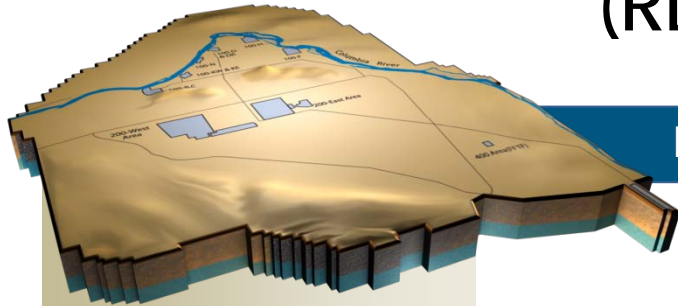


Section B Spent Nuclear Fuel Stabilization and Disposition (RL-0012)



Monthly Performance Report

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April 2010
DOE/RL-2008-69, Rev. 18
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1



Maintenance and Storage Facility Pool Superstructure



Sludge Transportation Storage Cask Test Article

PROJECT SUMMARY

The first pump skid was recovered and repaired by Sludge Treatment Project (STP) Engineering and 100K operations personnel while additional spare pump skids are being fabricated. Approximately 30% of the bulk retrieval of the sludge from the eighth tank (S5) was completed before the pump began to degrade and was taken out of service. The first of two spare pump skids was delivered to 100K and will be installed and the retrieval re-started.

CHPRC Engineering, Projects, and Construction (EPC) Project Review Board (PRB) completed the formal review of the Knockout Pot (KOP) Disposition Project Conceptual Design Review (tailored approach per CHPRC procedure). The PRB Chairperson approved the KOP Disposition Project advancing from the Conceptual Design phase on to the Preliminary Design phase with minor comments/actions.

STP Engineered Container Retrieval Transportation System (ECRTS) project personnel met with RL to discuss final resolution of the RL comments on the ECRTS CD-1 package. There were five out of 57 comments that required additional documentation to resolve the comment. This also supports the DOE Technical Independent Project Review (TIPR) which is scheduled for the first week in May. In addition, the Sludge Transportation Storage Cask (STSC) test article successfully passed both the lift and hydro testing and is ready to support connector remotability tests, planned for next month.

Completed delivery of the superstructure and grating material, for the 100K Basin pool mockup at Maintenance and Storage Facility (MASF) (to replicate the monorail support structure of the basin). The water filtration skid is undergoing Factory Acceptance Tests, prior to delivery to MASF.

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

| | Current Month | Rolling 12 Month | Comment |
|--------------------------------------|---------------|------------------|--|
| Days Away, Restricted or Transferred | 0 | 3 | N/A |
| Total Recordable Injuries | 0 | 4 | N/A |
| First Aid Cases | 1 | 54 | 04/09 CVD NCO pinched hand in trailer door due to wind. The manager and NCO agreed to self-treat (20861) |
| Near-Misses | 0 | 0 | N/A |

KEY ACCOMPLISHMENTS

Sludge Treatment Project (STP)

- STP revised the following documents to address DOE Safety & Environmental Division (SED) comments: 1) *Determination if a New Transportation Safety Document is Necessary for the Transportation of the K-East Engineered Container Sludge*, PRC-STP-00213, Rev 1, and 2) *Sludge Treatment Project – Engineering Containers Transportation Safety Documentation Plan*, PRC-STP-00200, Rev 2.
- CHPRC met with RL Transportation Safety to gather information to define a potential alternative to the baseline package configuration and transportation authorization documentation for shipment of the K East sludge to T Plant.
- The Fuel-Special Packaging Authorization (F-SPA) Shipping Evaluation Checklist and supporting analyses for shipment of Settler Tank sludge samples were submitted to RL Transportation Safety on March 26 for approval.
- The Hazards Screening Checklist for removing the filters from SCS-CON-230 (Settler Tank Sludge Engineered Container [EC]) was completed with a determination that any “release is below the Hanford Site dose criterion for classification as an Alert.” Emergency Preparedness has reviewed the checklist and analysis and has concurred with the conclusion.
- A contract has been placed to support the preparation of a Statement of Work for the conceptual design of an Alternate Interim Storage (AIS) option for the EC sludge.
- STP and 100K Operations personnel reviewed ECRTS and KOP arrangements within the basin and no significant problems were identified.
- A target inventory of material needed to supply physical simulants to the selected Phase 2 – Technical Evaluation testing vendors has been completed. All bulk materials are available. Minor quantities of organic ion exchange media and a stand-in for the Zeolite are required to be procured. PNNL has started a production run to produce a 50/50 mixture of Uraninite/Metascheopite to simulate the uranium oxide present in the K Basin sludge material. This mixture is a key part of the uranium bearing simulant PNNL will be shipping vendors for proof-of-principle testing.
- Property transfer for the 22L mixer-dryer and supporting equipment has been completed from ORP to CHPRC and the loan to Impact Services has been approved.







- *Data Quality Objectives for Characterization of the KW IWTS Garnet Filter Media, HNF-45802* was approved and issued on April 26.















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-009: Jurisdictional Issues (Davis-Bacon) Impact Productivity | Risk handling options being evaluated |  |  | No impacts at this time. |
| KBC-010: Unexpected TRU Debris or Other Waste | Develop characterization & blending/packaging strategy; establish alternate waste disposition pathways |  |  | Completed shipment of Legacy CERCLA waste in October, increasing the confidence trend. |
| 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 progressed 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 (%) |
|---|--|--|--|------------------------------|-----------------------------|--------------------------|-------------------------|
| Base | 7.7 | 6.6 | 6.5 | (1.1) | -16.7 | 0.1 | 1.5 |

CM Schedule Performance (-\$1.1M/-16.7%)

The 100K Area and STP current month variances include: contracting delays in the Phase 2 scope as terms and conditions are being negotiated (-\$0.4M); lower production in the Settler Tank Retrieval activities due to the pump failures (-\$0.1M); delayed start of the settler tank sampling activities until the retrieval completion nears (-\$0.1M); delayed start and slower progress towards the Preliminary Design scope and testing for the KOP Disposition subproject while preparing for the CHPRC EPC PRB approval of the Conceptual Design (-\$0.2M); 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 contracts (most, if not all) negotiations have completed, Settler Tank retrieval using the first skid installed until spares are fabricated and overtime for optimal run times; KOP recovery now that the CHPRC EPC PRB has approved the Conceptual Design. CHPRC and RL are working on the contracting strategy for the MCOs and STP and 100K Engineering are working closely to place the procurements identified for upgrades to the MCO and Integrated Water Treatment System (IWTS).

CM Cost Performance (\$0.1M/1.5%)

The 100K Area and STP current month variances are 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 | 138.6 | 136.2 | 137.6 | (2.4) | -1.8 | (1.4) | -1.0 | 576.9 | 578.5 | (1.6) |

Numbers are rounded to the nearest \$0.1M.

CTD Schedule Performance (-\$2.4M/-1.8%)

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

CTD Cost Performance (-\$1.4M/-1.0%)

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 | |
| Base | 86.8 | 79.7 | 7.1 |

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.