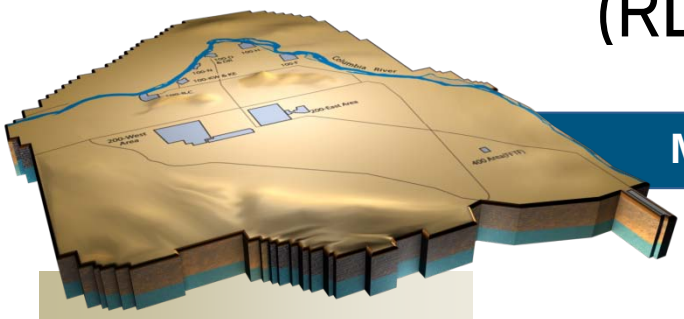
CH2MHILL
Plateau Remediation Company

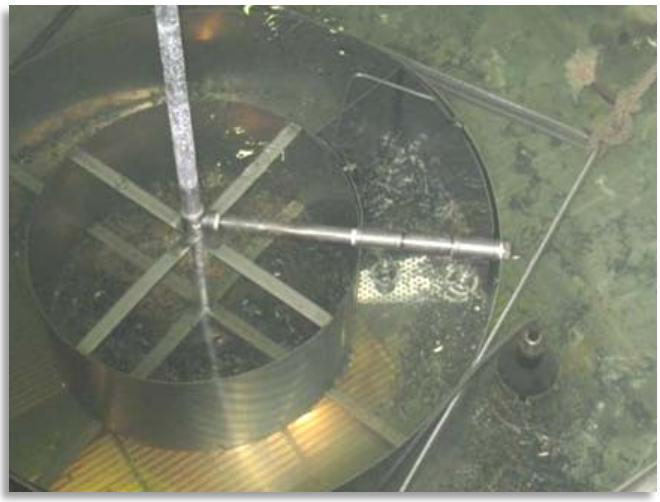
Section B
Spent Nuclear Fuel Stabilization and Disposition (RL-0012)



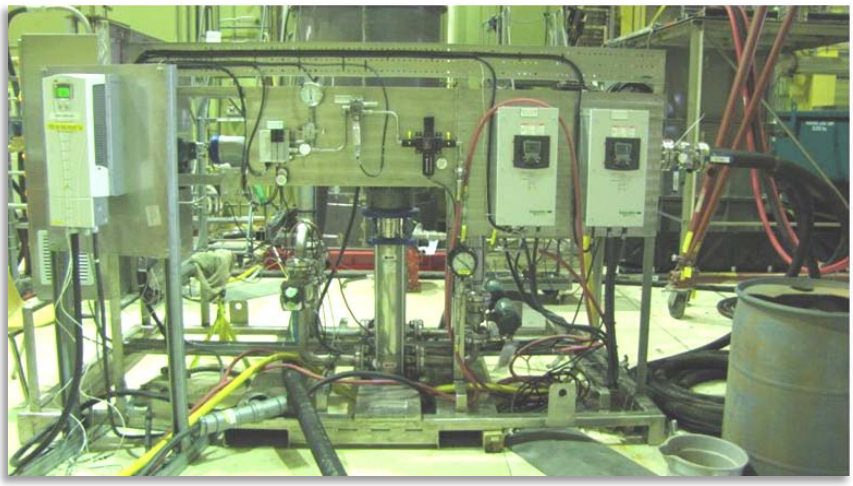
Monthly Performance Report

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

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



Knockout Pot Sorting Table Operations Test Setup



XAGO System Control Panel Setup

October 2010
DOE/RL-2010-126-10, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

The Sludge Treatment Project and 100K Operations personnel completed the sample pulls for three complete cores of settler tank sludge from Engineered Container (EC) 230 and safely shipped them to PNNL for characterization and analysis. The final sample will be pulled and shipped to PNNL on November 11 (completed). This will complete the work at 100K for the settler tank retrieval and sampling campaigns. Construction Services personnel also completed the installation of the sampling systems (grating modifications, cameras, and inserted the isolation tube in the first position) in preparation of sampling the K West floor and pit sludge in EC 210. Sampling is scheduled to commence November 15.

The Knockout Pot (KOP) Disposition Subproject is incorporating agreed upon changes into the KOP Processing System (KPS) Preliminary Design Report (PDR) design documents resulting from the formal design review. Due to extended comment resolution with the Nuclear Safety documentation, the completion date for the release of the PDR slipped to October 14. The next step will be to convene the CHPRC Project Review Board and present data for their review and approval.

The KOP Pretreatment 90% Design was achieved with the issuance of PRC-STP-00315, Revision 1, *Pretreatment of KOP Material Process Description, Process Control Plan and Material Balance*, and the completion of the Pretreatment drawings. The drawings include the Wire Separations Device, Instrument Rack, and mechanical and electrical components. In addition, components of the test platform have begun to arrive at Maintenance and Storage Facility (MASF) for installation. The bullpen (portion of the platform that will house the instrumentation required for testing) was delivered and staged for installation. The schedule is to have the entire testing platform installed and ready to support Pretreatment Qualification Testing by early January 2011.

The XAGO/Transfer Pump dry (on-the-deck) testing performed six runs of the XAGO retrieval tool to complete clean out of the remaining K West material in the test EC. They drained and recovered residual simulant for measurement. With the K West simulant material in the Sludge Transfer Storage Cask (STSC), the first overfill recovery test was initiated. Testing showed low flow rates and inability to mobilize and/or lift the sludge. Troubleshooting activities were initiated. Engineering was not able to resolve the overfill recovery tool flow rate, and decided to retrieve the sludge from the STSC and store it in a holding container and proceed with the retrieval of the settler tank sludge simulant from the EC. At a later date they will come back to the K West material, after the settler tank material is transferred from the EC.

