

Section C

Solid Waste Stabilization and Disposition (RL-0013)



L.T. Blackford
Vice President and
Project Manager for
Waste and Fuels
Management Project

January 2012
CHPRC-2012-01, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

PROJECT SUMMARY

The Waste & Fuels Management Project (W&FMP) focused on delivering safe, compliant performance.

American Recovery and Reinvestment Act (ARRA)

Project layup activities continued. Mixed Low-Level Waste (M/LLW) completed submittal of the 2011 Baseline Data Disposition report to the U.S. Department of Energy–Headquarters. Closed the American Recovery and Reinvestment Act funded contracts associated with M-91-43 and 435.1 legacy M/LLW.

T Plant shipped one shipment of 20 Puck drums to Environmental Restoration Disposal Facility (ERDF).

Base

The W&FMP continued maintaining facilities in a safe and compliant condition. Waste Receiving and Processing Facility (WRAP) completed 13 Technical Safety Requirements surveillances. T Plant completed the annual container and Dose to Curie (DE-Ci) inventory, waste container surveillances, Specific Administrative Control (SAC) surveillances and chemical inventory surveillances with no issues. Central Waste Complex (CWC)/Low Level Burial Ground (LLBG) and Mixed Waste Trench (MWT) shipped 65 TRU-Project dropout LLW waste packages from the CWC to Perma-Fix Northwest (PFNW) for final disposition. CWC also received 36 Standard Waste Boxes (SWB), 30 drums, and one IP-2 (209E Slab Tank) of transuranic waste, and four shipments of M/LLW into the Mixed Waste Disposal Units (total of 20 waste packages). Liquid Effluent Facilities (LEF) received two tankers (calendar year [CY] 8k gallons). 200A Treated Effluent Disposal Facility (TEDF) discharged 1 Million gallons (CY 1M). At Liquid Effluent Retention Facility (LERF) Basin 44 received Environmental Restoration Disposal Facility (ERDF) leachate (323k gallons) (CY 323k). Canister Storage Building (CSB) completed annual cask receiving crane maintenance and motor replacement on exhaust fan 001. The Cold Vacuum Drying Facility declared a Potential Inadequacy in the Safety Analysis (PISA) on January 23, 2012 related to multi-canister overpack (MCO) proof of dryness testing. Waste Encapsulation and Storage Facility (WESF) completed an annual 294B domestic backflow preventative maintenance, radioactive material area inspection (no findings) and a pool cell transfer port operability testing. In addition, WRAP completed the Acceptance Testing Plan (ATP) for the High Energy Real-Time Radiography (HERTR) in support of the Washington Closure Hanford (WCH) 618-10 burial ground.

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
12-EMS-WFM-OB1-T1	Reduce the generation and/or toxicity of waste at the source by using biological spill treatment.	Evaluate biological spill treatment/cleanup products available to address petroleum based spills and identify opportunities for use within the W&FMP based on FY12 work scope.	9/30/2012	On schedule

TARGET ZERO PERFORMANCE

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	6	N/A
Total Recordable Injuries	0	11	N/A
First Aid Cases	3	81	<ul style="list-style-type: none"> • 1/5/2012 - Employee performing source checks on bottom three detectors. Body part affected: Knee. (22597) • 1/18/2012 - Employee walking up steps slipped and fell. Body part affected: Shoulder. (22607) • 1/30/2012: - Employee touched live wire while performing calibration process. Body part affected: Hand. (22619)
Near-Misses	0	1	N/A

KEY ACCOMPLISHMENTS

ARRA

13.04 MLLW Treatment

- Closed out the ARRA funded contracts associated with M-91-43 and 435.1 legacy M/LLW.

13.06 Lay-Up Activities

- The WRAP and the T Plant Transition Plans are undergoing revision during January with final approval in February.
- Completed 1 shipment of 20 Puck drums to ERDF.

