	No issues at this time. As preventative maintenance packages proceed through the development process, staffing levels will be evaluated to ensure continuous P&T operation.
SGW-098: 200-W P&T - Schedule Impacts Due to Scope Increases	As these issues are identified, they will be listed with other emerging issues. At this point, further mitigation tactics will be determined.	●	↔	OT and additional shifts have been utilized in certain areas to ensure schedule requirements are met to the extent possible.
SGW-119: Integration of Lime system Vendor Package Equipment into Facility Construction	Send representatives to fabrication facilities to inspect processes. PRC is actively managing subcontractors by holding schedule accountability meetings twice per week. Project will retrofit as required to facilitate progress.	●	↔	Contractor continues to work overtime to perform rework on odor control, (e.g. chemical system skids). Profibus connection are missing and requires manual startup and will cause delay to automatic startup feature.
SGW-120: 200 West Safety Considerations	CHPRC oversight including site safety, IH, and construction management will work with the contractor on a daily basis to reduce this risk potential.	●	↔	Successful completion of the project is contingent upon ongoing implementation of safety and health practices. Project is proceeding with required training for CHPRC staff and its subcontractors, including those that have not previously been trained on the Hanford Reservation.
SGW-121: 200 West P&T Work - Software Development & Verification/Validation	Monitor progress of software development and apply additional resources as necessary. Visit vendors or coordinate vendors' visits to the site as necessary to facilitate integration testing.	●	↔	Primary difficulty is experienced while integrating the vendors' package system controls (e.g. FBR, MBR) with CHPRC's SCADA system. Probability of occurrence remains until system is fully operational.
SGW-124: 200 W P&T Long-Lead Equipment Fabrication to Site Standards & Requirements	Facilitate and encourage vendors to provide guidance and support when dealing with equipment.	●	↔	Project completed inspection at vendor facilities and via submittals to ensure compliance with standards. Lack of coordination between contractor and vendor has produced a requirement for rework in the field. Project is managing the situation, including field oversight, BTR, and engineering support.
SGW-131: 200 W P&T - Readiness Review and Turnover	Project strategy has been to include design authority resources early in development of processes/design. Once issues are identified, expedite design changes to support startup.	●	↔	As found conditions have affected ATP and subsequent turnover of facility. (E.g. automation of actuator adjustments to provide back pulse of effluent water to MBR has caused rework and delays. Stepped approach to acceptance testing has created this issue as the original plan only required manual adjustments.

## 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 (%)
Base RL-0030.C1 GW Remedy Implement	2.3	1.9	2.7	(0.4)	-18.6	(0.9)	-47.2
ARRA RL-0030.R1.1 Cleanup Operations	0.0	0.0	0.1	0.0	0.0	(0.1)	0.0
ARRA RL-0030.R1.2 Well Drilling Operations	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	0.0	<u>(0.0)</u>	0.0
<b>Subtotal RL-0030.C</b>	<b>2.3</b>	<b>1.9</b>	<b>2.9</b>	<b>(0.4)</b>	<b>-18.6</b>	<b>(1.0)</b>	<b>-47.2</b>
Base RL-0030.O1 RL 30 (Operations)	5.9	5.9	5.8	0.0	-0.1	0.1	2.3
ARRA RL-0030.R1.3 Support Operations	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0</u>	0.0	<u>0.0</u>	0.0
<b>Total</b>	<b>8.2</b>	<b>7.8</b>	<b>8.7</b>	<b>(0.4)</b>	<b>-5.2</b>	<b>(0.9)</b>	<b>-11.1</b>

Numbers are rounded to the nearest \$0.1M.

#### CM Schedule Performance

Current month schedule variances that exceed thresholds are as follows:

#### **RL-0030.C (-\$0.4M/-18.6%)**

##### **Base RL-0030.C1 GW Remedy Implementation (-\$0.4M)**

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

Fiberglass repairs and inclement weather have caused schedule delay to acceptance testing.

##### **ARRA RL-0030.R1.1 Cleanup Operations (\$0.0M)**

There is no current month schedule variance.

##### **ARRA RL-0030.R1.2 Well Drilling Operations (\$0.0M)**

There is no current month schedule variance.

##### **RL-0030.O1**

##### **Base RL-0030.O1 RL 30 (Operations) (\$0.0M)**

There is no current month schedule variance.

##### **RL-0030.R1.3**

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

There is no current month schedule variance.

#### CM Cost Performance

Current month schedule variances that exceed thresholds are as follows:

#### **RL-0030.C (\$-1.0M/-47.2%)**

##### **Base RL-0030.C1 GW Remedy Implementation (-\$0.9M)**

##### 200 ZP-1 Operable Unit (-\$0.9M)

Sludge Stabilization System installation is costing more than budgeted. There have been significant delays in long lead equipment, field installation issues, design changes and schedule extensions.