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	
First Aid Cases	4	29	10/5/10 - 105KW NCO noticed a lump on the left wrist and was evaluated at AMH. The diagnosis was left wrist De Quervain Tenosynovitis (repetitive motion issue); left wrist ganglion cyst. The worker was provided a rigid splint and was returned to work with restrictions. (21377) 10/7/10 - Engineering Technician at MASF complained of shoulder discomfort in a pre-job briefing. He indicated that he had been experiencing the discomfort in his shoulder when he was assembling piping manifolds over the past several weeks. As a result of this additional information, the technician was sent to AMH for evaluation. Worker was examined and released without restrictions. The diagnosis was right shoulder strain. (21382) 10/8/10 - RCT had left foot run over by a Bobcat. The RCT was standing next to Bobcat while the driver was backing up. The worker did not report the event until Monday 10/11/10. Worker was transported to AMH, evaluated, and returned to work without restriction. (21386) 10/1/10 - D&D, 100K Area, Nuclear Safety worker taken to AMH for metal shards in fingernail. Worker taken to AMH for metal shards from a 3 ring binder imbedded in finger nail. Worker decided to seek treatment with private physician on 10/14 (21401)
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

Sludge Treatment Project (STP)

Prototypes of the STS IP-2 confinement liners were installed onto the STS cask mock-up at MASF. DOE Safety Engineering Division (SED) transportation and packaging representatives were given the opportunity to inspect the STS, STSC, and the IP-2 liners all together, as a total packaging system for the EC sludge streams. DOE SED was pleased with the system and felt it would meet all the packaging requirements of the F-SPA, which will be used to authorize the transport of the EC sludge.

The MHF Logistical Solutions technical representative (vendor for STS IP-2 confinement liners) also toured MASF and identified modifications and enhancements during the inspection of the IP-2 liner installation on the STS cask mock-up. The identified changes simplify installation, securing, and closure of the systems without compromising the confinement properties of the liners.

The draft KPS Qualification Test Plan was completed and provided to the Joint Test Group for review. Qualification testing on KPS equipment is scheduled to commence in February 2011

The KOP Subproject developed and issued a Statement of Work (SOW) to procure a Density Separation Funnel to support qualification testing and operator training on Pretreatment hardware, which is scheduled to commence at MASF in December 2010

In preparation for the ECRTS Integrated Test, MASF received a second flocculent skid, the process ventilation skid, and the ingress/egress piping

Items completed this month for the Integrated Decant Test System include filling the sand filter media; plumbing and wiring the Annex Flocculent skid; simulant preparation; tanks, pumps and hose assemblies; piping modification to the sand filter; and instrumentation wire was pulled

MASF personnel completed selected prerequisite steps for Integrated Decant System Testing. Approximately 2,000 gallons of water was flushed through the sand filter until effluent water was nearly clear.

A draft of *Sludge Treatment Project: Retrieval, Transport and Interim Storage of the K West Basin Garnett Filter Media Engineering Study*, was completed and sent out for internal review

Progress of note on the Phase 2 Subcontracts:

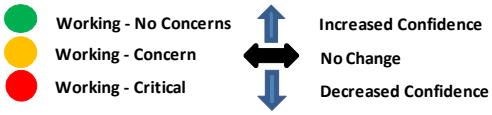
- Ceradyne's acidification and Fenton's reagent tests produced significant uranium metal oxidation rates and one actually dissolved all the uranium metal cubes in ~96 hours
- Areva's warm water oxidation test produced early results indicating that at 95 degrees Centigrade will not produce significant agglomeration as long as agitation is maintained
- Impact Services tests demonstrated that the full scale mixer/dryer can satisfactorily dry K Basin simulant with or without glass formers

MAJOR ISSUES

None identified.

RISK MANAGEMENT STATUS

Unassigned Risk
Risk Passed
New Risk



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, Settler Tank Sampling campaign (now complete) and the installation of the sampling system on EC-210 (now complete) show improved communications are working.
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	5.0	4.8	4.7	(0.3)	-5.1	0.1	1.5

CM Schedule Performance (-$0.3M/-5.4%)
The negative schedule variance in STP is due to the slip in delivery of final test articles (STP Management decision to prioritize the KOP test articles over the ECRTS), which also impacts the estimated completion of the Preliminary Design Report date ($0.3M).

CM Cost Performance (+$0.1M/+1.5%)
The positive 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	175.9	172.5	178.3	(3.4)	-2.0	(5.8)	-3.4	580.1	591.2	(1.9)
Numbers are rounded to the nearest $0.1M.										

CTD Schedule Performance (-$3.4M/-2.0%)
The combined 100K and STP variances are within reporting thresholds.

CTD Cost Performance (-$5.8M/-3.4%)
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 Projected Funding	FY2011 Spending Forecast	FY2011 Variance
Base	83.8	82.6	1.2

Numbers are rounded to the nearest $0.1M.

Funds/Variance Analysis
Funding includes FY2010 carryover and FY2011 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-11-003R0, Incorporate Revised Labor, Non-Labor and Escalation Rates
BCRA-PRC-11-004R0, FOC and Other Administrative Changes, October 2010

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 (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.