

# Section C

## Solid Waste Stabilization and Disposition (RL-0013)



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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. T Plant shipped 160 Low-Level Waste (LLW) puck drums to the Environmental Restoration Disposal Facility (ERDF). The 221-T Canyon entry was sealed closed and all excess waste was removed.

### Base

The W&FMP continued maintaining facilities in a safe and compliant condition. Waste Receiving and Processing Facility (WRAP) completed one Technical Safety Requirement (TSR) surveillance. T Plant completed two TSR surveillances. T Plant also issued and completed a Facility Modification Package (FMP) to repair leaking fire piping. Central Waste Complex (CWC) and Low Level Burial Ground (LLBG) received 4 transuranic waste shipments into CWC, which included the first 2 Standard Large Waste Boxes (SLB2) from PFP. Liquid Effluent Facilities (LEF) received three tankers (calendar year [CY] 15k gallons) and shipped 40 powder drums to the Environmental Restoration Disposal Facility (ERDF). 200A Treated Effluent Disposal Facility (TEDF) discharged 0.66 million gallons (CY 1.66M). At Liquid Effluent Retention Facility (LERF) Basin 44 received 105k gallons of ERDF leachate (CY 429k). Canister Storage Building (CSB) completed motor replacement on exhaust fan EF-001. Waste Encapsulation and Storage Facility (WESF) relocated 245 capsules out of approximately 1,000 as part of thermal balancing the capsule inventory in the pool cells. In addition, WRAP transferred X-Ray tubes from drum Non Destructive Examination (NDE) to vendor for storage.

## 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	4	73	<p>2/1/2012: Employee was closing a gate when the wind caught the gate blowing it into employee and causing employee to fall to the ground. Body part affected: Knee. <b>(22625)</b></p> <p>2/7/2012: Employee was ratcheting down straps on a trailer and felt pain. Body part affected: Shoulder. <b>(22646)</b></p> <p>2/7/2012: Employee was walking, tripped and fell from slight elevation. Body part affected: Knee <b>(22638)</b></p> <p>2/23/2012: Employee slid a piece of plywood to get a box off a shelf. Body part affected: hand <b>(22673)</b></p>
Near Misses	0	1	N/A

## KEY ACCOMPLISHMENTS

### ARRA

#### Lay-Up Activities

- The updated WRAP and the T Plant Transition Plans were approved and released.

### Base

#### 13.01 Project Management

- Continued Project Management support for high priority projects.
- Initiated Business Case Analysis for deinventory of Cat I nuclear material from the Hanford Site in support of reducing site security costs.
- Completed internal review of Chapters 3, 4 and 5 of the Solid Waste operations Complex (SWOC) Master Documented Safety Analysis (MDSA)/Technical Safety Requirements (TSR) Revision 9.

#### 13.02 Capsule Storage & Disposition

- Relocated 245 capsules out of 1098 as part of thermal balancing the capsule inventory in the pool cells.
- Inspected north door (design feature).
- Replaced bearing on supply fan K1.
- Completed annual visual inspection of 225B for degradation.
- Completed Waste Encapsulation and Storage Facility (WESF) Maintenance System training.

**13.03 Canister Storage Building (CSB)**

- Completed 6-month multi-canister overpack (MCO) MCO handling machine (MHM) wire rope inspection.
- Completed quarterly MHM interlock channel tests.
- Completed annual MHM periodic lubrication.
- Completed MHM torque-arm bolt replacement.
- Completed annual demonstrations of MCO handling operations.
- Completed motor replacement on exhaust fan EF-001.
- Completed annual MCO transport cask seal replacements on casks #1 and #3.

**13.07 WRAP**

- Continued repack of last ten containers.
- Completed one Technical Safety Requirement (TSRs).
- Completed 20 Preventive Maintenance (PMs) activities.
- Completed 122 Radiological Operations Surveillances.
- Completed 40 Operational Surveillances.
- Continued floor repairs in 2336W and 2404WB.
- Transferred X-Ray tubes from drum Non Destructive Examination (NDE) to vendor for storage.
- Completed troubleshooting of unexpected voltage issue in Chessel cabinet.

