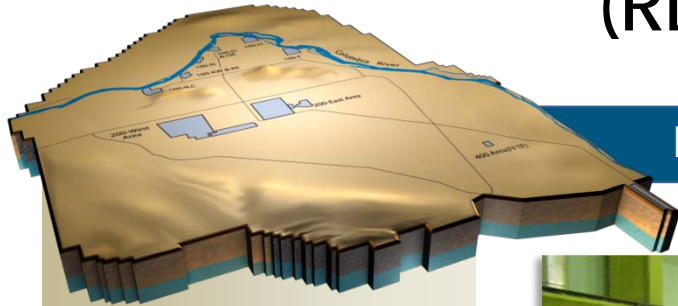


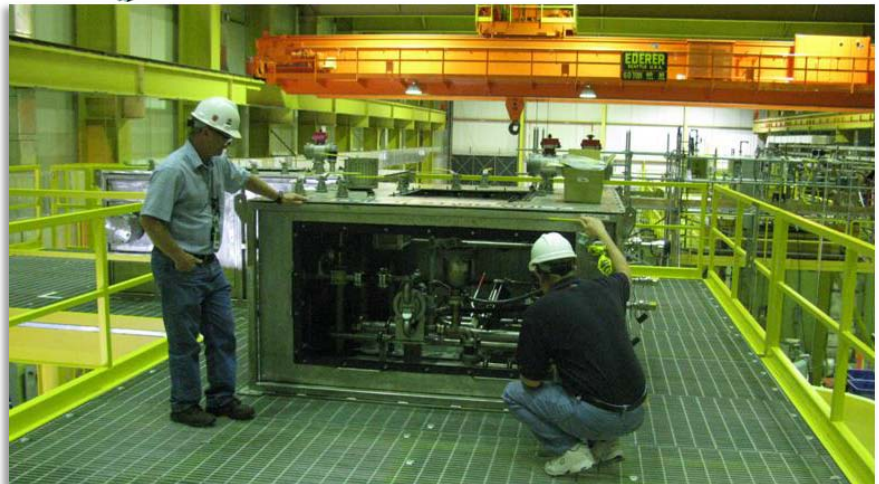
Section B Spent Nuclear Fuel Stabilization and Disposition (RL-0012)



Monthly Performance Report

K. L. Kehler
Vice President and
Project Manager for
D&D Project

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



Test Decant System



Test Top Retrieval System

September 2010
DOE/RL-2008-69, Rev. 36
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

The formal design review of the Knockout Pot (KOP) Processing System Preliminary Design Report (PDR) is complete. There were 181 comments with 64 being "Type A". The KOP Subproject team is actively implementing the corrective actions and plans to complete the resolution of all "Type A" comments and a substantial number of the "Type B" comments prior to final approval of the PDR. The current schedule for the PDR release is mid-October. In addition, a four foot drop test of the aluminum prototype inserts filled with KOP simulant material was successfully performed. The insert adequately confined the KOP simulant material. The final test report will be used as part of the Department of Transportation Industrial Package-2 (IP-2) equivalency document that will ultimately be used to support the development of the KOP/Multi-Canister Overpack (MCO) F-SPA checklist. AREVA Federal Services completed its structural review of the MCO cask/MCO with the KOP product material and the copper inserts. The review found that the addition of the KOP product material and the copper inserts is bounded by the original MCO cask structural analysis, thus not requiring any additional structural reviews. Finally, a Hazards Analysis of the KOP Pretreatment activity was completed by 100K Area D&D and KOP Subproject personnel. Although the conclusions have not been finalized, no new hazards were identified. Some of the existing hazards may require further evaluation to ensure that existing controls are sufficient to protect facility workers.

Progress continued toward declaring readiness to sample the Settler Tank Sludge from SCS-CON-230. Procedures OP-43-39W and OP-70-151W were approved and are ready to work, work package 1K-10-05217/W, which changed out the lid bolts on the super pigs, installed the NucFil filters into the Standard Waste Boxes (SWBs), and completed a functional fit test for the bottle/bag and shielding spacer, was completed, and two training "dry-runs" for sampling were completed by the operators. The first extraction was made on September 28 and shipped to PNNL on September 30. The remaining sludge of the first core will be drawn during the first week in October. A total of four cores are required to meet sampling Data Quality Objective requirements.

