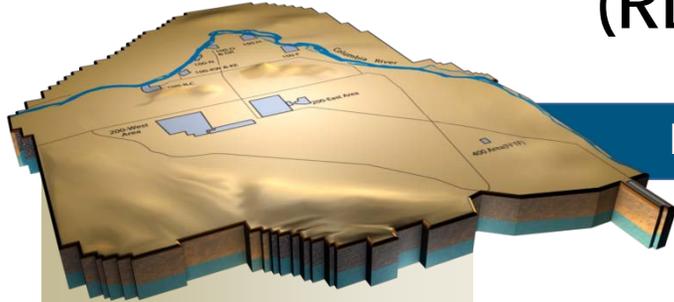


# Section B Spent Nuclear Fuel Stabilization and Disposition (RL-0012)



## Monthly Performance Report

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May 2010  
DOE/RL-2008-69, Rev. 19  
Contract DE-AC06-08RL14788  
Deliverable C.3.1.3.1 - 1



**Bredel Pump Submergence Test Set-up**



**Maintenance and Storage Facility Water Filtration Skid**

## PROJECT SUMMARY

During the month of May, the Sludge Treatment Project (STP) project and 100K Operations personnel worked through several attempts to retrieve the sludge from the remaining settler tanks. Due to pump failures, several attempts were made to continue progress while additional, modified pumps could be fabricated and shipped to the site for placement on skids. The team placed the last spare pump skid (#4) in service, and when it failed, recovered the first pump skid, which required additional rework to place it back in service. This attempt also quickly failed, and retrieval was put on hold until the new pumps were received. The scheduled re-start of settler tank retrieval was planned for June 6.

The STP Engineered Container Retrieval and Transportation System (ECRTS) subproject completed working on the Critical Decision-1 (CD-1) package and review with RL. In addition, the project prepared for the DOE-HQ Technical Independent Project Review (TIPR), as required by DOE Order 413.3A. The review occurred during the week of May 3 with no findings being identified. The draft report was issued on May 20, with the project and RL personnel performing a factual accuracy check. The formal report is expected on or about June 4.

The subcontractor for the 100K Basin mock-up at the Maintenance and Storage Facility (MASF) completed placement of the superstructure over the pool opening to verify fit and to mark hole locations for the handrail and anchor points. They also completed the offsite Factory Acceptance Test for the filter skids, completed the lift test of the superstructure, and completed drilling for the anchors and guard rails. The pool was then filled with water to the 19-foot level to support integrity testing for leaks. Some seepage was observed. The pool was then drained and re-coated to better seal the pool. Another leak test will be performed to ensure the integrity of the pool.

The Phase 2 technology evaluations and alternative analysis work continues to address issues on the final four subcontracts to be placed. Below are the technologies and vendors we are working with:

- Filtration-Autoclave (Thor Treatment Technologies)
- Dissolution (Energy Solutions)
- Phosphate Bonded Ceramics (Ceradyne Inc.)
- Inductively Heated Modular Vitrification System (MVS) (Kurion)
- Joule Heated In-Container Vitrification (ICV) (Impact Services Inc.)
- Warm Water Oxidation/Immobilization (AREVA)
- Nitrate additive (STP Project and PNNL)

A Request for Proposal (RFP) was issued to the seven vendors that expressed an interest in supplying multi-canister overpacks (MCOs) in support of packaging knockout pot (KOP) product material. The RFP required vendor proposals to be submitted by June 18, 2010. Subsequently all but one vendor decided to no-bid the contract. Joseph Oat Corporation (who provided the original MCOs) is the only contractor that will provide a bid.

