

# Section C

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



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**Services (DWF&RS)**

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**CHPRC-2012-04, Rev. 0**  
**Contract DE-AC06-08RL14788**  
**Deliverable C.3.1.3.1 - 1**

## PROJECT SUMMARY

### American Recovery and Reinvestment Act (ARRA)

Project layup activities were completed.

### Base

The W&FMP continued maintaining facilities in a safe and compliant condition. Waste Receiving and Processing Facility (WRAP) continued final repacking operations of nine drums. T Plant completed the three month combustible surveillance, by Facility and Fire Protection Engineer. T Plant also completed one year calibration on the Atmosphere Clean-up Train (ACT) 1 & 2 High-efficiency Particulate Air (HEPA) filter system of 2706T facilities. Central Waste Complex (CWC) and Low Level Burial Ground (LLBG) received nine shipments consisting of 67 Transuranic mixed-waste packages totaling 61.7 cubic meters from the Plutonium Finishing Plant, 209E (via Perma-Fix Northwest (PFNW)), and Washington Closure Hanford (via PFNW). Liquid Effluent Facilities (LEF) received 13 tankers (calendar year [CY] 60k gallons). 200A Treated Effluent Disposal Facility (TEDF) discharged 1.7 million gallons (CY 5.1M). Liquid Effluent Retention Facility (LERF) Basin 44 received 189k gallons of ERDF leachate (CY 841k). Canister Storage Building (CSB) loaded cold multi-canister overpack (MCO) H-170 into cask and staged for shipment to K Basin. Waste Encapsulation and Storage Facility (WESF) relocated 182 capsules out of 998 (521 to date) as part of thermal balancing the capsule inventory in the pool cells.

### 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	50% complete, plans to address in July 2012.

### TARGET ZERO PERFORMANCE

	CM Quantity	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	4	N/A
Total Recordable Injuries	0	10	N/A
First Aid Cases	1	63	<b>4/12/2012</b> - Employee was crossing RBA chain and rolled ankle. Body part affected: ankle. <b>(22732)</b>
Near Misses	0	1	N/A

## KEY ACCOMPLISHMENTS

### ARRA

#### Lay-Up Activities

- No American Recovery and Reinvestment Act (ARRA) funded M/LLW was received during April 2012, final returns due in May.

### Base

#### 13.01 Project Management

- Continued Project Management support for high priority projects.
- Completed Business Case Analysis for deinventory of Cat I nuclear material from the Hanford Site in support of reducing site security costs.

#### 13.02 Capsule Storage & Disposition

- Completed 182 of 998 scheduled capsule moves (521 to date)
- Completed annual calibrations and tests on the following:
  - Record sampler/beta monitor
  - Beta stack flow instrument
  - Beta stack continuous air monitor
  - Radiation indicating transmitter (RIT) and radiation element (RE) (tested and returned to service)
  - Generator 225BG load test
  - Pool cell sump leak detectors
  - Differential pressure (DP) transmitter K1-3/K1-4 and DP indicator (DPI) K1 filter
  - K3 exhaust duct DP recorder
  - DPI K2-12
- Completed repair/replacement on the following deficiency equipment and components:
  - Area Radiation Monitor #1
  - K2 bag filter door latch
  - Air Compressor #5 relief valve
  - K3-7-1 belts and sheaves; fan placed in service
  - DPI Recorder-4W chart drive
- Completed summerization activities

#### 13.03 Canister Storage Building (CSB)

- Received legacy fuel multi-canister overpack (MCO) from Cold Vacuum Drying Facility (CVDF)
- Completed annual inspection of the heating, ventilation and air conditioning (HVAC) service area and operating area duct heater
- Completed 6 month MCO Handling Machine (MHM) high efficiency particulate (HVAC) air filter aerosol testing
- Loaded cold MCO H-170 into cask and staged for shipment to K Basins
- Implemented *Evaluation of Safety of the Situation* related to CVDF proof of dryness test
- Completed quarterly stack monitoring inspections

**WRAP**

- Completed one Technical Safety Requirement (TSRs) surveillances
- Completed 14 Preventive Maintenance (PMs) packages
- Completed 129 Rad Operational Surveillances
- Completed 155 Operational Surveillances
- Shipped one low-level waste package to the Environmental Restoration Disposal Facility (ERDF)

**13.07 T-Plant**

- Completed nine Technical Safety Requirement (TSRs) surveillances
- Completed 28 Preventive Maintenance (PMs) packages
- Completed 290 Rad Operational Surveillances
- Completed 196 Operational Surveillances

**13.09 Central Waste Complex (CWC)**

- Completed seven Technical Safety Requirement (TSRs) surveillances
- Completed 21 Preventive Maintenance (PMs) packages
- Completed 178 Rad Operational Surveillances
- Completed 63 Operational Surveillances
- Commenced carport assembly to cover Box 231ZDR-11
- Commenced moving 7 boxes near 231ZD-11 in order to remediate radiological contaminated soil

