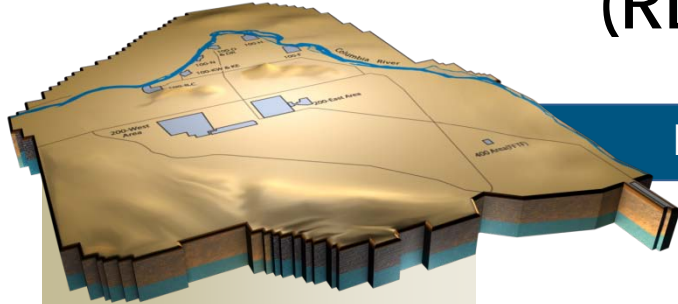


Section B Spent Nuclear Fuel Stabilization and Disposition (RL-0012)



Monthly Performance Report

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Knockout Pot Insert Loading Test Setup



**Sludge Transfer Storage Cask
Trailer Fabrication**

PROJECT SUMMARY

Sludge Treatment Project (STP) submitted the Critical Decision (CD)-1 package for RL approval. RL letter 10-AMRC-0122 dated June 17 stated, “Based on the successful results of a series of independent project reviews and RL line management reviews conducted since the two-phased approach for executing the STP was proposed by CH2M HILL Plateau Remediation Company (CHPRC) in January 2009, RL concludes that the Engineered Container/Settler Tank (EC/ST) subproject has satisfied the DOE O 413.3A requirement for CD-1 (tailored), and reached a sufficient level of maturity to proceed to the next project phase”. Leading to this letter, RL also completed the Conceptual Safety Validation Report (CSV), which concluded that the Conceptual Safety Design Report (CSDR) that CHPRC submitted was very “clean”, in that it required no significant changes to the CSDR and identified specific areas where CHPRC had exceeded the minimum acceptable standard for such a document. The CSV is consistent with draft recommendations received from the Technical Independent Project Review (TIPR). This is significant since this is the first CSDR submitted by CHPRC.

STP and 100K Operations personnel completed both the retrieval of the sludge from the final settler tanks (all ten tanks emptied) and the boroscope inspections of the tanks. After engineering calculations of the remaining volume of residual sludge in the tanks and the volume estimates of the sludge retrieved into engineered container SCS-230, the filters will be removed and sampling of the material can be initiated.

At the Maintenance and Storage Facility (MASF), the engineering and testing organizations completed the conditional Construction Completion Document (CCD), documenting completion of the K Basin pool mock-up at the facility. In addition, the superstructure mock-up representing the K West Annex facility has been fabricated and is expected to be shipped to MASF in early July.

Fabrication of the Knockout Pot (KOP) Disposition subproject low density separations funnel was completed and delivered to MASF for testing. This assembly was tested to determine its viability for removing aluminum wire and lose density material from the product stream. Testing of the assembly was then completed and the results indicate that the tool was very successful at removing the low density material (Grafoil, aluminum wire, and gibbsite – a material form of aluminum hydroxide).

Procurement and fabrication of the Engineered Container Retrieval and Transportation System (ECRTS) test articles is well underway, and MASF is preparing receipt of the equipment. Receipt of the superstructure over the pool was completed this month, the mockup of the Sludge Transport Storage Cask (STSC), was completed, and fabrication of the XAGO retrieval system, the STSC Trailer, and the K West Annex superstructure were completed, with delivery of the equipment scheduled for early July.

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 | 0 | 3 | N/A |
| Total Recordable Injuries | 0 | 1 | N/A |
| First Aid Cases | 3 | 52 | 6/7 - NCO in 105KW sustained a minor cut on thumb from box knife. Worker and supervisor agreed self-treat was appropriate. (20968) 6/8 - NCO from 105KW received a bug bite on neck during load-out. The NCO/Supervisor/Safety Representative agreed self-treat was appropriate. (20970) 6/15 - Operations Specialist was walking on sidewalk to go to the parking lot to leave for the day. Worker twisted ankle for an unknown reason landing on ground. Worker was taken to AMH and released without restriction. (20989) |
| Near-Misses | 0 | 0 | N/A |

KEY ACCOMPLISHMENTS

Sludge Treatment Project (STP)

After the submergence test of the Bredel hose pump (SPX) at MASF, water intrusion was discovered during the inspection of the pump to gearbox void space. The pump was disassembled for further inspection and analysis. A test exception was generated and a path forward plan developed, pending lab results on the lubricant samples.

In support of 100K debris removal, MASF personnel fabricated a test cell to perform initial cuts on tubing. The cell consisted of a stainless steel box with mounts to hold sample specimens, and a Lexan lid for retention of possible ejected pieces during cutting. Two successful demonstrations were performed using the shear tool, with 100K Operations personnel witnessing the demonstrations.

Initial parametric calculations projecting the extent of U-Metal oxidation during the interim storage period in T Plant or the AIS have been completed. The calculations also explore potential enhancements which could increase the extent of oxidation during interim storage. Calculations are being structured into an engineering calculation format and an annotated outline for an engineering reference document has been prepared. Initial results indicate very little oxidation would be expected for nominal conditions of interim storage for periods ranging from five to 20 years. Potential enhancements include higher temperature storage conditions and conditioning the storage water to maintain anoxic conditions during the interim storage period. This information will be incorporated into the Phase 2 Technology evaluation to specifically respond to one of the outstanding DOE-EM STP-ETR team comments.

In response to the failure of pump skids during the settler tank retrieval operations, STP Management has decided to conduct tests at MASF to re-create and analyze the pump failure modes. This action is taken to mitigate the risk of pump failure in the event that a second settler tank retrieval campaign is required after the boroscope inspection activity. MASF personnel have initiated the set-up of a slurry loop system for testing, and drafted a procedure for “run-to-failure” trials on the retrieval pump.

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-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. | ● | ↑ | STP successfully completed the Settler Tank retrieval activities this month This risk will be closed. |

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 | 5.8 | 5.3 | 6.2 | (0.5) | -9.0 | (0.9) | -17.1 |

CM Schedule Performance (-\$0.5M/-9.0%)

The STP current month variances include contracting delays in the Phase 2 scope as terms and conditions are being negotiated (-\$0.2M) 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. Joseph Oats Corporation was the only vendor to bid on the MCO fabrication subcontract. Once the Acquisition Verification Services (AVS)/Quality Assurance (QA) assessment has been completed, this contract can be awarded.

CM Cost Performance (-\$0.9M/-17.1%)

The STP negative variance (-\$0.2M) was generated by costs associated with the procurement of the ECRTS test articles, which have been processed and are now being fabricated and received at the MASF facility. No recovery actions required as this is only a timing issues associated with the delivery of the test articles.

The 100K Area negative variance (-\$0.2M) is within variance thresholds. No recovery actions required. Project Services & Support: (-\$0.5M) 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 | 150.9 | 147.3 | 150.8 | (3.6) | -2.4 | (3.5) | -2.3 | 577.4 | 578.0 | (0.6) |

Numbers are rounded to the nearest \$0.1M.

CTD Schedule Performance (-\$3.6M/-2.4%)

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

CTD Cost Performance (-\$3.5M/-2.3%)

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)

| FY 2010 | | | |
|---|----------------------|----------------------|----------|
| RL-0012 Spent Nuclear Fuel Stabilization and Disposition | Projected Funding | Spending Forecast | Variance |
| Base | 86.5 | 77.5 | 9.0 |

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.