

Section B

Spent Nuclear Fuel Stabilization and Disposition (RL-0012)



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PROJECT SUMMARY

RL personnel have completed their review of the Safety Basis documents that were submitted on 12/02/11 in support of knockout pot (KOP) processing operations. A Safety Evaluation Report (SER) was issued to CHPRC for the 105KW Basin on 02/21/12, for the Canister Storage Building (CSB) on 03/13/12, and for the Cold Vacuum Drying Facility (CVDF) on 03/23/12.

RL and CHPRC personnel met with DNFSB Staff on 02/28–29/12 to answer technical and programmatic questions the DNFSB Staff had submitted pertaining to the KOP Subproject. The information exchange was productive and no issues were identified that CHPRC personnel believe hinder proceeding with execution of the KOP Processing System Campaign.

Installation of the KOP Processing System hardware was completed early in calendar March. This included successfully connecting all underwater hoses, resolving an interference between the support table extension structure and an existing spent nuclear fuel rack, installing the size separations unit (the screened table), and providing the water supply and installation of a grating panel to facilitate efficient operation. The water supply line, however, failed a leak test upon being pressurized. The work management documentation has been reworked and the current plan is to obtain formal approval for this revised plan, complete rework of the failed water supply components, and retest the system the week of 04/01/12.

CH2MHILL Corporate completed their annual OCRWM Audit of CHPRC Activities. The Lead Auditor indicated there were no findings after completing review of the KOP Subproject equipment design, procurement, testing, and inspection portions of the audit.

CHPRC Engineering & Quality Assurance personnel completed source inspection of the first 38 MCO Scrap Basket Copper Inserts at the supplier's facility in New Mexico. Successful source inspection will facilitate completion of the OCRWM Certification Documentation and delivery of these safety significant components to the Hanford Site by the end of March. Forty additional copper inserts are being machined at the supplier's facility with delivery to the Hanford Site forecast for mid-April.

Final Design of the Engineered Container Retrieval and Transport System (ECRTS) Process Equipment continued this month as planned. In addition, contracts were placed with a subcontractor, HiLine, for five control panels that will be used for upcoming system tests at the Maintenance and Storage Facility (MASF). The Valve Cycling and Leak Test Procedure was also approved.

Comment resolution associated with the formal review of the modified K West Annex design package continued all month. The Safety Evaluation Board completed the Award Recommendation Report for the Annex construction contract this week and has initiated the preparation of the associated consent package. The consent package will be submitted to DOE in late calendar March as planned.

Preparations for the second STP ECRTS Technology Readiness Assessment (TRA) continue as planned. The Joint Test Group has approved Technology Readiness Level-6 checklists for all critical technology elements. Information required for the DOE TRA team was provided to DOE on 03/01/12.

The K West Annex construction project self-perform crew has made significant progress at the future construction mobile office site, removing existing railroad rails, ties and fencing, preparing for site fill and leveling starting next week. The majority of the future ECRTS mobile offices have been disconnected, furniture removed, and readied for transport to 100K Area.

On 03/05/12 MSA and the Benton County Sheriff's Office satisfactorily completed the performance of the river closure drill. The purpose of this drill was to demonstrate the ability to establish boat pickets at the Vernita Bridge boat launch and the White Bluffs Ferry Landing within one-hour of notification. The results of the drill and the establishment of the pickets demonstrated that they were able to meet the one hour time period with the most limiting time during the drill being 49 minutes. This completes one of the actions required for the readiness process for the found fuel multi-canister overpack (MCO) activity.

CVDF Operations continued to qualify Operators on the systems, bay, and control room qualification cards in order to support processing of MCOs. One additional Operator was qualified for the CVDF control room.

Work to support the last Fuel MCO was initiated in March with fuel scrap washing and sorting operations.

RL provided technical direction for management of the less than 600 micron particulate matter collected during the KOP material pretreatment campaign. This 21 liters of material will be placed in SCS-CON-230, consistent with all other material that has passed through a 600 micron screen, so long as no DOE-approved safety bases are violated.

RL also provided authorization for shipments of KOP material in the MCO and MCO cask from the K West Basin to CVDF and to CSB. These shipments will be bounded by checklist F-SPA-STP-2011-002, Revision 0, and meet the intent of the Fuel-Special Packaging Authorization (F-SPA).