Additional test articles for the Engineered Containers Retrieval and Transportation System (ECRTS) began arriving at the Maintenance and Storage Facility (MASF) for installation. The sand filter, Riverbend sludge transfer and decant hoses (hose-in-hose), Sludge Transport System (STS) Trailer, STS Container, and STS Cask were all delivered and positioned, in preparation for Integrated Testing to be initiated. In the mean time, component level testing was initiated on the Retrieval and Transfer systems. STP Engineering, in conjunction with the MASF test coordinator and XAGO personnel, worked to resolve insufficient flow rate in the HydroLance eductor. As a result, the tool was modified (enlarged the jet holes by 0.25mm each), and retested. After the simulant was loaded and allowed to settle for the required 91 hour minimum settling duration, the tool was then used to complete four test batch runs this month.

EMS OBJECTIVES AND TARGET STATUS

Objective #	Objective	Target	Due Date	Status
09-EMS-EPC-10-OB4-T1	Identify Pollution Prevention opportunities for the Sludge Treatment Project locations	Perform Assessment/Surveillance (EPC-STP-SURV-10036 – IEP #7725) of programs to be implemented	03/31/10	Complete
		Implement recommendation actions at the Federal Bldg	05/31/10	Complete
		Implement recommendation actions at MASF	06/30/10	Complete
		Follow-up Assessment/Surveillance	09/30/10	Complete

TARGET ZERO PERFORMANCE

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	2	N/A
Total Recordable Injuries	0	3	N/A
First Aid Cases	0	27	N/A
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Sludge Treatment Project (STP)

- CHPRC has approved and released PRC-STP-00270, *Data Validation and Assessment by the Sludge Treatment Project for Characterization Data from Engineered Containers SCS-CON-220, 240, 250 and 260*. This is the validation and assessment report for the in-basin and laboratory characterization data for the sludge sampled from the listed engineered containers. It provides the final reviewed set of analytical data together with statistical analyses and comparisons against the data from previous characterization campaigns.
- An Alternatives Analysis working group held a down-select meeting for the K West Basin Integrated Water Treatment System (IWTS) Garnet Filter Media Disposition. In the meeting, subject matter experts and project management from the STP discussed various alternatives for the removal, packaging, and interim storage of the approximately 6.9m³ of garnet filter media currently stored in the northwest corner of the K West Basin Transfer Bay. These alternatives were rated based on five criteria: safety, regulatory/stakeholder acceptance, technical maturity, operability and maintainability, and programmatic aspects.
- AREVA Federal Services completed its benchmarking of the LS-DYNA finite element analysis model to the original ABAUS model for the structural evaluation of the STS/Large Diameter Container (LDC).
- MASF established an internal checklist system to be prepared for test technicians to follow when using the K Basin monorail system mockup during test activities.
- The project issued an Expression of Interest for the STP Alternative Interim Storage Facility to solicit interest from prospective bidders. STP received six expressions of interest from architect/engineering firms for performing the conceptual design.
- The STP External Review Panel was held this month. The panel reviewed ongoing progress of the KOP Subproject, the progress on preliminary design and testing for the ECRTS subproject, and the status of the Phase 2 Technology Evaluation and Alternatives Analysis. The team also toured the recent upgrades and test installations at MASF. ERP report to be issued mid-October.

- Progress of note on the Phase 2 contracts include:
 - Immobilization of sludge with BoroBond with Hydrogen generation and pressure data collection and oxidation of uranium metal with acidification and Fenton’s reagent are both progressing under the Ceradyne contract
 - U metal loss (i.e., conversion rate), peroxide concentration, pH and off-gas volume and composition data is being collected by tests being conducted by Energy Solutions
 - IMPACT Services has submitted its final Dryer Test Report and is preparing for full scale testing

MAJOR ISSUES

None identified.

