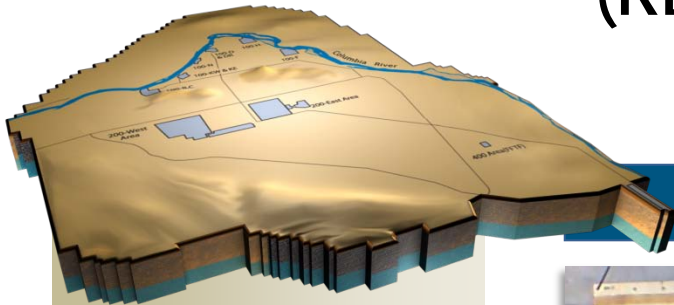


Section C

Solid Waste Stabilization and Disposition (RL-0013)



Monthly Performance Report

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Vice President and
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Waste and Fuels
Management Project



**Large TRUM
Waste FRP
Being Cut Open
at PFNW**

**Loading MLLW
and TRUM Waste
for Disposition**



August 2011
CHPRC-2011-08, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1



**Boxes Removed
from 12B Trench 17**

PROJECT SUMMARY

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

American Recovery and Reinvestment Act (ARRA)

Work is nearing completion on a “middle-ware” utility to provide an accessible, user friendly and comprehensive interface for waste inventory, forecast, and reporting data. The product is currently in test and will be transferred to production in September. Completed the Key Performance Parameter (KPP) to ship 1,800 cubic meters (m³) of Mixed/Low Level Waste (MLLW) to a treatment facility. M-91-42 /435.1– shipped 107 cubic meters (m³) to processing, (1,390) m³ total under ARRA) and completed 59 m³ during the month (1,159) m³ total under ARRA); M-91-43 – shipped 53 m³ to processing (588 m³ total under ARRA) and completed 127 m³ during the month (443 m³ total under ARRA).

Transuranic (TRU) Retrieval removed 153 m³ of contact handled (CH) TRU waste from the trenches and shipped 191 m³ of CH TRU waste to a Treatment, Storage, and Disposal facility (2,164 m³ total under ARRA). Next Generation Retrieval (NGR) removed 233 drums (48.5 m³); completed assay of 263 drums (Gamma Assay), 47 drum (Passive/ Active Neutron [PAN] Assay System), vented 44 TRU drums, and x-rayed 43 drums in the Real-Time-Radiography (RTR) System.

Base

The W&FMP continued maintaining facilities in a safe and compliant condition; Canister Storage Building (CSB) completed annual Multi-Canister Overpack Handling Machine (MHM) interlock calibration and functional check .

The Central Waste Complex (CWC) completed three on-site shipments/transfers, 19 containers; and received 109 shipments/transfers, 1417 containers.

Liquid Effluent Facilities 200A Treated Effluent Disposal Facility (TEDF) discharged 1.5M gallons (CY 10M) and received Environmental Restoration Disposal Facility (ERDF) leachate (213k gallons) at Liquid Effluent Retention Facility (LERF) Basin 44 (CY 1.3M gallons).

EMS Objectives and Target Status

Objective #	Objective	Target	Due Date	Status
09-EMS-WFM-OB1-T1	Reduce the potential for releases from TRU Retrieval Waste repackaging activities in the low-level burial ground.	Implement a point-of-generation approach to waste management that minimizes the transport and handling of wastes.	10/1/2011	On schedule
		No exceedances of permit conditions. Participate in readiness assessment and establish process to confirm permit levels have been met.	9/30/2010	Complete
10-EMS-WFM-OB2-T1	Reduce the levels of air pollution and increase the energy efficiency of Waste Encapsulation and Storage Facility (WESF) Plant heating and cooling operations.	Eliminate the use of the refrigerant R22.	2/26/2010	Complete
		Inactivate the fuel oil fired steam plant and replace with heat recovery chiller and electrical resistance heaters.	2/26/2010	Complete
10-EMS-WFM-OB3-T1	Reduce the generation of waste through implementation of pollution prevention practices.	Conduct a pollution prevention assessment of waste packaging and other operations at T-Plant to identify waste minimization opportunities.	9/30/2010	Complete

