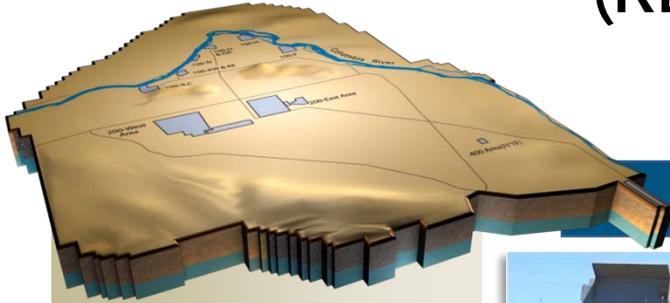


Section C

Solid Waste Stabilization and Disposition (RL-0013)



Monthly Performance Report

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



**Paving the
Route 2
South Curve**

**3A Trench 17 Box
20 Loading for
Shipment in Super
7A to PFNW**



June 2011
CHPRC-2011-06, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1



**Excavation and
Removal of 4B
Trench 11 Large
Concrete Box**

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. Mixed/Low Level Waste (MLLW): M-91-42 /435.1– shipped 63 cubic meters (m³) to processing, (1,235) m³ total under ARRA) and completed 31 m³ during the month (1,070) m³ total under ARRA); M-91-43 – shipped 112 m³ to processing (498 m³ total under ARRA) and completed 54 m³ during the month (195 m³ total under ARRA).

Transuranic (TRU) Retrieval removed 237 m³ of contact handled (CH) TRU waste from the trenches and shipped 439 m³ of CH TRU waste to a Treatment, Storage, and Disposal facility (1554 m³ total under ARRA). Next Generation Retrieval (NGR) removed 501 drums and one carton (104.7 m³); completed assay of 201 drums (Gamma Assay), seven drum (Passive/ Active Neutron [PAN] Assay System), vented 52 TRU drums, and x-rayed 33 drums in the Real-Time-Radiography (RTR) System.

TRU Project completed Performance Incentive for Repack: 860 m³. TRU Disposition completed 12 TRU-PACT II shipments to the Waste Isolation Pilot Plant (WIPP).

Base

The W&FMP continued maintaining facilities in a safe and compliant condition; Canister Storage Building (CSB) completed quarterly Gaseous Effluent Monitoring System (GEMS) stack flow and mass flow controller functional checks.

The Central Waste Complex (CWC) completed 23 on-site shipments/transfers, 649 containers; and received 43 shipments/transfers, 381 containers.

Liquid Effluent Facilities sent 1.3M gallons of treated effluent to the state-approved land disposal site, continued Basin 43 processing campaign (processed 1.9M gallons), and received Environmental Restoration Disposal Facility (ERDF) leachate (244k gallons) at Liquid Effluent Retention Facility (LERF) Basin 44 (CY 932k 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	2	6	6/01/11: Employee was rolling a 109.5kg drum and contents in the drum shifted. The employee lost balance and Strained back trying to keep drum from falling. Restricted workdays. (22003) 6/03/11: Employee was pulling on torque wrench with co-worker, torque wrench slipped, when using arm again noticed pain. Surgical repair. Lost workdays. (22007)
Total Recordable Injuries	2	12	See DART cases above.
First Aid Cases	6	109	6/1/11: Employee was walking across lunchroom when another employee opened a refrigerator door. Employee did not have time to react and move out of the way before walking into open door. Employee received cut to head. (21995) 6/03/11: Employee brushed inside of elbow on a fiberglass pole causing employee to get splinters on elbow. (22030) 6/21/11: Employee was surveying items out of CA, moving up and down with knees-woke up next morning with pain in knee. (22059) 6/22/11: Employee received insect bite (possible spider). (22058) 6/24/11: Employee was working on overhead lights in a conference room from a ladder and felt pain in back. (22064) 6/30/11: Employee was performing piping work underneath the MDU trailer, employee bumped head on angle iron. (22077)
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, and comprehensive interface for waste inventory, forecast, and reporting data

13.04 MLLW Treatment

- M-91-42/435.1 MLLW:
 - Shipped 63 m³ to processing (1,235 m³ total under ARRA)
 - Completed 31 m³ (1,070 m³ total under ARRA)
- M-91-43 MLLW:
 - Shipped 112 m³ to processing (498 m³ total under ARRA)
 - Completed 54 m³ (195 m³ total under ARRA)
- MLLW key performance parameter (KPP) to ship 1,800 m³:
 - Shipped 1,752 m³ to date

- Completed the processing of the sodium metal contaminated debris waste at IMPACT Services
 - The deactivated low-level waste (LLW) debris was returned to Hanford and disposed
- Shipped two large MLLW fiberglass reinforced plywood FRP boxes totaling 87 m³ from the CWC to PFNW utilizing the Super-7A
- Shipped the two (2) remaining legacy mercury contaminated MLLW packages to a Perma-Fix facility located in Tennessee. Perm-Fix will treat the waste and the resulting secondary treatment residues will be shipped to the Clive Site for disposal
- Completed five (5) shipments of retrieved MLLW out of the 12B location to PFNW for treatment. The shipments totaled 228 drums and were shipped inside reusable 8x4x4 Type-7A