**13.08 T-Plant**

- Maintained the facility in a safe and compliant condition.
- Completed 107 Operational Surveillances for January.
- Issued Facility Modification Package (FMP) and completed repair on leaking fire piping.

**13.09 Central Waste Complex (CWC)**

- Completed 179 Radiological Operations Surveillances.
- Completed 18 Operational Surveillances.
- Received four transuranic (TRU) waste shipments, which included the first two Standard Large Waste Boxes (SLB2) from PFP.
- Shipped five shipments to PFNW which included the 209E BF<sub>3</sub> drum and two Slab Tanks.
- Issued FMP for new air compressor in 2403WA (both riser rooms) and 2403WD (west riser).

**13.11 Liquid Effluent Facilities (LEF)**

- Received three tankers (calendar year [CY] 15k gallons)
- Treated effluent to State-Approved Land Disposal Site: 1.8M gallons (CY 1.8M)
- 200A TEDF discharged 0.66M gallons (CY 1.66M)
- Received ERDF leachate (105k gallons) at LERF Basin 44 (CY 429k)
- Continued operating the 310 Retention Transfer System (RTS): CY 1 batch; 39k gallons
- Shipped 40 powder drums to the ERDF.
- Maintenance activities:
  - Repaired electrical circuits at LERF basins
  - Replaced thin film dryer (TFD) blower (60-F-1)

- Installed pH monitor on Clean-in-Place System
- Replaced isolation valve on TEDF line (TL)-5 manhole
- Replaced two check valves on Hydrogen Peroxide Addition System
- Replaced sample pump (P-19) at waste collection sump
- Replaced failed check valve on sump 1 discharger
- Initiated repairs to TFD mechanical seal and rotor assembly

**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.
- Received six shipments totaling 28 packages (Perma-Fix Northwest and Mission Support Alliance, LLC).

## MAJOR ISSUES

No major issues to report this month.

## RISK MANAGEMENT STATUS

**Unassigned Risk**  
**Risk Passed**  
**New Risk**  
**Change**

 Working - No Concerns  
 Working - Concern  
 Working - Critical

 Increased Confidence  
 No Change  
 Decreased Confidence

Risk Title	Risk Strategy/Handling	Assessment		Comments
		Month	Trend	
<b>RL-013/WBS 013</b>				
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.			Forecasted volumes may not allow commercial capability to remain viable. Working with vendor(s) to understand impacts.
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, However, as capability/capacity has been adjusted to align with projections peak transportation needs are problematic.
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 will document current status.
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.			Unplanned repackaging activities are nearing completion at WRAP. Legacy containers in expansion area are requiring additional resources. The Long-Term Box Storage is not in the contract Statement of Work, and will be addressed as part of the contract alignment process.

<b>WSD-120: WESF Major System/Equipment Failure</b>	Continue with the current maintenance program and aggressive PM and CM program.			No significant maintenance issues this month at WESF.
<b>WSD-132: Aging Building/Systems/Components</b>	Perform critical system reliability assessments, continue with PM/CM program, and procure critical spares.			Continue CM activities for equipment at ETF and 400 Area.
<b>WSD-133: Results of External Audits/Assessments Impact Operations</b>	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 (%)
<b>MLLW Treatment</b>	0.0	0.0	(0.0)	0.0	0.0%	0.0	100%
<b>TRU Waste</b>	0.0	0.0	(1.2)	0.0	0.0%	1.2	100%
<b>TRU Wst Facil Trans MinSafe</b>	<u>0.0</u>	<u>0.0</u>	<u>1.1</u>	<u>0.0</u>	0.0%	<u>(1.1)</u>	100%
<b>ARRA Total</b>	<b>0.0</b>	<b>0.0</b>	<b>(0.0)</b>	<b>0.0</b>	<b>0.0%</b>	<b>0.0</b>	<b>100%</b>
<b>Base</b>	<u>6.6</u>	<u>6.6</u>	<u>6.7</u>	<u>(0.0)</u>	(0.7)%	<u>(0.0)</u>	22.6%
<b>Total</b>	<b>6.6</b>	<b>6.6</b>	<b>6.6</b>	<b>(0.0)</b>	<b>0.5%</b>	<b>0.0</b>	<b>35.5%</b>