HNF-SD-SNF-TI-015, Rev. 18, Spent Nuclear Fuel Project Technical Databook, Volume 2, Sludge, was approved this week. This revision provides design and safety basis values for density, total uranium, uranium metal, radionuclide concentrations and dose equivalent curies for sludge captured in Engineered Container 220.

The Phase 2 Preliminary Technology Maturation Plan was transmitted from the contractor to RL on 03/12/12. Minor comments were returned, and final submittal scheduled for the final week of the calendar month.

A meeting attended by RL, EPA, and CHPRC was held to discuss the completion of the TPA M-016-171 milestone (due 03/31/12). It was agreed that RL will transmit the Phase 2 Technology Evaluation and Alternatives Analysis along with a draft change request proposing two interim milestones in 2013 and 2014. EPA requested additional clarification in the description of the milestones, with a focus on completion of testing and technology selection. An alternative set of milestone descriptions was prepared and reviewed by RL and EPA the week of 03/19/12. Negotiation of the final wording is ongoing with everything in place to meet TPA Milestone M-016-171 before the 3/31/2012 due date.

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	1	24	3/22/2012 – Worker tripped over box and landed on left elbow which resulted in a contusion to elbow. (22708)
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

The project successfully completed Level 3 Readiness Assessment for Found Fuel Processing.

MAJOR ISSUES

No major issues to report this month.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk
Change

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

Risk Title	Risk Strategy/Handling	Assessment		Comments
		Month	Trend	
RL-012/WBS 012				
STP-057: PWC & IWTS IXM Change Out	Physical properties of the KOP material are not expected to result in change out of the PWC & IWTS ion exchange media. 8 Additional IXM on hand to change out as required.			No issues at this time. The physical properties of the material will not be the driver to cause a required change out. Due to normal operation of the IWTS a change out may be required sometime during the KOP material processing, this activity would result in an up to one week delay in the current schedule.
STP-030: 100K KOP Systems Operation (CHPRC Risk)	Perform aggressive CM & PM Program for the IWTS, RRS, CLS, and other system to support MCO Loading.			No issues at this time. MLS/CLS Gantry and the 32 Ton KW crane PMs due in June & August.
STP-054: KOP Startup	Initiate startup/readiness activities to minimize impacts.			KOP Startup activities may be impacted by Found Fuel processing due to USQ prestart item.
STP-ANX-002: Ecological/Cultural Conditions Restrict Field Activities	Accelerate cultural resource review to minimize schedule impact of cultural resource mitigation is required prior to initiating Annex Construction.			Cultural resource review initiated. No issues.
STP-007 Competing Priorities	Develop detailed working schedules and institute interface meetings to communicate priorities and progress. Overtime used to mitigate impacts of schedule delay.			Found Fuel MCO processing may be delayed by unknown impacts to resolve USQ. This will impact KOP startup and processing activities.

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	8.1	7.3	7.6	(0.8)	-9.5	(0.3)	-3.7

Numbers are rounded to the nearest \$0.1M

CM Schedule Performance (-\$0.8M/-9.5%)

The negative schedule variance is primarily due to containerized sludge activities ahead of schedule in previous periods and realizing BCWS in the current period, K West fuel processing as there have been delays in the construction testing for the equipment installation and manufacturing delays in the delivery of the Copper Inserts for the KOP project.

CM Cost Performance (-\$0.3M/-3.7%)

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	289.1	288.5	289.8	0.6	0.2	(1.2)	-0.4	625.6	628.3	-2.7

Numbers are rounded to the nearest \$0.1M

CTD Schedule Performance (-\$0.6M/-0.2%)

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

CTD Cost Performance (-\$1.2M/-0.4%)

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 is within reporting thresholds.

FUNDS vs. SPEND FORECAST (\$M)

FY2012			
RL-0012 Spent Nuclear Fuel Stabilization and Disposition	Projected Funding	Spending Forecast	Spend Variance
Base	87.5	85.9	1.6

Numbers are rounded to the nearest \$0.1M.

Funds/Variance Analysis

The spend variance to funding reflects forecasted efficiencies achieved by the project team.

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	3/29/12		Complete

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.