##### **ARRA RL-0030.R1.1 Cleanup Operations (-\$0.1M)**

All current month variances are within reporting thresholds.



**ARRA RL-0030.R1.2 Well Drilling Operations (-\$0.0M)**

All current month variances are within reporting thresholds.

**RL-0030.O1****Base RL-0030.O1 RL 30 (Operations) (+\$0.1M/+2.3%)**

All variances are within reporting thresholds except as listed below.

**GW Monitoring and Performance Assessments (-\$0.7M)**

As a result of the work stoppage at WSCF earlier this fiscal year, laboratory sample analyses were sent to off-site labs. Invoices for the off-site work have been slow in being submitted. The off-site labs are paid by P-card when the invoices are actually received. The delays in invoice submittal have resulted in cost underruns in prior months. This month a manual accrual was made for earlier months, causing a current period overrun. The overall impact of the WSCF work stoppage is being addressed as part of a BCR that will address the project risk that was realized when WSCF was closed for lab analysis.

**200-ZP-1 Operable Unit (+\$0.3M)**

The current month positive cost variance is primarily as a result of continued efficiencies in operation of the current 200-ZP-1 Pump & Treat facility and less resources are also being used than was originally planned for the new 200 West Pump & Treat facility operations ramp-up.

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

All current month variances are within reporting thresholds.

### 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)
Base RL-0030.C1 GW Remedy Implement	55.2	53.2	61.5	(2.0)	-3.6	(8.3)	-15.6	60.4	76.1	(15.7)
ARRA RL-0030.R1.1 Cleanup Operations	175.0	175.0	174.7	0.0	0.0	0.3	0.2	175.0	175.0	0.0
ARRA RL-0030.R1.2 Well Drilling Operations	<u>40.7</u>	<u>40.7</u>	<u>38.4</u>	<u>0.0</u>	0.0	<u>2.4</u>	5.8	<u>40.7</u>	<u>38.4</u>	<u>2.4</u>
<b>Subtotal RL-0030.C</b>	<b>271.0</b>	<b>269.0</b>	<b>274.6</b>	<b>(2.0)</b>	<b>-0.7</b>	<b>(5.6)</b>	<b>-2.1</b>	<b>276.1</b>	<b>289.5</b>	<b>(13.3)</b>
Base RL-0030.O1 RL 30 (Operations)	402.1	403.5	406.3	1.5	0.4	(2.7)	-0.7	1,170.8	1,172.3	(1.6)
ARRA RL-0030.R1.3 Support Operations	<u>51.4</u>	<u>51.4</u>	<u>50.9</u>	<u>0.0</u>	0.0	<u>0.5</u>	0.9	<u>51.4</u>	<u>50.9</u>	<u>0.5</u>
<b>Total</b>	<b><u>725.0</u></b>	<b><u>723.9</u></b>	<b><u>731.8</u></b>	<b><u>(0.5)</u></b>	<b>-0.1</b>	<b><u>(7.9)</u></b>	<b>-1.1</b>	<b><u>1,498.4</u></b>	<b><u>1,512.8</u></b>	<b><u>(14.4)</u></b>

Numbers are rounded to the nearest \$0.1M.

**CTD Schedule Performance**

The primary contributors to the schedule variances that exceed the reporting thresholds are discussed below:

**RL-0030.C (-\$2.0M/-0.7%)****Base RL-0030.C1 GW Remedy Implementation (-\$2.0M)**

200 ZP-1 Operable Unit (-\$2.0M)

Negative schedule variance is due to delays associated with Sludge Stabilization System subcontractor submittals, fair cost estimates, award of contracts and design changes as well as schedule delays discussed in the CM period for the Acceptance testing.

**ARRA RL-0030.R1.1 Cleanup Operations (\$0.0M)**

Scope is complete. There is no contract to date schedule variance.

**ARRA RL-0030.R1.2 Well Drilling Operations (\$0.0M)**

Scope is complete. There is no contract to date schedule variance.

**RL-0030.O1****Base RL-0030.O1 RL 30 (Operations) (+\$1.5M/+0.4%)**100 NR-2 Operable Unit (+\$2.3M)

Positive schedule variance has resulted from performing barrier expansion and sampling support that was planned in FY13 and performed in FY11 and FY12.

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

Scope is complete. There is no contract to date schedule variance.