Numbers are rounded to the nearest \$0.1M

**ARRA**

**Current Month (CM) Schedule Performance (+\$0.0M/+0.0%)**

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/+0.0%)**

RL-0013 MLLW Treatment / RL-0013 TRU Waste/ RL-0013 TRU Waste Facility Transition to Min Safe  
The favorable cost variance is within threshold and is the result of a cost transfer from ARRA to Base.  
Future labor corrections and projected passbacks are likely to offset this reduction in cost.

**Base**

**CM Schedule Performance (-\$0.0M/-0.0%)**

The unfavorable current period schedule variance is within threshold.

**CM Cost Performance (+\$0.0M/-0.7%)**

The unfavorable cost variance is within threshold.

## 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)%	1.5	0.6%
TRU Wst Facil Tran MinSafe	<u>1.5</u>	<u>1.5</u>	<u>1.1</u>	<u>0.0</u>	0.0%	<u>0.4</u>	23.9%
<b>ARRA Total</b>	<b>304.5</b>	<b>304.5</b>	<b>297.7</b>	<b>(0.0)</b>	<b>(0.0)%</b>	<b>6.9</b>	<b>2.3%</b>
<b>Base</b>	<u>345.2</u>	<u>344.2</u>	<u>350.6</u>	<u>(0.9)</u>	(0.3)%	<u>(6.4)</u>	(1.8)%
<b>Total</b>	<b>649.7</b>	<b>648.7</b>	<b>648.1</b>	<b>(0.9)</b>	<b>(0.1)%</b>	<b>0.5</b>	<b>0.1%</b>

Numbers are rounded to the nearest \$0.1M

### ARRA

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

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

#### CTD Cost Performance (+\$6.9M/+2.3%)

The positive cost variance due to efficiencies in Transuranic Waste (TRU) Characterization and Shipping, TRU Repackaging, T Plant and Waste Receiving and Processing Facility (WRAP), Mixed Low Level Waste (MLLW) efficiencies created by treating waste at Energy Solutions (ES) - Clive rather than planned treatment at Perma-Fix Northwest (PNW) 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 CTD schedule variance is within threshold and is due to Canister Storage Building (CSB), Waste Encapsulation and Storage Facility (WESF), and Effluent Treatment Facility (ETF) activities delayed due to resource availability (assigned to higher priority activities) and a planned deferral of scope to accommodate DOE directed activities.

#### CTD Cost Performance (-\$6.4M/-1.8%)

The unfavorable CTD cost variance is the result of 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 January to February, 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
<b>ARRA</b>	4.6	4.6	0.0
<b>Base</b>	88.3	86.7	1.6
<b>RL-0013 Total</b>	<b>92.9</b>	<b>91.3</b>	<b>1.6</b>

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**

None currently identified.

## 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
<b>M-091-03F</b>	Submit Annual Revision of TRUM and MLLW PMP to Ecology	TPA	6/30/12			On schedule
<b>M-091-40U-T01</b>	Retrieve a minimum of 250 cubic meters of CH RSW in FY 2012	TPA	9/30/12			To be missed. Activity currently not funded. Ltr in draft to DOE-RL.
<b>M-091-46B-T01</b>	Certify 300 cubic meters of small container CH TRUM waste	TPA	9/30/12			To be missed. Activity currently not funded. Ltr in draft to DOE-RL.
<b>M-016-93B</b>	Submit Implementation Workplan To Prepare TRU/TRUM Waste	TPA	12/31/12			On schedule
<b>M-091-44P</b>	Designate all RH TRUM Waste & Lrg Containers of CH TRUM Waste	TPA	12/31/12			Ahead of schedule
<b>M-091-44Z-003</b>	Annual PMM or Qtrly Notification of Cert of CH/RH TRUM	TPA	12/31/12			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
<b>CONTRACT</b>			
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)