**13.11 Liquid Effluent Facilities (LEF)**

- Received 13 tankers (calendar year [CY] 60k gallons)
- Treated effluent to State-Approved Land Disposal Site: 3.3M gallons (CY 5.1M)
- 200A Treated Effluent Disposal Facility (TEDF) discharged 1.7M gallons (CY 5.1M)
- Received Environmental Restoration Disposal Facility (ERDF) leachate (189k gallons) at Liquid Effluent Retention Facility (LERF) Basin 44 (CY 814k )
- Continued operating the 310 Retention Transfer System (RTS): CY 67k gallons
- Completed cleaning of residual powder off Thin Film Dryer lift table lower assembly
- Received and unloaded tanker of 50% sodium hydroxide
- Unloaded 1,000 gallons of 93% sulfuric acid
- Maintenance activities:
  - Repaired 4% sodium hydroxide line to the secondary waste retrieval tank
  - Completed annual Drum Handling System inside airlock preventive maintenance (PM)
  - Completed Air Handling Units EVU-8, 9, and 10 repairs and annual PM
  - Completed annual Department of Transportation inspections for 3 Polar and 2 Beall tankers
  - Repaired Sump Tank #1 check valve 20B-001
  - Replaced heater on ModuTank backflow preventer enclosure

**13.12 Integrated Disposal Facility**

- Completed 12 Preventive Maintenance (PMs) packages
- Completed 18 Operational Surveillances

**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.
- Completed 22 Radiological and four operational surveillances.

Received 6 shipments consisting of 10 M/LLW packages totaling 31.4 cubic meters from PFNW and originated from Washington River Protection Solutions (WRPS), Pacific Northwest National Laboratory (PNNL) and CH2M Hill Plateau Remediation Company (CHPRC) waste generators

**MAJOR ISSUES**

At CWC an employee issued a stop work on the operation of the local fan disconnects on all of the 2402 series buildings due to disconnects being clogged with sand and dirt. Completed replacement/cleaning of disconnects on 13 buildings April 26, 2012. Stop work was lifted with concurrence of employee.





**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.
WSD-120: WESF Major System/Equipment Failure	Continue with the current maintenance program and aggressive PM and CM program.			No significant maintenance issues this month at WESF.
WSD-132: Aging Building/Systems/Components	Perform critical system reliability assessments, continue with PM/CM program, and procure critical spares.			Continue CM activities for equipment at ETF and 400 Area.

WSD-133: 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.			On-Schedule with completion of the WESF Corrective Action Plan developed in response to the DNFSB audit from June 2011. No change in trend.
<b>PRC-021A: Workforce Restructuring Caused by Funding Changes</b>	Revise project schedules and work planning documents around workforce restructuring timelines. Work with other contractors to minimize impacts associated with Bump and Roll.			Based on FY-13 funding projections, CHPRC is initiating a workforce restructuring act.

## 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	0.0	0.0	(0.0)	0.0	0.0%	0.0	0.0%
TRU Wst Facil Trans MinSafe	<u>0.0</u>	<u>0.0</u>	<u>0.1</u>	<u>0.0</u>	0.0%	<u>(0.1)</u>	0.0%
<b>ARRA Total</b>	<b>0.0</b>	<b>0.0</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0%</b>	<b>(0.1)</b>	<b>0.0%</b>
Base	<u>6.6</u>	<u>6.9</u>	<u>5.9</u>	<u>0.3</u>	4.0%	<u>1.0</u>	14.5%
<b>Total</b>	<b>6.6</b>	<b>6.9</b>	<b>6.0</b>	<b>0.3</b>	<b>4.0%</b>	<b>0.9</b>	<b>13.4%</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 schedule variance is within threshold.

##### CM Cost Performance (-\$0.1M/-0.0%)

RL-0013 MLLW Treatment / RL-0013 TRU Waste/ RL-0013 TRU Waste Facility Transition to Min Safe  
The unfavorable cost variance is within threshold.

#### Base

##### CM Schedule Performance (+\$0.3M/+4.0%)

The favorable current period schedule variance is within threshold.

##### CM Cost Performance (+\$1.0M/+14.5%)

The favorable cost variance is primarily due to a contract accrual reversal (Retrieval contract claim was rejected), inventory adjustments, and schedule recovery in ETF without commensurate use of resources.

## 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	(8.4)	(0.0)%	5.0	10.5%
TRU Waste	255.3	255.3	253.6	(0.0)	(0.0)%	1.7	0.7%
TRU Wst Facil Tran MinSafe	<u>1.5</u>	<u>1.5</u>	<u>1.4</u>	<u>0.0</u>	0.0%	<u>0.1</u>	7.0%
ARRA Total	<b>304.5</b>	<b>304.5</b>	<b>297.7</b>	<b>(8.4)</b>	<b>(0.0)%</b>	<b>6.8</b>	<b>2.2%</b>
Base	<u>360.2</u>	<u>359.6</u>	<u>364.9</u>	<u>(0.6)</u>	(0.2)%	<u>(5.3)</u>	(1.5)%
<b>Total</b>	<b>664.7</b>	<b>664.2</b>	<b>662.8</b>	<b>(0.6)</b>	<b>(0.1)%</b>	<b>1.5</b>	<b>0.2%</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 (+\$6.8M/+2.2%)

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 (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 (-\$0.6M/-0.2%)

The negative CTD schedule variance is within threshold and is due to Canister Storage Building (CSB) and Effluent Treatment Facility (ETF) activities delayed due to resource availability (assigned to higher priority activities).

#### CTD Cost Performance (-\$5.3M/-1.5%)

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 March to April, 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	84.3	4.0
<b>RL-0013 Total</b>	<b>92.9</b>	<b>88.9</b>	<b>4.0</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**

BCR-PRC-12-001R1 – *Contract Modification 220*

BCRA-PRC-12-014R0 - *Decommissioning, Waste, Fuels and Remediation Services - FOC Changes*



## 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)