**CTD Cost Performance**

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

**RL-0030.C (-\$5.6/-2.1%)****Base RL-0030.C1 GW Remedy Implementation (-\$8.3M)**200-ZP-1 Operable Unit (-\$8.3M)

Major contributors to the variance are as follows:

- 200W P&T construction negative CV is associated with the CHPRC accrued costs for Construction Contractor's completed work scope defined in Change Notifications which are in the process of definitization. The costs are associated with the resources expended to complete the P&T facility by the end of FY2011 including added shifts, overtime, and logistics of working parallel activities
- Sludge Stabilization System installation is costing more than budgeted. There have been significant delays in long lead equipment, field installation issues, design changes and schedule extensions that have resulted in cost overruns
- Interim Operations reflects significant progress and cost underruns achieved to date for System Calibration
- Design of the permanent hookup of well EW-1 was lower than planned as only minor changes were needed to an existing design
- Cost for performing general operating and maintenance and minor modification activities have been lower than planned as the system has been running smoothly
- Cost for collecting depth-discrete groundwater and soil samples during the installation of new wells was less than planned
- 200W P&T Remedial Design/Remedial Action work plan and preliminary design activities were completed with fewer resources than planned

**ARRA RL-0030.R1.1 Cleanup Operations (+\$0.3M)**

Contract to Date variances are within threshold.

**ARRA RL-0030.R1.2 Well Drilling Operations (+\$2.4M)**Drilling (+\$2.4M)

The positive cost variance is due to efficiencies and savings obtained in drilling for 100-NR-2 and 200-BP-5 wells. Cost efficiencies have been obtained through an aggressive drilling schedule with savings in support personnel and faster drilling methods. Well decommissioning has also been completed for less than planned.

**RL-0030.O1****Base RL-0030.O1 RL 30 (Operations) (-\$2.7M/-0.7%)**Integration & Assessments (+\$4.0M)

Primary drivers for this positive cost variance are as follows:

- Less subcontractor support required for Central Plateau strategy development and integration
- Sample Management and Reporting has performed work scope more efficiently than planned
- Less cleanup document reviews were required than originally planned, requiring less contract support. Also efficiencies/savings were realized in establishing document templates, reviewing procedures, and software procurements.

Drilling (-\$2.6M)

Radiological contamination encountered on five NR-2 wells has caused additional supporting resource requirements (Health Physics Technicians). In order to recover schedule additional well drilling rigs were used, resulting in additional overruns to the project. Also, cost for remaining casing at the completion of the project was accrued as it cannot be released to the contractor.

100-NR-2 OU (+\$2.9M)

Barrier expansion and sampling scope, chemical treatment and maintenance scope, jet grouting pilot test work, RI/FS work plan and interim proposed plan reporting were performed more efficiently than planned leading to the positive cost variance.

100-HR-3 OU (-\$3.5M)

Primary contributors to the negative cost variance are as follows:

- 100 DX- Extensive effort required to design the pH adjustment system, cost overruns in completing the OU Remedial Process Optimization studies.
- 100 DX -Higher than expected cost to complete acceptance test plan and the operational test plan.
- Cost of realigning wells from DR-5 to 100 DX.
- 100 HX- Construction Material procurement costs were high and ATP resources to complete exceeded the plan.
- Additional time and resources being spent on internal CERCLA (RI/FS) document development that will be recovered in completed Draft A document.

200-ZP-1 OU (+\$0.9M)

Labor and subcontract cost for general operations and minor modifications support for 200-ZP-1 interim pump & treat facility is significantly less than planned. The system is running very smoothly with less adjustment than had been anticipated. Efficiencies are expected to continue with the interim facility operations until startup of the new 200 West Pump & Treat facility.

200 PW-1 OU (+\$1.1M)

Labor and subcontract cost for general operations and minor modifications support is less than planned. In addition, efficiencies and savings experienced with the Soil Vapor Extraction (SVE) system testing prior to March 2010 as well as the removal of two old SVE units.

#### Usage Based Services (-\$1.4M)

Increased cost associated with training due to the additional ARRA work in FY2010 and fleet services costs that occurred in FY2009 and FY2010. Overruns will continue to be funds-managed within the S&GRP project.

#### **RL-0030.R1.3**

#### **ARRA RL-0030.R1.3 Support Operations (+\$0.5M/+0.9%)**

#### Regulatory Decision and Closure Integration (+\$1.7M)

The positive cost variance is primarily due to completing work scope more efficiently than planned, primarily in the areas of multi-incremental sampling (using existing documentation and direct haul rather than staging), and borehole drilling and landfill characterization (competitive subcontracting of drilling support and efficient field support).

#### Ramp-up and Transition (-\$1.8M)

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

#### **Estimate at Completion (EAC)**

ARRA – The projected variance at completion is +1.1%.

