

Section C

Solid Waste Stabilization and Disposition (RL-0013)



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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. Completed disposition of 60.5m³ of ARRA funded mixed and/or low-level waste (M/LLW). Completed three ERDF Roll-Off/Roll-On waste shipments to the Environmental Restoration Disposal Facility (ERDF) from burial ground 12B. Remediated High Contamination Area (HCA) in burial ground 4B to the point of final painting activities. Completed repack of two Hanford Engineering Development Laboratory (HEDL) sludge drums in the Waste Receiving and Processing Facility (WRAP) Transuranic Waste (TRU) Glovebox. Completed compaction efforts for 442 empty parent drums in 221-T Canyon.

Base

The W&FMP continued maintaining facilities in a safe and compliant condition; Canister Storage Building (CSB) completed 5-year fire water storage tank inspection, the Multi-Canister Overpack (MCO) H-172 gas sample, and the quarterly MCO Handling Machine (MHM) interlock channel tests. Shipped 27 TRU-Project dropout M/LLW waste packages from the CWC to Perma-Fix Northwest (PFNW) for final disposition. Liquid Effluent Facilities (LEF) received Environmental Restoration Disposal Facility (ERDF) leachate (111K gallons) at Liquid Effluent Retention Facility (LERF) Basin 44 (CY 1.8M gallons) and treated effluent to State-Approved Land Disposal Site 1M gallons (CY 17M). The 200A Treated Effluent Disposal Facility (TEDF) discharged 973k gallons (CY 13M). Completed W&FMP FY 2013-FY2018 Performance Measurement Baseline (PMB) submittal.

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	12	N/A
First Aid Cases	1	93	Base - 11/17/11 - Employee was getting out of personal vehicle and slipped on icy surface. Body part affected: back. (22521)
Near Misses	0	0	N/A

KEY ACCOMPLISHMENTS

ARRA

13.04 MLLW Treatment

- Completed disposition of 60.5m³ of ARRA funded mixed and/or low-level waste (M/LLW)

13.05 TRU Retrieval

• TRU Retrieval Layup Activities

- Completed three ERDF Roll-Off/Roll-On waste shipments to the Environmental Restoration Disposal Facility (ERDF) from burial ground 12B.
- Remediated High Contamination Area (HCA) in burial ground 4B to the point of final painting activities.
- Continued survey and removal of the rental equipment (generators and light plants) from 3A, 4B, 4C, and 12B.
- Initiated 12B Real Time Radiography (RTR) disassembly and shipment preparations. Shipments to be completed 12/16/11.

13.06 TRU Repackaging

• WRAP Layup Activities

- Continuing 2404WB Decontamination work.
- Completed repack of two Hanford Engineering Development Laboratory (HEDL) sludge drums in Transuranic Waste (TRU) Glovebox.
- Retained Nuclear Chemical Operator (NCO)/Radiological Control Technician (RCT) Resources continue to support multiple layup activities (including T Plant and the Low-Level Burial Ground (LLBG)).

• T-Plant Layup Activities

- Completed compaction efforts for 442 empty parent drums in 221-T Canyon.
- Continuing Pacific Northwest National Laboratory (PNNL) Assay of 256 100-gal suspect TRU compacted (“puck”) drums.

Base

13.01 Project Management

- Completed W&FMP FY 2013-FY 2018 Performance Measurement Baseline (PMB) submittal
- Continued Project Management support for high priority projects

13.02 Capsule Storage & Disposition

- Waste Encapsulation & Storage Facility (WESF)
 - Installed hose reel to wagon in support of 282B sampling
 - Performed beryllium sampling on the electrical switchgear (awaiting results)
 - Replaced block heaters on 225B-DG-1 (cold weather protection)
 - Completed 225BG yearly lube and inspection
 - Completed 21 ‘fix-it-now’ items

13.03 Canister Storage Building (CSB)

- Continued Security Mobile Office 155 utilities tie-in (construction)
- Completed tire replacement on cask transporters
- Completed Building 2701HV propane generator repair

- Completed 5-year fire water storage tank inspection
- Completed Multi-Canister Overpack (MCO) H-172 gas sample
- Completed quarterly MCO Handling Machine (MHM) interlock channel tests
- Completed annual uninterruptable power supply maintenance

13.07 WRAP

- Maintained the facility in a safe and compliant condition

13.08 T-Plant

- Maintained the facility in a safe and compliant condition

13.09 Central Waste Complex (CWC)

- Shipped 27 TRU-Project dropout M/LLW waste packages from the CWC to Perma-Fix Northwest (PFNW) for final disposition.
- Received 28 SWBs and 24 drums of transuranic waste
- Received 7 shipments of M/LLW in to the Mixed Waste Disposal Units (total of 16 waste packages).