TARGET ZERO PERFORMANCE

	Current Month	Rolling 12 Month	Comment
Days Away, Restricted or Transferred	0	7	
Total Recordable Injuries	0	14	
First Aid Cases	18	104	<p>08/01 - Employee noticed a black spot and swelling on thumb from unknown cause. Diagnosed with an infection. (22191)</p> <p>08/02 - Employee was trying to sit in chair when it moved unexpectedly. Diagnosed with cervical pain. (22182)</p> <p>08/10 - Employee received insect bite/sting. (22211)</p> <p>08/10 - Employee was driving Gator and hit cement marker. Diagnosed with contusion to thumb. (22209)</p> <p>08/10 - Employee was moving drums. Diagnosed with shoulder strain. (22214)</p> <p>08/10 - Employee felt something in eye. Diagnosed with eye irritation. (22242)</p> <p>08/11 - Employee noticed pain in elbow after working on compacter. Diagnosed with bursitis. (22216)</p> <p>08/12 - Employee bumped head on bolt. Diagnosed with scalp laceration. (22219)</p> <p>08/12 - Employee got dizzy during PFT test at CSC. (22218)</p> <p>08/22 - Employee was moving drums on a pallet. Diagnosed with shoulder AC joint separation. (22246)</p> <p>08/22 - Employee was doing drum prep. Diagnosed with hip/knee pain. (22248)</p> <p>08/24 - Employee felt pain in leg when lifting to go over a boundary. Diagnosed with hip pain. (22268)</p> <p>08/24 - Employee stepped on nail. Diagnosed with abrasion. (22269)</p> <p>08/24 - Employee struck elbow on door frame. Diagnosed with elbow contusion. (22271)</p> <p>08/25 - Employee received insect bite/sting. (22281)</p> <p>08/29 - Employee was tightening straps on a flatbed and caught thumb between strap and frame. Diagnosed with pain/strain to thumb. (22322)</p> <p>08/29 - Employee received insect bite/sting. (22334)</p> <p>08/30 - Employee walking on uneven ground. Diagnosed with knee strain. (22309)</p>
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

ARRA

13.01 Project Management

- Continued Project Management support for high priority projects
- Continued work on a “middle-ware” utility to provide an accessible, user friendly, comprehensive interface for waste inventory, forecast and reporting data. Product is currently in test and will be put into production in September.

13.04 MLLW Treatment

- Completed the KPP to ship 1,800 m³ Legacy M/LLW to a treatment facility:
 - To date - 1,978m³ (KPP field work completed 7/21/11)
- M-91-42/435.1 MLLW:
 - Shipped 107 m³ to processing (1,390 m³ total under ARRA)
 - Completed 59 m³ (1,159 m³ total under ARRA)
- M-91-43 MLLW:
 - Shipped 53 m³ to processing (701 m³ total under ARRA)
 - Completed 127 m³ (443 m³ total under ARRA)
- TRU Retrieval Support
 - Shipped the largest MLLW fiberglass-reinforced plywood (FRP) box totaling 64.5 m³ from the Waste Retrieval Project (WRP) to Perma-Fix Northwest (PFNW)
 - Completed ten (10) shipments of retrieved MLLW out of the 12B location to PFNW for treatment. To date, a total of 104 m³