Base

13.01 Project Management

- Continued Project Management support for high priority projects.
- Provided support to RL FY2014 budget formulation

13.02 Capsule Storage & Disposition

- Completed annual 294B domestic backflow preventive maintenance.
- Completed annual radioactive material area inspection (no findings).
- Completed annual pool cell transfer port operability testing.
- Completed asbestos sampling of material in load lugger (no asbestos present).
- Completed operational “man-down” drill.
- Initiated verification of K3 East exhaust filter operation.

13.03 Canister Storage Building (CSB)

- Completed annual cask receiving crane maintenance.
- Completed motor replacement on exhaust fan 001.
- Declared a PISA on January 23, 2012 related to MCO proof of dryness testing at the CVDF.

13.07 WRAP

- Maintained the facility in a safe and compliant condition
- Initiated activities to complete repack of last 10 containers at WRAP.
- Completed three TSR surveillances.
- Completed 21 scheduled PMs.
- Completed containment tent operations for the decontamination of the 2404WB floors.
- Secured the Transuranic Package Transporter (TRUPACT) Bridge Crane.
- Completed the ATP for the HERTR in support of WCH 618-10 project.

13.08 T-Plant

- Maintained the facility in a safe and compliant condition.
- Completed two TSR scheduled surveillances.
- Completed 21 scheduled PMs.
- Completed 426 Rad Ops surveillances.
- Completed 92 daily surveillances.
- Completed 10 weekly surveillances.
- Completed five monthly surveillances.

13.09 Central Waste Complex (CWC)

- Received four shipments of TRU waste totaling 11 SWBs and 32 drums.
- Shipped 1 shipment of LLW totaling 8 waste packages to PFNW.

13.11 Liquid Effluent Facilities (LEF)

- Received two tankers (calendar year [CY] 8k gallons)
- Treated effluent to State-Approved Land Disposal Site: 0 gallons (CY 1M)
- 200A TEDF discharged 1M gallons (CY 1M)
- Received ERDF leachate (323k gallons) at LERF Basin 44 (CY 323k)
- Continued operating the 310 Retention Transfer System (RTS): CY 1 batch; 39k gallons
- Maintenance activities:
 - Repaired second reverse osmosis pump (60F-P-2B)
 - Replaced Thin Film Dryer (TFD) distillate pump (60J-P-3)
 - Completed annual TFD boiler calibrations
 - Replaced influent conductivity meter with higher range capacity
 - Replaced vacuum relief valve at UP1-1 manhole
 - Replaced pressure indicator on evaporator (PI-60I-314)
 - Completed annual Department of Transportation running gear inspection on Tankers HO-64-3558/HO-64-4275
 - Removed and inspected spray nozzles on TFD heat exchanger for plugging (no issues identified)

13.12 Integrated Disposal Facility

- Completed all required inspections at the Integrated Disposal Facility

13.16 Off Site Spent Nuclear Fuel Disposition

- Maintained coordination for offsite Spent Nuclear Fuel Disposition

- Supported RL initial request to analyze potential Hanford Site security reductions

13.21 Mixed Waste Disposal Trenches







- Maintained the facility in a safe and compliant condition.
- Completed 15 scheduled PMs.















MAJOR ISSUES

No major issues to report this month.

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	
WSD-018: CSB Major Equipment Failure	Risk accepted without mitigation. Continue to maintain equipment in accordance with baseline PM/CM schedule.			Risk is very unlikely.
WSD-019: Commercial Capability	MLLW treatment capacity/capability does not meet Hanford needs or treatment does not occur as scheduled.			Current projected treatment volumes are unlikely to support long term viability of commercial capabilities.
WSD-025: Unexpected Waste Volumes/Characteristics	Work with generators to update forecasting data monthly/quarterly/semi-annually.			Waste volumes to ERDF significantly lower due to suspension of cleanup activities.
WSD-043: Orphan Wastes	Obtain regulatory relief for "No Path Forward" wastes.			Issued "No Path Forward" waste and German log alternatives analysis. Annual update of M-91 PMP documented current status.
WSD-097: Major Equipment Failure at WRAP WSD-079: Major Equipment Failure - T Plant	Risk accepted without mitigation. Continue to maintain equipment in accordance with baseline PM/CM schedule.			Risks are unlikely.
WSD-125: Three-Year Pause in Waste Processing Results in Unexpected Container Integrity Issues	Perform weekly waste container surveillances and overpack as required. Perform overpack or covering as required to mitigate condition. Schedule repackaging at appropriate facility.			Legacy containers in expansion area are requiring additional resources. The Long-Term Box Storage is not in the contract Statement of Work. Evaluating process for 110-gallon drums at Permafex Northwest.
New Risk: Results of External Audits/Assessments Impact Operations	Conduct operations in accordance with current approved procedures and processes. CHPRC and RL conduct routine assessments to assess conduct of operations and maintenance activities. Work with oversight groups to understand regulatory basis for interpretations.			Impacts to DNFSB Assessment not fully defined. CHPRC & RL working issues.