Base – The projected variance at completion of -1.4% is spread among several operational areas and is not considered significant.

ARRA – The EAC change from the previous month is within reporting thresholds.

Base – The EAC change from the previous month is within reporting thresholds.

## **FUNDS vs. SPEND FORECAST** ((\$M))

WBS 030/ RL-0030 Soil and Groundwater Remediation	FY2012		Spend Variance
	Projected Funding	Spending Forecast	
<b>ARRA</b>	0.6	0.6	0.0
<b>Base</b>	121.1	121.6	(0.5)

Numbers are rounded to the nearest \$0.1M.

#### **Funds/Variance Analysis**

Funding includes FY2011 carryover and FY2012 new Budget Authority.

#### **Critical Path Schedule**

Critical path analysis can be provided upon request.

**Baseline Change Requests**

BCRA-PRC-12-005R0 - RL30 Jan Admin BCR

**FY2012 Management Reserve (Funded):**

ARRA = \$0.0M

Base = \$2.8M

No MR was used in January, see Management Reserve table in the CHPRC Overview.

**MILESTONE STATUS**

Tri-Party Agreement (TPA) milestones represent significant events in project execution. DOE Enforceable Agreement milestones were established to provide high-level visibility to critical deliverables and specific status on the accomplishment of these key events. The PMB Revision 3, implemented in November 2011, and subsequent approved BCRs define CHPRC planning with respect to TPA milestones. The following table is a one year look ahead of commitments and TPA enforceable milestones and non-enforceable target due dates.

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-015-70-T01	Submit Feasibility Study Report and Proposed Plan for 100-HR-1/2/3 and 100-DR-1/2 OUs	TPA	1/12/12		7/26/12	Working with DOE regarding a recovery schedule and path forward
M-015-68-T01	Submit CERCLA RI/FS Report and Proposed Plan for the 100-BC-1, 100-BC-2 and 100-BC-5 Operable Units for groundwater and soil.	TPA	3/15/12		3/15/12	Working with DOE regarding a recovery schedule and path forward
M-091-40L-033	Submit Oct-Dec 1 <sup>st</sup> Quarter Burial Ground Sample Results	TPA	3/15/12		3/15/12	On Schedule

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-037-03	Submit revised closure plans to support TSD closure of two TSD Units: 216-B-3 Main Pond system and 216-S-10 Pond and Ditch	TPA	4/30/12		4/30/12	Currently DOE is working with Ecology to adjust milestone date
M-015-64-T01	Submit RI/FS Report and PP for 100-FR-1/2/3 and 100-IU-2/6	TPA	5/14/12		5/14/12	Working with DOE regarding a recovery schedule and path forward
M-024-58E	Initiate Discussions of Well Commitments.	TPA	6/1/12		6/1/12	On Schedule
M-091-40L-034	Submit January to March 2nd Quarter FY-12 Burial Ground Sample Results.	TPA	6/15/12		5/31/12	On Schedule
M-015-110D	Submit Technicium-99 Pilot-scale Treatment Study Test Report as an element of the Remedial Investigation for the 200-WA-1 OU to EPA.	TPA	6/30/12		6/30/12	On Schedule

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-016-120	GW Treatment System <50 gpm for Tc-99 Plume at S/SX Tank Farm	TPA	8/31/12		7/12/12	On Schedule
M-024-63-T01	Conclude Discussions of Well Commitments Initiated Under M-024-058 and Add a New Interim M-024 Milestone Commitment for 12/31/15	TPA	8/1/12		8/1/12	On Schedule
M-091-40L-035	Submit April to June 3 <sup>rd</sup> Quarter FY-12 Burial Ground Sample Results	TPA	9/15/12		8/31/12	On Schedule
M-015-62-T01	Submit a FS/PP for 100-NR-2-1/2 Operable Unites Including groundwater and soil.	TPA	9/17/12		11/21/12	Currently DOE is working with Ecology to adjust milestone date
M-016-110-T01	Take Actions to Contain or Remediate Hexavalent Cr 100A GW Plumes	TPA	12/31/12		9/28/12	On Schedule

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-024-63	DOE Shall Complete Construction of all Wells Listed	TPA	12/31/12		12/31/12	Fieldwork complete, milestone accepted when M-024-58E is complete
M-091-40L-036	PMM Submittal Jul-Sep 4th Qtr FY12 Burial Ground Sample Results	TPA	12/15/12		12/15/12	On Schedule
M-015-00D	Complete RI/FS Process by Submitting PP's for all 100 & 300 Area OUs	TPA	12/31/12		11/21/12	On Schedule

### SELF-PERFORMED WORK

The Section H. clause entitled "Self-Performed Work" is addressed in the Overview.

### GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.