13.05 TRU Retrieval

- CH-TRU Retrieval Volumes
 - Removed 153 m³ CH-TRU waste from trenches – 2,424 m³ removed to date under ARRA
 - Shipped 191 m³ CH-TRU waste (shipped to Treatment, Storage, Disposal Facility) – 2,164 m³ retrieved under ARRA to date
- TRU Retrieval Activities
 - Removed last two waste containers (61.7 m³) from 4B Trench 11
 - Performed Portable Assay of 267 4B Trench seven drums
 - Received Industrial Packages 1 (IP-1) container and forklift pockets for shipping large 4B Trench 11 container to Central Waste Complex (CWC) and long-term storage
 - Completed sixteen 4B Trench 11 shipments: 13 containers (68.0 m³) to CWC; 19 containers (17.4 m³) to Perma-Fix Northwest (PFNW)
 - Removed 173 drums (36.0 m³) from 4B Trench 7; overpacked 163 drums into 85-gal drums
- Point-of-Generation TRUM Repackaging
 - Shipped 205 m³ from LLBG 3A to PFNW for repackaging (151 m³ total completed to date)
- Next Generation Retrieval Activities
 - Removed 233 drums from 12B Trenches 17 and 27(48.5 m³)
 - Shipped 414 drums to PFNW and 95 drums to CWS (106.1 m³)
 - Completed assay of 263 drums (Gamma Assay), 47 drum (PAN)

- Vented 44 drums assaying TRU and x-rayed 47 drums in the Real-Time-Radiography System

13.06 TRU Repackaging

- T- Plant Repack
 - Processed 52 parent drums and created 113 offspring drums
 - Generated one drum from glovebag change out
 - Compacted 121 empty 216-Z-9 drums
 - Completed venting of 216-Z-9 drums

13.07 WRAP

- Nondestructive examination (NDE)
 - 80 drums (80 for Central Characterization Project [CCP])
 - 48 standard waste boxes (SWBs) (22 for CCP)
- Nondestructive Assay (NDA):
 - 112 drums (100 for CCP)
 - 49 SWBs (48 for CCP)
- Flammable gas analysis sampling
 - 140 drums
 - 38 SWBs
- Received 39 TRU drums and nine standard waste boxes (SWB) from Plutonium Finishing Plant
- WRAP Layup/De-inventory Program
 - Transferred 787 drums and 19 SWBs, which included all Special Nuclear Material (SNM) from WRAP to CWC
- Successfully passed the annual Fire Marshal's Ignitable Waste Inspection
- CCP received certification letter for SuperHENC and High Energy-Real Time Radiography (HE-RTR)
- Working toward support of River Corridor Project 618-10 Burial Grounds in FY12 using HE-RTR

13.08 T-Plant

- Shipped 110 containers from T Plant
- Continued de-inventory of completed repacked drums
 - 85 & 55 gallon drums not needed to complete TPA milestone to prepare for FY12 Minimum Safe at T Plant

13.15 TRU Disposition

- Shipments to the Waste Isolation Pilot Project (WIPP): Current Month total – 10, total WIPP shipments to date – 209

Base

13.02 Capsule Storage & Disposition

- Waste Encapsulation and Storage Facility
 - Supported DNFSB review
 - Repackaged recycle materials for shipment/disposal

13.03 Canister Storage Building

- Completed annual Multi-Canister Overpack (MCO) Handling Machine (MHM) annual MHM interlock calibration and functional check
- Completed annual MHM interlock calibration and functional check load cell calibration
- Completed semi-annual sample/weld station air handler high efficiency particulate air (HEPA) filter test
- Completed annual sample hood HEPA test

13.07 WRAP

- Maintained the facility in a safe and compliant condition

13.09 Central Waste Complex (CWC)

- Shipped three on-site transfers, 19 containers
- Shipped three offsite shipments, 73 containers
- Received 109 on-site transfers, 1417 containers
- Received nine offsite shipments, 93 containers
- Installation of replacement Fire Systems compressors in the Central Waste Complex 2403 buildings continues
 - Phase 4, Fire Systems Maintenance install and test new equipment scheduled for completion by 9/30/11
- Completed 10 transfer shipments of 11 containers from 4B grounds in support of Waste Retrieval Projects.
- Roof repairs are complete on 2404WA and 2403 WA and 2403WC is 90% complete. Expected completion for 2403WB is 9/9/11.
- CWC received and staged the D-10 tank from U plant on 8/10/11 and off loaded the tank on 8/17/11