PROJECT BASELINE PERFORMANCE

Current Month

(\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
MLLW Treatment	0.0	0.0	0.0	0.0	0.0%	(0.0)	0.0%
TRU Waste	(1.4)	(1.3)	0.1	0.1	-4.2%	(1.5)	111%
TRU Wst Facil Trans MinSafe	<u>1.5</u>	<u>1.5</u>	<u>0.0</u>	<u>0.0</u>	<u>0.0%</u>	<u>1.5</u>	<u>100%</u>
ARRA Total	0.1	0.2	0.1	0.1	47.6%	0.0	17.2%
Base	<u>5.8</u>	<u>5.7</u>	<u>5.2</u>	<u>(0.1)</u>	<u>-1.4%</u>	<u>0.5</u>	<u>9.6%</u>
Total	5.9	5.9	5.3	(0.0)	-0.4%	0.6	9.9%

Numbers are rounded to the nearest \$0.1M

ARRA

Current Month (CM) Schedule Performance (\$0.1M/+47.6%)

RL-0013 MLLW Treatment / RL-0013 TRU Waste/ RL-0013 TRU Waste Facility Transition to Min Safe – The positive schedule variance is within threshold.

CM Cost Performance (+\$0.0M/+17.2%)

RL-0013 MLLW Treatment / RL-0013 TRU Waste/ RL-0013 TRU Waste Facility Transition to Min Safe – The favorable cost variance is within threshold. However, ARRA layup activities were replanned to a newly established DOE requested/authorized ARRA subproject. Costs associated with replanned scope will be corrected and/or transferred to the new subproject in the next reporting period (February 2012).

Base

CM Schedule Performance (-\$0.1M/-1.4%)

The unfavorable current period schedule variance is within threshold.

CM Cost Performance (+\$0.5M/+9.6%)

The positive cost variance is primarily due to the correction of a MLLW charge made in the prior period (December accrual was incorrectly made for the remaining value of the contract and corrected in this reporting period). In addition, staff utilization was below plan due to holidays and weather impacts. Partially offset by resources being transferred from ARRA to Base. Because ARRA funding is exhausted, remaining work required to reach and maintain planned facility conditions will be executed and costed under Base funding.

Contract-to-Date (CTD)

(\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	Budgeted Cost of Work Scheduled	Budgeted Cost of Work Performed	Actual Cost of Work Performed	Schedule Variance (\$)	Schedule Variance (%)	Cost Variance (\$)	Cost Variance (%)
MLLW Treatment	47.7	47.7	42.7	(0.0)	-0.0%	-5.0	10.5%
TRU Waste	255.3	255.3	255.0	(0.0)	-0.0%	0.3	0.1%
TRU Wst Facil Tran MinSafe	<u>1.5</u>	<u>1.5</u>	<u>0.0</u>	<u>0.0</u>	0.0%	<u>1.5</u>	100.0%
ARRA Total	304.5	304.5	297.7	(0.0)	-0.0%	6.8	2.2%
Base	<u>338.5</u>	<u>337.6</u>	<u>343.9</u>	<u>(0.9)</u>	-0.3%	<u>(6.3)</u>	-1.9%
Total	643.0	642.1	641.6	(0.9)	-0.1%	0.5	0.1%

Numbers are rounded to the nearest \$0.1M

ARRA

CTD Schedule Performance (-\$0.0M/-0.0%)

RL-0013 MLLW Treatment – The negative schedule variance is within threshold.

