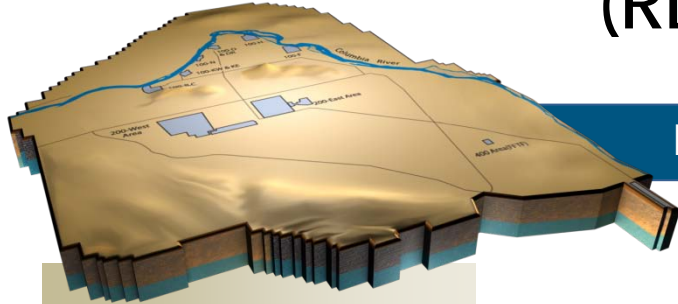


Section B Spent Nuclear Fuel Stabilization and Disposition (RL-0012)



Monthly Performance Report

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Standard Waste Box Sludge Shipment Received at PNNL



Knockout Pot Wire Separation System

December 2010
DOE/RL-2010-126-12, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

Sampling of the Engineered Container 210 (EC-210) is nearing completion. Three cores have been retrieved successfully and safely shipped to PNNL for characterization and analysis. One final core has been retrieved and is awaiting shipment to PNNL the first week in January. (NOTE: On January 4, 2011, the final shipment of sludge to be sampled was shipped. The Sludge Treatment Plant's (STP) sampling campaign is now complete.)

The knockout pot (KOP) subproject continued with final design having received approval from the CHPRC Project Review Board on the Preliminary Design package. In addition, the KOP mezzanine has been fabricated and shipped to the Maintenance and Storage Facility (MASF) for installation. The Qualification Test Plan/Specification for Pretreatment Testing was approved by the STP Joint Test Group (JTG).

Engineered Container Retrieval Transportation System (ECRTS) component testing continues at MASF. The integrated decant testing using simulated unsettled solids were successfully filtered, and the overflow recovery test using simulated metal-rich sludge was started. Additional integrated decant testing (with flocculent) was also performed. While the flocculent injection was minimally effective, it did provide information for the next round of tests, as to where the injection point could be more effective. With the completion of these tests, the ECRTS testing will now focus on preparation for the fully integrated test to demonstrate a Technology Readiness Level – 6 (TRL-6).

Nearly all the contracts for the Phase 2 Technology Evaluations have completed the submittals. AREVA is the exception, due to analysis at the PNNL laboratory slipping schedule (laboratory resource constraints). The final test will be performed in early January and the report submitted to CHPRC by the end of January. On December 17, 2010, a summary status briefing was provided to RL that discussed the status of the Phase 2 testing activities, current conclusions, and the evaluation process that will be employed.

Finally, the project initiated preparation for the Defense Nuclear Facilities Safety Board (DNFSB) staff visit in January. The project began to prepare briefing charts and storyboards that will be staged at MASF for the tour and demonstrations.

EMS OBJECTIVES AND TARGET STATUS

Goal #	Goal	Target	Due Date	Status
1	Reduce use of copier paper by 3% at 825 Jadwin and Maintenance and Storage Facility (MASF) during FY2011	Present goal to STP employees in a memo. Include 2010 usage and 2011 target for Room 301-C and 356 copy machines at 825 Jadwin and copy machine S/N31012668 at MASF	12/31/10	Complete
		Issue quarterly status to all employees	03/31/11, 06/30/11	On Schedule
		Issue year-end status to all employees	09/30/11	On Schedule
2	Recycle/reuse test simulant and basin mockup water at MASF	Outline plan for recycling/reuse of test simulant and Basin mockup water at MASF	12/31/10	Complete
		Issue quarterly status to all employees	03/31/11, 06/30/11	On Schedule
		Assess effectiveness of reuse program and evaluate if continued reuse in FY2012 is warranted.	09/30/11	On Schedule

TARGET ZERO PERFORMANCE

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	2	4	<p>12/28 MASF Engineering Technician fractured the tip of finger in a crushing incident. The base of the platform came off the edge of the table during movement. The technician was not anticipating the full weight of the platform (40 lbs), and was therefore unable to stop the 4" drop. The technician's right little finger was caught between the platform and welding table. Worker was transported to AMH and diagnosed with an open tuft fracture. Worker was then transported to Kadlec Medical Center and given 4 sutures. (21602)</p> <p>12/02 CVDF NCO was descending the stairs from the mezzanine to a landing. While descending the stairs, the worker caught steel-toed safety boot on the second step and tripped. Because worker was holding the handrail at the time of the incident, the trip caused worker to rotate counter-clockwise while falling toward the landing, ultimately striking right shoulder and back on a fire system riser. The worker sustained a contusion to right shoulder. (21555)</p>
First Aid Cases	2	24	<p>12/06 105KW NCO twisted right knee on the basin grating. Worker did not report injury to supervisor until 12/7 since the NCO felt the discomfort would go away. The NCO knelt down on the grating on 12/07/10, which aggravated the right knee. (21565)</p> <p>12/11 100K SOE complained of bilateral tinnitus (ringing in the ears) and high frequency hearing loss. Worker was transported to AMH on 12/14/10 and was examined and released to work without restrictions. Worker indicated that this condition may be due to exposure to diesel engine noise. (21584)</p>
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Sludge Treatment Project (STP)