13.11 Liquid Effluent Facilities (LEF)

- Received six tankers (426K gallons)
- 200A Treated Effluent Disposal Facility discharged 1.5M gallons
- Received Environmental Restoration Disposal Facility (ERDF) leachate (231K gallons) at Liquid Effluent Retention Facility Basin 44
- Continued operating the 310 Area Retention Transfer System (19 batches/605K gallons)
- Received 40 drums of Waste Sampling and Characterization Facility wastewater

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

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	
WSD-007: TRU Retrieval Complexities	Accelerate "next generation" retrieval	●	↔	Significant container degradation encountered; Draw down of available MR complete. ARRA Retrieval is expected to complete on schedule.
WSD-008: Classified Waste Storage Limitations	Implement mobile shredding; evaluate establishing secure storage at CWC or other location	●	↔	Questionable mobile shredding feasibility, working with NNSA to define path forward
WSD-013A: TRU Waste Volumes or Characteristics - Retrieval	Implement in-trench assaying as part of Next Generation retrieval and explore stabilization techniques	●	↔	Encountering issues regarding unexpected waste characteristics; Implementing Trench Face Retrieval and Characterization capabilities implemented.
WSD-013B: TRU Waste Volumes or Characteristics - Processing	Use ARRA funds to add additional process lines	●	↔	No issues regarding unexpected waste volumes or characteristics experienced to date
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 greater than projected due to ARRA work acceleration. Post ARRA volumes drop sharply
WSD-043: Orphan Wastes	Obtain regulatory relief for "no path forward" wastes	●	↔	Working to identify treatment options for all waste currently in storage. Issued "No Path Forward" waste and German log alternatives analysis. Annual update of M-91 PMP will documented current status.

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	1.4	1.9	1.2	0.5	39.5	0.7	35.3
TRU Waste	14.4	19.9	8.8	5.5	38.1	11.1	55.6
ARRA Total	15.8	21.8	10.1	6.0	38.2	11.8	53.9
Base	(3.1)	(0.8)	6.4	2.3	-74.8	(7.2)	920.5
Total	12.7	21.0	16.5	8.3	4.6	65.7	21.8

Numbers are rounded to the nearest \$0.1M

ARRA

Current Month (CM) Schedule Performance (+\$6.0M/+38.2%)

RL-0013 MLLW Treatment – The positive variance is due to schedule recovery for M-91-43 and M-91-42 waste, partially offset by 435.1 waste processing achieved in prior period.

RL-0013 TRU Waste – The positive variance is due to implementation of a baseline change which deferred T-Plant Repack line, RH/Large Package Commercial Repack, WRAP Repack, TRU Characterization and Shipping to accommodate layup activities in preparation for FY12 funding levels, partially offset by TRU waste shipments to PFNW completed in prior period, coupled with delay in TRU layup activities due to focus on ARRA KPP goals.

CM Cost Performance (+\$11.8M/+53.9%)

RL-0013 MLLW Treatment – The positive variance is due to schedule recovery for M-91-43 without commensurate costs, coupled with delay in receipt of costs for M-91-42 completions.

RL-0013 TRU Waste – The positive variance is due to transfer of CWC Base and Min Safe Operations from BASE to ARRA without associated costs (cost transfers in process), implementation of baseline change for T-Plant Repack, WRAP Repack and TRU Characterization and Shipping to accommodate layup activities in preparation for FY 12 funding levels without commensurate cost, coupled with delay in receipt of costs for repack layup activities, reduced labor rates due to a distribution of labor adder reductions.

Base

CM Schedule Performance (+\$2.3M/-74.8%)

The positive variance is due to implementation of a baseline change which deferred WESF Upgrades in preparation for FY12 funding levels.

CM Cost Performance (-\$7.2M/+920.5%)

The negative variance is due to transfer of CWC Base and Min Safe Operations from BASE to ARRA without associated costs (cost transfers in process), increased assessments and higher G&A than planned.

