

Section B

Spent Nuclear Fuel Stabilization and Disposition (RL-0012)



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PROJECT SUMMARY

RL personnel continued reviewing the 105KW Basin, the Cold Vacuum Drying Facility (CVDF), and the Canister Storage Building (CSB) Safety Basis documents that were submitted in support of the knockout pot (KOP) processing operations, cold vacuum drying, and interim storage. The weekly interface meeting between RL and CHPRC personnel did not identify any new significant RL comments. STP personnel continue to work on resolution of previously identified comments and are making good progress. Approval of the Final Safety Basis Documents is expected before the end of the month.

Final preparations, including the delivery of all required hardware, were completed and hands-on operations training commenced at the Maintenance and Storage Facility (MASF) early in the month and continued throughout. In addition to facilitating proficient operations, this evolution is critical for preparing the final operating procedures and ensuring all operational activities are consistent with the safety and radiation protection program requirements. In addition, excellent progress was made in familiarizing operations personnel with KOP Process System (KPS) process operation and validation of the operating procedure steps. This is scheduled to be completed by the end of the month.

A recent independent review of the KOP Proof of Dryness Basis Calculation resulted in questions regarding the mathematical equation used to validate that multi-canister overpacks (MCOs) loaded with KOP product material are physically dry (containing < 200 grams of free water). This resulted in a potential inadequacy in the safety analysis (PISA), which will be addressed in late January and early February.

A review of the AREVA 90% design of the modified K West Annex was conducted earlier in the month. The review was performed to verify that the design package was sufficiently complete to support issuing an amendment to the Request for Proposal (RFP) for construction. No major issues were identified. AREVA continues to resolve and incorporate comments from the review. Resolution of the few comments received will be complete in time to support issuance of the revised RFP before the end of the month.

Preparations for Technology Readiness Assessment -2 (TRA-2) continue as planned. The Joint Testing Group (JTG) approved the first of seven Critical Technology Elements (CTEs) earlier in the month, and continued to work through the balance of them. The JTG has had several comments that will improve the CTE documentation. No impact to the TRA-2 start date will result from resolution of these JTG comments.

Training was initiated for MCO Loading System/Cask Loading System in the K West Basin and MCO training at MASF for the KPS. In addition, CVDF Operations continued to perform simulator training and systems/bay qualifications in order to support processing scrap fuel MCOs this spring.

RL completed their review of CHPRC's Phase 2 Technology recommendation and has formally accepted the recommendation. A concurrence letter was signed on December 23, 2011 and was received by CHPRC on December 27, 2011. RL's approval is consistent with the efforts currently underway to develop the Phase 2 Preliminary Technology Maturation Plan (PTMP) in support of TPA milestone M-016-171 due March 31, 2012.

TARGET ZERO PERFORMANCE

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	0	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	7	21	<p>01/03 - Electrician from CVDF was working in a dusty area when worker experienced left eye irritation. (22591)</p> <p>01/11 - Maintenance Craft worker was changing an implement on a backhoe while at 209E when the worker felt a “pop” in the left shoulder. (22604)</p> <p>01/16 - NCO from MASF in the 400 area was operating a pole tool when worker experienced a “pop” in the left hand. (22606)</p> <p>01/18 - NCO fell and injured the right shoulder and sustained a contusion. (22611)</p> <p>01/18 - NCO fell and landed on his buttocks causing an abrasion and lumbar pain. (22610)</p> <p>01/18 - NCO was entering 105KW when he slipped on the door entry but did not fall. (22608)</p> <p>01/30 - D&D employee from 100K D4 was in the process of tarping an ERDF can. The worker was pushing down on a bungee cord when worker reported the right wrist “popped back”. (22620)</p>
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Following review with Engineered Container Retrieval and Transport System (ECRTS) personnel and incorporation of comments, subcontractor AREVA submitted their final draft of the 90% Design of the K West Annex.

MAJOR ISSUES

No major issues to report this month.

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	
STP-039: KOP Separations Process Qualification	Test the mechanical separations process in a relevant environment at MASF	●	↑	Pretreatment test equipment modified and shipped to 100K for staging
STP-042: KOP Material Drying in MCO	KOP MCOs will meet the proof of dryness after two drying cycles	●	↑	KOP Thermal analysis and Proof of Dryness analysis have been updated to document capability of drying MCOs with KOP material
STP-044: Increased Difficulty in Developing KOP Safety Basis	Technical issues or other nuclear safety issues could complicate the development of the authorization basis documents	●	↔	Technical safety basis will be developed by March 2012
STP-048: KOP Transportation Requirements	Develop F-SPA checklist as modeling results are available and brief RL Transportation Safety on approach/results.	●	↔	Develop F-SPA checklist as modeling results are available and brief RL Transportation Safety on approach/results.
STP-057: PWC IXM Change Out	Physical properties of the KOP material are not expected to result in change out of the PWC ion exchange media	●	↔	No issues at this time
STP-075A: ECRS Technology Maturation Testing	Continue technology testing at MASF to demonstrate TRL-6 maturity by March 2012 TRA.	●	↔	Full Integrated Testing (TRL-6) is complete.

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
Base	6.1	5.9	5.8	(0.2)	-3.5	0.5	0.9

Numbers are rounded to the nearest \$0.1M

CM Schedule Performance (-\$0.2M/-3.5%)

The combined 100K and STP variance is within reporting thresholds.

CM Cost Performance (+\$0.5M/+0.9%)

The combined 100K and STP variance is within reporting thresholds.

Contract-to-Date

(\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	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	274.4	274.8	275.6	0.4	0.2	(0.8)	-0.3	625.6	625.6	-0.0

Numbers are rounded to the nearest \$0.1M

CTD Schedule Performance (+\$0.4M/+0.2%)

The combined 100K and STP variance is within reporting thresholds.

CTD Cost Performance (-\$0.8M/-0.3%)

The combined 100K and STP variance is within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

Estimate at Completion (EAC)

The current EAC change from December to January is within reporting thresholds.

FUNDS VS. SPEND FORECAST

(\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	FY2012		Spend Variance
	Projected Funding	Spending Forecast	
Base	87.5	83.6	3.9

Numbers are rounded to the nearest \$0.1M.

Funds/Variance Analysis

The spend variance reflects targeted carryover into FY2013.

Critical Path Schedule

Critical Path Analysis can be provided upon request.

Baseline Change Requests

None currently identified.

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.

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
DNFSB 120W	Complete Sludge Treatment	DNFSB	11/30/09			A pending Implementation Plan update will address this milestone.
M-016-171	Complete K Basin Sludge Treatment & Packaging Tech Eval Report	TPA	3/31/12			On Schedule.

SELF-PERFORMED WORK

The Section H.20 clause entitled, Self-Performed Work, is addressed in the Monthly Report Overview.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

None currently identified.