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-030: 100K KOP system operations	Refurbish IWTS, FRS, CLS to minimize operational downtime	●	↔	Baseline includes refurbishment.
STP-007: Competing K Basin Priorities	Integrated, detailed working schedules/plan-of-the-week meetings	●	↔	Close interactions between the projects is occurring, schedules are reviewed and evaluated, against established priorities.
KBC-010: Unexpected TRU Debris or Other Waste	Develop characterization & blending/packaging strategy; establish alternate waste disposition pathways	●	↔	No issues at this time
KBC-011: DSA/FHA Limits Impact Waste Staging	Modify DSA/FHA to increase combustible loadings	●	↔	Work in this area is proceeding without impact.
KBC-018: Discovery of Additional Sludge or SNF	Ensure SNF handling capabilities and WCH agreements are in-place	●	↑	With completion of KOP / Canister washing with no surprises, confidence level increased for this risk area.
STP-039: KOP Separations Process Qualification	Test the mechanical separations process in a relevant environment at MASF	●	↑	Testing being conducted at MASF has identified changes required to optimize the process
STP-075A: ECRTS Technology Maturation Testing	Continue technology testing at MASF to demonstrate TRL-6 maturity by March 2012 TRA.	●	↑	Component level testing is being conducted. Full Integrated Testing will commence in December 2010.

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	6.6	7.7	8.8	1.0	15.2	(1.2)	-15.4

CM Schedule Performance (+\$1.0M/+15.2%)

The STP current month variances include: 1) implementation of BCR-PRC-010-053R0 which included the KOP project plan update, per DOE O 413.3A (updated estimate for Preliminary Design Report). The update included re-planning the procurement of MCOs and the IWTS upgrades (+\$1.7M), offset by 2) schedule delay in the sampling of Engineered Container (EC)-230 (Settler Tank Sludge), while the 100K Basin operations personnel completed the MCO proficiency run (-\$0.3M), and 3) schedule delay in the installation of the sampling system on EC-210 while 100K Operations personnel complete the vacuuming campaign (-\$0.4M).

The EC 210 schedule variance will correct when the vacuuming campaign completes (scheduled for October 8). No recovery actions are required for the KOP procurements as the baseline reflects the current procurement actions in place.

CM Cost Performance (-\$1.2M/-15.4%)

The STP negative variance (-\$0.5M) is due to increase costs for the MASF electrical upgrades. No recovery actions required, as this is a one-time expenditure.

The 100K Area positive variance (+\$0.2M) is due to year end passbacks. No recovery actions required. Project Services & Support: (-\$0.9M) is due to an increase in year-end allocations. No recovery actions required.

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	170.9	167.7	173.6	(3.2)	-1.9	(5.9)	-3.5	576.1	581.1	(5.0)

Numbers are rounded to the nearest \$0.1M.

CTD Schedule Performance (-\$3.2M/-1.9%)

The combined 100K and STP variances are within reporting thresholds.

CTD Cost Performance (-\$5.9M/-3.5%)

The combined 100K and STP variances are within reporting thresholds.

Contract Performance Report Formats are provided in Appendix A.

FY2010 FUNDS VS. SPENDING (\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	FY2010		Spend Variance
	Funding	Actual Spending	
Base	86.4	77.6	8.8

Numbers are rounded to the nearest \$0.1M.

Funds/Variance Analysis

Funding includes FY2009 carryover and FY2010 new Budget Authority.

Critical Path Schedule

Critical Path Analysis can be provided upon request.

Estimate at Completion (EAC)

The BAC and EAC now include FY2009 through FY2018, the PRC contract period.

Baseline Change Requests

BCR-PRC-10-053R0, PRC Baseline, Revision 2 Update

BCRA-PRC-10-060R0, General Administrative Changes for FY 2010 Year End

MILESTONE STATUS

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
DNFSB 120W	Complete Sludge Treatment	DNFSB	11/30/09			Letter dated 30 June 2010, from Ms Triay to DNFSB, notifying the board of a pending Implementation Plan (IP) update that will address this missed milestone.

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.