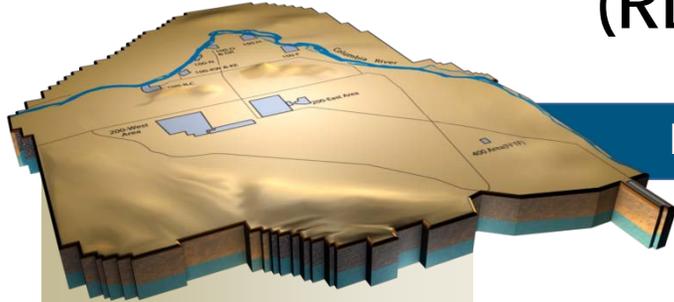


Section B Spent Nuclear Fuel Stabilization and Disposition (RL-0012)



Monthly Performance Report

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Bredel Retrieval Pump Mockup



XAGO Retrieval Tool Mockup

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DOE/RL-2008-69, Rev. 34
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

The Sludge Treatment Project (STP) completed the final estimates on the residual sludge volume left in the settler tanks and the sludge transferred into Engineering Container (EC)-230. The engineering estimate is that approximately 8.85 liters (including 50% contingency) of sludge remained in the settler tanks, and 3.5 m³ of settler tank sludge is now confined in EC-230. Construction started work on the grating modifications necessary to install the guide tubes for sampling and expect to complete the work in early August. In addition, the settler tank sludge sampling Fuel-Special Packaging Authorization (F-SPA) checklist was approved by RL. After the Management Self-Assessment, sampling will be initiated.

Feedback from the Knockout Pot (KOP) Hazards and Accident Analysis identified a potential thermal instability should the KOP product material verification container be inadvertently lifted out of the basin water. The KOP Subproject design team is currently re-designing the verification container to eliminate this challenge. This evolution is an example of how the integration of safety into design approach has been institutionalized in the STP. In addition, the KOP Engineering team completed sufficient thermal modeling of the KOP material drying process to finalize the design parameters for the KOP scrap basket inserts. A procurement specification was initiated to support procurement of these inserts, which are anticipated to be long-lead Office of Civilian Radioactive Waste Management (OCRWM) procurements. Finally, a representative of the Acquisition Verification Services (AVS) organization conducted a quality assurance (QA) program audit of the Joseph Oats Company to determine acceptability of adding them to the CHPRC Evaluated Suppliers List (ESL) for supplying OCRWM compliant Multi-Canister Overpacks (MCO). The field portion of the audit was completed and the KOP Subproject team is working on a specification revision that should allow a final audit report to be issued on August 4, 2010. Based on this report being final, a contract award for the three additional MCOs will be issued no later than August 9, 2010.

Testing at Maintenance and Storage Facility (MASF) continues to be a hub of activity for the upcoming component level tests and for the integrated test for Technology Readiness Level 6 (TRL-6). The Bredel pump successfully passed the submergence test, the XAGO retrieval tool equipment was received, the K West Annex mezzanine mockup was received and erected, the half engineered container mockup and the overfill recovery tool mockup were received, as was the desiccant dryer for the overfill pump operation.

STP-PRC-00248, Summary of Analysis Requirements and Inputs, was updated to address RL Safety and Environmental Division comments and was issued as final. This document provides a discussion of the various analysis and computer models that will be used to develop the new transportation safety documents for the Sludge Treatment System (STS) and MCO casks. Also, the *MCO Shielding Analysis for KOP Material* evaluation was completed by AREVA Federal Services and issued for review. This analysis confirms that the transport of the KOP material in the MCO/MCO cask does not challenge the transportation shielding limits.

Contracts with five different subcontractors are in place for the Phase 2 technology evaluations, which will lead to an alternatives analysis and recommendation next year, on the possible treatment technology that should be developed. In addition, CHPRC has a contract with PNNL for some additional testing to demonstrate that high hydrogen mitigation factors can be achieved with nitrate in the waste form.