- CSER 10-007, *Criticality Safety Evaluation for the Onsite Transportation of the K Basin Container Sludge in the Sludge Transport System*, was issued and provided to DOE-Safety and Environmental Division (SED). The Criticality Safety Evaluation Report (CSER) concluded that under both normal and upset conditions of transport, the K Basin Container K_{eff} remained under the Transportation Safety Document (TSD) threshold of 0.95. The results of the CSER will provide the justification for increasing the Fuel-Special Packaging Authorization (F-SPA) fissile gram equivalent (FGE) limit for the transport of an Engineered Container (EC) sludge populations in the Sludge Transport System (STS). Currently, the F-SPA limit of 1200 FGE per shipment is the most restrictive of all the F-SPA limits.
- A multi-canister overpack (MCO) material storage management assessment kicked off this week in support of the KOP subproject and 100K scrap fuel shipments. Items inspected included MCO shield plugs, cover caps, Mark 1A scrap baskets, process tubes, flex seals, and low pressure sending units used for monitoring MCOs. Remaining items to be inspected include eight MCO shells, two shield plugs and one large crate identified as small parts. In addition, 52 Mark 1A scrap baskets were inspected. Data collected identified the need to procure additional process tubes, low pressure sending units and valve seals.
- The sample digests for the U-metal and U-speciation were initiated this week for the settler sludge material. U-metal digestions are planned for next week and U-metal samples will be ready to analyze by inductively coupled (Argon) plasma (ICP) the first week of January.
- With the issuance of the *Thermal and Gas Analysis for KE Container Sludge in the STS Cask* this week, AFS has delivered all the evaluations required to develop the F-SPA Checklist for the K East containerized sludge sub-population. The analysis results conclude that the design threshold of 80 (Pound Per Square Inch Gauge) psig will not be exceeded during the transport of the K East sludge in the STS/Sludge Transfer Storage Cask (STSC). These results will be added to the draft F-SPA Checklist for the K East sludge that will be released for internal review the last week of December.
- Field activities supporting the management assessment for MCO material storage were completed this week. The Project is evaluating collected information and will identify the hardware that must be procured prior to execution of the Legacy Fuel and KOP Disposition campaigns. This assessment is scheduled to be released by December 30, 2010.















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			MCO Dry Runs completed, Engineered Container Sampling campaign have all completed. The next STP activity in KW is Pretreatment operations in April/May.
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 January 2011.

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	6.4	6.1	6.3	(0.3)	-5.1	(0.2)	-3.7

CM Schedule Performance (-\$0.3M/-5.1%)

The negative schedule variance is driven by schedule slips in the KOP design and testing activities, which secondarily impacted the pretreatment training activity. The preliminary design required a change in the diameter of the slot on the copper inserts, which required that the new diameter be tested through the proper test procedures.

CM Cost Performance (-0.2M/-3.7%)

The negative 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	188.7	184.9	190.7	(3.8)	-2.0	(5.8)	-3.1	580.1	590.9	(10.8)

Numbers are rounded to the nearest \$0.1M.

CTD Schedule Performance (-\$3.8M/-2.0%)

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

CTD Cost Performance (-\$5.8M/-3.1%)

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

Contract Performance Report Formats are provided in Appendix A.

FY2011 FUNDS VS. SPEND FORECAST (\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	FY2011		Variance
	Projected Funding	Spending Forecast	
Base	83.8	81.6	2.2

Numbers are rounded to the nearest \$0.1M.

Funds/Variance Analysis

Funding includes FY2010 carryover and FY2011 new Budget Authority. The BASE positive variance of \$2.2M reflects a projected PMB over run of \$3.0M offset by \$5.2M of reserve funds.

A CHPRC site integrated work scope prioritization plan is being developed to align work scope with proposed revised funding levels.

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

BCRA-PRC-11-015R0, General Admin & FOC Change for Dec 2010

BCR-PRC-11-010R0, PMB Alignment to Contract Price Adjustment Request

BCR-PRC-11-014R0, MR Adjustment for PRC Baseline, Rev 2 Update

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 PRC Baseline Revision 2 Update, implemented in September 2010, defines CHPRC planning with respect to TPA milestones. The following table is a one year look ahead of key milestones.

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 update that will address this missed milestone.
M-016-140	Submit Revised RD/RA Work Plans for 100K RODs with New Milestones	TPA	3/31/11		TBD	Currently considered "at risk" due to issues with providing sludge treatment milestone dates and plans. Other work plans required by the milestone are on schedule. EPA disapproved TPA change request with DOE's proposed strategy and milestone modifications on 12/14/10. TPA dispute with EPA initiated by letter on 12/21/10.

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.