## 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	3/31/10	Complete
		Implement recommendation actions at the Federal Bldg	5/31/10	On Schedule
		Implement recommendation actions at MASF	6/30/10	On Schedule
		Follow-up Assessment/Surveillance	9/30/10	On Schedule

## 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	1	52	5/13 – EPC employee experience a sore and swollen knee while working in the A9 Switchyard. (20926)
Near-Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### Sludge Treatment Project (STP)

- Work was initiated with the subcontract to support STP's development of a Statement of Work that can be issued as a Request for Quotation on an Alternate Interim Storage (AIS) option as requested by DOE.
- Dry runs were successfully performed at the PNNL 325 Building/Radiochemical Processing Laboratory (RPL) demonstrating the revised procedures and equipment that will be used for receipt of the settler tank sludge samples from EC-SCS-230.
- In preparation for settler tank sampling, 100K Operations personnel completed dry runs on the sampling systems to maintain operator and system qualifications.
- Preliminary review of Work Package 1K-09-06299 for removing the filters from EC-SCS-230 is finished and ready for final review and approval. Fabrication is complete for the racks and hooks that will be used to remove the filters from container 230.
- A tour of the MASF was provided to two members of the DOE-HQ Safety Organization. The tour included providing details on project history, testing activities conducted to date that substantiated project maturity levels, and planned testing activities that will be conducted prior to

commissioning production hardware. The tour was well received with complimentary feedback from the HQ staff members.

- The strategy for KOP material pre-treatment has been developed, and the design for the screened canister and associated procurement documentation has been approved through the project team. Once CHPRC Procurement places the contract with Hi-Line Engineering & Fabrication, the canisters will be fabricated and delivered to support the pre-treatment campaign, which is scheduled to begin in October 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			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-005: STP Settler Tank Retrieval	Develop multiple retrieval tools, and bounding simulant, to test most adverse conditions expected in Settler Tanks.			Settler Tank retrieval progress slowed this month due to a pump failure. Recovery plan placed skid #1 in service until spares were fabricated.

## 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 (%)
<b>Base</b>	6.5	5.9	7.1	(0.7)	-10.2	(1.2)	-20.9

#### CM Schedule Performance (-\$0.7M/-10.2%)

The STP current month variances include contracting delays in the Phase 2 scope as terms and conditions are being negotiated (-\$0.4M) and delayed start of both Multi-Canister Overpack (MCO) subcontracts and MCO processing upgrades, while management determinations and engineering analysis completed (-\$0.3M).

Recovery actions include focused attention on the subcontracts for the Phase 2 technology testing and continued focus of 100K engineering on the Integrated Water Treatment System (IWTS) and MCO system refurbishments. Vendor response to the MCO RFP is due June 18, at which time CHPRC will award the contract.

#### CM Cost Performance (-\$1.2M/-20.9%)

The STP negative variance (-\$0.5M) was generated by a cost to date accrual from the fabrication vendor for the test articles associated with the ECRTS. The vendor had not previously been providing accrual information.

Recovery action includes continued monitoring of and support to the vendor to ensure either invoices or accruals are made monthly.

The 100K Area negative variance (-\$0.5M) is due to the MSA support cost for K West Basin Debris removal project (RL-0041 work scope) inadvertently charged to RL-0012.

Recovery actions: A cost transfer will be prepared.

Project Services & Support: (-\$0.2M) 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)
<b>Base</b>	145.1	142.0	144.6	(3.1)	-2.1	(2.5)	-1.8	576.9	578.9	(2.0)

Numbers are rounded to the nearest \$0.1M.

#### CTD Schedule Performance (-\$3.1M/-2.1%)

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

#### CTD Cost Performance (-\$2.5M/-1.8%)

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

**Contract Performance Report Formats are provided in Appendix A.**

## FY 2010 FUNDS VS. SPEND FORECAST (\$M)

RL-0012 Spent Nuclear Fuel Stabilization and Disposition	FY 2010		Variance
	Projected Funding	Spending Forecast	
<b>Base</b>	86.8	78.9	7.9

Numbers are rounded to the nearest \$0.1M.

### Funds/Variance Analysis

Projected Funding includes FY 2009 uncosted and FY 2010 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 FY 2009 through FY 2018, 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			Revised STP commitment dates provided to DNFSB by DOE-EM on 12/01/09

## 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.