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 (%)	Budget at Completion (BAC)	Estimate at Completion (EAC)	Variance at Completion (VAC)
MLLW Treatment	45.6	43.6	38.8	(2.1)	-4.5	4.8	9.9	50.1	45.6	4.5
TRU Waste	<u>233.1</u>	<u>235.5</u>	<u>226.6</u>	<u>2.4</u>	1.0	<u>8.9</u>	3.8	<u>255.5</u>	<u>244.0</u>	<u>11.5</u>
ARRA Total	278.7	279.1	265.4	0.4	0.1	13.7	4.9	305.6	289.6	15.9
Base	<u>295.3</u>	<u>295.0</u>	<u>311.7</u>	<u>(0.3)</u>	-0.1	<u>(16.7)</u>	-5.7	<u>1,597.4</u>	<u>1,607.4</u>	<u>(10.0)</u>
Total	574.0	574.1	577.1	0.06	0.0	(3.0)	-0.5	1902.9	1904.4	(1.4)

Numbers are rounded to the nearest \$0.1M

ARRA

CTD Schedule Performance (+\$0.4M/+0.1%)

RL-0013 MLLW Treatment – The negative variance is due to delay in receipt of M-91-42 feed from TRU Retrieval, partially offset by accelerated shipments of 435.1 and M-91-43 waste.

RL-0013 TRU Waste – The positive variance is due to a baseline adjustment which deferred RH/ Large Package Commercial Repack, T-Plant Repack line, WRAP Repack, and TRU Characterization and Shipping to accommodate layup activities in preparation for FY12 funding levels, coupled with TRU Retrieval accelerated Point of Generation (POG) commercial processing, partially offset by delay of TRU Retrieval layup activities due to focus on ARRA KPP goals.

CTD Cost Performance (+\$13.7M/+4.9%)

RL-0013 MLLW Treatment – The positive variance is due to Mixed Low Level Waste costs below plan due to efficiencies created by treating waste at Energy Solutions (ES) - Clive rather than planned treatment at PermaFix Northwest (PFNW) due to a waiver received from the Department of Energy (DOE), 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 higher costs for ETF Containment Berm repairs.

RL-0013 – TRU Waste – The positive cost variance due to efficiencies in TRU Characterization and Shipping, CWC (scope moved from BASE to ARRA without associated costs - cost transfers in process), TRU Repackaging, T-Plant and WRAP, partially offset by increased materials and labor costs in support of the Trench Face Retrieval and Characterization System (TFRCS), coupled with increased resources for TRU Retrieval deteriorated waste containers.

Base

CTD Schedule Performance (-\$0.3M/-0.1%)

Within Threshold - The negative variance is due to Canister Storage Building (CSB) engineering activities delayed due to resource availability (assigned to higher priority activities); partially offset by accelerated WRAP high-efficiency particulate air (HEPA) filter replacement (scheduled for FY13).

CTD Cost Performance (-\$16.7M/-5.7%)

Increased assessments above plan, transfer of CWC Base and Min Safe Operations from BASE to ARRA without associated costs (cost transfers in process), TRU Retrieval additional resources to deal with 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, Mixed Waste Disposal Trenches (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 July to August, for both ARRA and Base, are within reporting thresholds.

FUNDS vs. SPEND FORECAST

(\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	FY2011		
	Projected Funding	Spending Forecast	Spend Variance
ARRA	162.5	147.7	14.8
Base	85.6	86.8	-1.2

Numbers are rounded to the nearest \$0.1M.

Funds/Variance Analysis

Funding includes FY2010 carryover and FY2011 new Budget Authority.

Critical Path Schedule

Critical path analysis can be provided upon request.

Baseline Change Requests

BCR-PRC-11-039R0, FY2012 Annual PMB Update

BCR-PRC-11-040R0, Workforce Restructuring per HQ Guidance

MILESTONE STATUS

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 PRC FY2012 Annual PMB Update, implemented in August 2011, and subsequent approved BCRs define CHPRC planning with respect to TPA milestones. The following table is a one year look ahead of key milestones.

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	On Schedule
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
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