CTD Cost Performance (+\$6.8M/+2.2%)

The positive cost variance due to efficiencies in TRU Characterization and Shipping, TRU Repackaging, T Plant and WRAP, Mixed Low Level Waste (MLLW) efficiencies created by treating waste at Energy Solutions (ES) - Clive rather than planned treatment at PFNW due to a waiver received from the Department of Energy (DOE), Environmental Restoration Disposal Facility (ERDF) negotiated rate reduction with vendor for waste containers, partially offset by increased materials and labor costs in support of the Trench Face Retrieval and Characterization System (TFRCS), and increased resources for TRU Retrieval deteriorated waste containers, increased allocations for additional office space and other assessments as a result of allocations to Recovery Act expenditures.

Base

CTD Schedule Performance (-\$0.9M/-0.3%)

Within Threshold - The negative variance is due to Canister Storage Building (CSB), WESF, and ETF engineering activities delayed due to resource availability (assigned to higher priority activities).

CTD Cost Performance (-\$6.3M/-1.9%)

The unfavorable CTD cost variance is the result of FY 2009/2010 MSA assessments above plan, TRU Retrieval additional resources to deal with FY2009 deteriorated containers and drum wedge issue, FY2009 WRAP facility increased levels of corrective and preventive maintenance activities as a result of repack operations, increased labor and subcontractors support for Transportation and Packaging; partially offset by efficiencies in Liquid Effluent Facility (LEF), MLLW, TRU Disposition, TRU Repackaging, Interim Storage Area upgrades, Capsule Storage and Disposition, MWDT and lower G&A allocations.

Contract Performance Report Formats are provided in Appendix A and Appendix A-1.

Estimate at Completion (EAC)

The BAC and EAC include FY2009 through FY2018.

The changes in EAC from December to January, for both ARRA and Base, are within reporting thresholds.

FUNDS vs. SPEND FORECAST

(\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	FY2012		
	Projected Funding	Spending Forecast	Spend Variance
ARRA	4.6	4.6	0.0
Base	88.3	84.6	3.7
Total RL-0013	92.9	89.2	3.7

Numbers are rounded to the nearest \$0.1M.

Funds/Variance Analysis

Funding includes FY2011 carryover and FY2012 new Budget Authority.

Critical Path Schedule

Critical path analysis can be provided upon request.

Baseline Change Requests

BCR-R13-12-001R0 – W&FM ARRA Buy-Back

BCRA-PRC-12-005R0 – CEIS and P6 Reconciliation of “Closed” activities to Match Cobra

BCRA-PRC-12-007R0 – January 2012 PMB BCR Log Reconciliation to Cobra

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 PMB Revision 3, implemented in November 2011, and subsequent approved BCRs define CHPRC planning with respect to TPA milestones.

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-091-40U-T01	Retrieve a Minimum of 250 Cubic Meters CH RSW in FY 2012	TPA	9/30/12			Activity currently not funded
M-091-46B-T01	Certify 300 Cubic Meters of Small Container CH TRUM Waste	TPA	9/30/12			Activity currently not funded
C-026-07G	Tritium Treatment Technology Developments to Ecology & EPA	TPA (commitment)	3/31/12		3/31/12	On Schedule

SELF-PERFORMED WORK

The Section H. clause entitled, Self-Performed Work, is addressed in the Monthly Report Overview.

GOVERNMENT FURNISHED SERVICES AND INFORMATION (GFS/I)

Contract Section	Project	GFS/I	Status
CONTRACT			
J.12/C.2.3.6	PBS-13, Transuranic Waste Certification	WIPP provides shipping resources and manages the schedule for transportation of these containers to WIPP. The schedule is variable and the number of shipments is controlled by DOE-HQ on a complex-wide priority. Cost for shipment of TRU waste offsite is borne by the CBFO.	Ongoing (pending restart of WIPP Shipments)