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	On Schedule

TARGET ZERO PERFORMANCE

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	1	3	7/15 Teamster was unloading a dump truck and caught left ring finger in tailgate. Worker taken to AMH then referred to Kadlec Medical Center where finger was x-rayed and determined to be fractured. Stitches, splint, and prescription given making this a recordable injury. (21102)
Total Recordable Injuries	1	4	Same As Above
First Aid Cases	4	47	7/14 NCO in 105KW turned left ankle while walking on basin grating. Worker was taken to AMH for evaluation then released without restriction. The diagnosis was a high left ankle sprain. (21096) 7/26 105KW RCT noticed a cut on right arm when exiting basin. The cause of the cut was unknown. No Contamination was found. Management and worker decided to self-treat. (21123) 7/27 MASF Engineering Tech sustained a superficial cut to the left index finger while stripping an electrical conductor. The worker and management elected to self-treat. (21136) 7/28 105KW NCO received a scratch on the hand while performing hand and foot survey. The operator elected to self-treat with management and IH concurrence. (21159)
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Sludge Treatment Project (STP)

- STP received letters from PNNL documenting that all preparations have been completed for receipt and analysis of the settler tank sludge at the Radiological Processing Laboratory.
- The KOP Subproject had a briefing to discuss the draft MCO Proof of Dryness analysis with RL representatives and a member of the STP External Review Panel. The purpose of the review was to discuss an update to the analysis that now includes discussion of the effect of surface tension. The analysis concludes that the same proof of dryness test that has been used for previous MCOs can be applied to the KOP MCOs.
- *MCO Structural Review* was completed by AREVA Federal Services and issued for internal review. The review found that the transport of the KOP materials contained in the copper-inserts is well within the previously analyzed conditions, thus not requiring the development of a new structural analysis for the new MCO/MCO Cask transportation safety document.
- The OCRWM Independent Assessment was conducted this month. KOP personnel participated in both an administrative review and a physical review of the MCO hardware. The out-brief session was held and the final report is due August 5, 2010.
- MASF personnel conducted the operational shake-down on the pool filtration system to refine operating instructions. Revisions of the operating instructions are in progress, adding in ozone probe maintenance and storage information.
- The Engineered Container Retrieval and Transport System (ECRTS) preliminary design Process and Instrumentation Diagram (P&ID) has been updated and issued internally to support the next phase of Nuclear Safety Hazard Analysis.

MAJOR ISSUES

None identified.

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	
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	7.2	6.8	7.6	(0.4)	-5.5	(0.8)	-11.6

CM Schedule Performance (-\$0.4M/-5.5%)

The STP current month variances include 1) estimate omission in the settler tank sampling activities for the boroscope inspection and engineering evaluation of the residual sludge, as well as the activity to remove the filters from EC-230, were not accounted for in the baseline, but were required to be completed before Settler Tank sampling could be initiated (-\$0.1M), 2) Procurement of the MCOs and the Integrated Water Treatment System (IWTS)/MCO processing systems are behind schedule due to management decision to hold procurements until the Engineering evaluation of all requirements was known (-\$0.2M), and 3) Mockup pool at MASF completed early and BCWS now catching up with the performance that has been realized (-\$0.1M).

Recovery actions for the Settler Tank Sampling schedule variance will correct when the Sampling activities initiate. The boroscope inspection, engineering analysis and filter removal activities completed this month, and the Management Self-Assessment will begin in early August, with sampling operations following. Recovery actions for the MCOs is underway with a contract being awarded to Joseph Oat Corporation (fabricated previous MCOs) to fabricate three additional MCOs, and the procurements on the

IWTS/MCO processing system upgrades have been awarded and are actively being worked at 100K. No recovery actions are required for the MASF pool mockup, as all actions are complete.

CM Cost Performance (-\$0.8M/-11.6%)

The STP negative variance (-\$0.2M) is within variance thresholds. No recovery actions required.

The 100K Area negative variance (-\$0.3M) Subcontractor (ICWEAs) support is increasing; MSA cost is running higher than planned; fleet charges are higher than planned. Recovery action: The MSA cost is currently being reviewed to determine how much is RL-0012 and how much is RL-0041. When the RL-0041 portion is determined, a cost transfer will be submitted.

Project Services & Support: (-\$0.3M) higher than planned receipt of G&A attributed to the PBS overrun this month (allocation based on direct costs).

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	158.2	154.2	158.4	(4.0)	-2.5	(4.2)	-2.7	577.4	583.4	(6.0)

Numbers are rounded to the nearest \$0.1M.

CTD Schedule Performance (-\$4.0M/-2.5%)

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

CTD Cost Performance (-\$4.2M/-2.7%)

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

Contract Performance Report Formats are provided in Appendix A.

FY2010 FUNDS VS. SPEND FORECAST (\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	FY2010		Variance
	Projected Funding	Spending Forecast	
Base	86.5	79.3	7.1

Numbers are rounded to the nearest \$0.1M.

Funds/Variance Analysis

Projected Funding includes FY2009 uncosted and FY2010 expected 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

None.

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.