13.11 Liquid Effluent Facilities (LEF)

- Received 4 tankers (calendar year [CY] 484k gallons)
- Treated effluent to State-Approved Land Disposal Site: 1M gallons (CY 17M)
- 200A Treated Effluent Disposal Facility (TEDF) discharged 973k gallons (CY 13M)
- Received Environmental Restoration Disposal Facility (ERDF) leachate (111k gallons) at Liquid Effluent Retention Facility (LERF) Basin 44 (CY 1.8M)
- Continued operating the 310 Retention Transfer System (RTS): 24 batches; CY 777k gallons
- Shipped 40 powder drums from Basin 44 to ERDF
- Received tanker of 50% sodium hydroxide
- Maintenance activities:
 - Continued repairs to the Basin 43 recirculation line
 - Repaired motor operated valve at load-in station
 - Repaired vessel off-gas blower
 - Initiated preparations to relocate the respirator mask station
 - Replaced groundwater transfer line isolation and relief valve on Manhole #7
 - Placed Secondary Waste Retrieval Tank A pump into service
 - Completed annual roll-up door inspection
 - Completed preventive maintenance on dilute chemical feed pumps

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

13.21 Mixed Waste Disposal Trenches







- Maintained the facility in a safe and compliant condition









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			Risk is very unlikely.
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	Risks accepted without mitigation			Risks are unlikely.

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	(1.1)	0.7	0.8	1.8	168.2%	(0.1)	-14.6%
TRU Waste	<u>0.7</u>	<u>0.8</u>	<u>0.9</u>	<u>0.1</u>	18.8%	<u>(0.1)</u>	-11.5%
ARRA Total	-0.4	1.6	1.8	2.0	502%	(0.2)	-13.0%
Base	<u>6.1</u>	<u>6.2</u>	<u>5.4</u>	<u>0.04</u>	0.7%	<u>0.8</u>	12.4%
Total	5.7	7.7	7.2	2.0	34.8%	0.6	7.3%

Numbers are rounded to the nearest \$0.1M

ARRA

Current Month (CM) Schedule Performance (+\$2.0M/+502.2%)

RL-0013 MLLW Treatment / RL-0013 TRU Waste – The positive variance is primarily due to the implementation of the Rev 3 PMB which rephased MLLW treatment of TRU Retrieval dropouts (to out years), coupled with schedule recovery for TRU Retrieval Layup.

CM Cost Performance (-\$0.2M/-13.0%)

RL-0013 MLLW Treatment / RL-0013 TRU Waste – The unfavorable cost variance is primarily due to additional effort required to complete layup activities coupled with start-up anomalies which will require corrections from ARRA to base-funded work scope.

Base

CM Schedule Performance (+\$0.0M/+0.7%)

The positive schedule variance is within threshold.

CM Cost Performance (+\$0.8M/+12.4%)

The positive cost variance is primarily due to a correction in workforce restructuring allocation, resources deferred to higher priority Layup activities and some continued start-up anomalies which will require corrections from ARRA to base-funded work scope.

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	47.3	47.7	42.4	0.4	0.8%	5.2	10.9%
TRU Waste	256.0	255.5	254.7	(0.5)	-0.2%	0.8	0.3%
ARRA Total	303.2	303.1	297.1	(0.1)	-0.0%	6.0	2.0%
Base	<u>325.2</u>	<u>324.5</u>	<u>331.7</u>	<u>(0.7)</u>	<u>-0.2%</u>	<u>(7.1)</u>	<u>-2.2%</u>
Total	628.5	627.7	628.8	(0.8)	-0.1%	(1.2)	-0.2%

Numbers are rounded to the nearest \$0.1M

ARRA

CTD Schedule Performance (-\$0.1M/-0.0%)

RL-0013 MLLW Treatment – The negative CTD schedule variance is within threshold, however early completion of MLLW returns is offset by delays in Layup activities.

CTD Cost Performance (+\$6.0M/+2.0%)

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, decreased operations costs at Low Level Burial Grounds (LLBG), efficiencies in Large Type A waste container shipments to PFNW and in Mixed Waste Disposal Trenches (MWDT) upgrades, 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 (-\$0.7M/-0.2%)

The RL-0013 negative schedule variance is within reporting threshold and 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 (-\$7.1M/-2.2%)

The RL-0013 negative cost variance is due to MSA assessments above plan, TRU Retrieval additional resources to deal with FY09 deteriorated containers and drum wedge issue, FY09 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 October to November 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	86.0	2.3
Total	92.9	90.6	2.3

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-PRC12-001R0, Baseline Rev. 3

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. The following table is a one year look ahead of commitments and TPA enforceable milestones and non-enforceable target due dates.

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-091-40T	Retrieve 2,000 Cubic Meters of CH RSW	TPA	9/30/11		9/30/11	Field work completed 8/10/11. Completion letter issued after 9/30/11.
M-091-46A	Certify 850 Cubic Meters of Small Container CH TRUM Waste	TPA	9/30/11		9/30/11	Field work completed 7/21/11. Completion letter issued after 9/30/11.
M-091-44Z-002	Min. Annual PMM or Qtrly Notification of Cert. of CH/RH TRUM	TPA	12/31/11			On Schedule
C-026-07G	Tritium Treatment Technology Developments to Ecology & EPA	TPA (commitment)	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