13.05 TRU Retrieval

- CH-TRU Retrieval Volumes
 - Removed 237 m³ CH-TRU waste from trenches – 1,926 m³ removed to date under ARRA
 - Shipped 439 m³ CH-TRU waste (shipped to Treatment, Storage, Disposal Facility) – 1,554 m³ retrieved under ARRA to date
- TRU Retrieval Activities
 - Completed repairs to 3A Trench 17 Boxes 14, 20 and 80 and prepared for shipment.
 - Shipped 3A Trench 17 boxes 14 and 80 (87.0 m³) to CWC
 - Shipped 3A Trench 8 Box 26 (3.2 m³) to PFNW
 - Continued 4B Trench 11 excavation in the west end of the trench to expose remaining remote handled (RH) concrete box, waste containers and metal containers
 - Removed from 4B Trench 11 22 waste containers (93.5 m³)
 - Shipped 4B Trench 11, 15 waste containers to CWC (78.0 m³)
 - Shipped 4B Trench 11, 11 waste containers to PFNW (13.9 m³)
- Next Generation Retrieval Activities
 - Removed 501 drums and 1 carton (104.7 m³)
 - Continued excavation in 12B: Trench 17 under the weather enclosure, the north end of Trench 17, and in Trench 27; all are available for removal activities
 - Shipped 222 drums (46.2 m³) and one metal boxes (1.0 m³) in six shipments to PFNW
 - Completed assay of 201 drums (Gamma Assay), seven drum (PAN)
 - Vented 52 drums assaying TRU and x-rayed 33 drums in the Real-Time-Radiography System

13.06 TRU Repackaging

- Completed Key Performance Parameter (KPP) for Repack: 850 m³
- T- Plant Repack
 - Processed 58 parent drums and created 115 offspring drums
 - Generated two drums from glovebag change outs
 - 216-Z-9 Repack Campaign & Equipment
 - Vented 39 drums in 2706-T Building
 - Updated procedures to operate new outlet chute, new base plate installed, modified outlet chute and glove bag installed. Repackaging recommenced with new equipment and configuration

- **RH/Large Package Repackaging**
 - Size reduction of large-container TRUM waste packages shipped from CWC:
 - Phase 2: 215 m³ shipped to date
 - Supported Waste Retrieval Project (WRP) Point-of-Generation TRUM Repackaging (200 m³): Shipped 151 m³ from LLBG 3A to PFNW for repackaging (64 m³ shipped to date)

13.07 WRAP

- Nondestructive examination (NDE)
 - 164 drums (132 for Central Characterization Project [CCP])
 - 76 standard waste boxes (SWBs) (76 for CCP)
- Nondestructive Assay (NDA):
 - 232 drums – 146 for CCP
 - 41 SWBs (41 for CCP)
- Flammable gas analysis sampling
 - 147 drums
 - 79 SWBs
- Received 130 TRU drums and 10 standard waste boxes (SWB) from Plutonium Finishing Plant
- Successfully reduced Swing Shift staffing levels, and continued supporting extended shifts for CCP characterization activities

13.08 T-Plant

- Received three containers at T Plant
- Shipped 162 containers from T Plant
- Continued shipping out repack completes, 85 & 55 gallon drums not needed to complete TPA milestone to prepare for FY12 Minimum Safe at T Plant
- Beryllium Program
 - Monitoring Be training and blood work to assure Be workers remain current

13.15 TRU Disposition

- Shipments to the WIPP: Current Month total – 12, total WIPP shipments to date – 108

Base

13.02 Capsule Storage & Disposition

- Waste Encapsulation and Storage Facility
 - Continued upper roof upgrades
 - Continued pool cell cleaning
 - Continued capsule relocation activities
 - Completed physical repair of the lower roof

13.03 Canister Storage Building

- Completed quarterly Gaseous Effluent Monitoring System (GEMS) stack flow and mass flow controller functional checks
- Completed quarterly Multi-Canister Overpack (MCO) Handling Machine (MHM) interlock channel test
- Completed quarterly MCO Cask Transport Trailer exercise
- Completed gravel addition at ISA exclusion zone

- Completed replacement of ISA north rolling gate

13.07 WRAP

- Maintained the facility in a safe and compliant condition

13.09 Central Waste Complex (CWC)

- Shipped 20 on-site transfers, 296 containers
- Shipped eight offsite shipments, 13 containers
- Received 77 on-site transfers, 762 containers
- Received 11 offsite shipments, 37 containers
- Work continues on the Navy project to re-grade the route 2S curve. Compaction of the adjusted roadway bed is completed and the first of two asphalt lifts are scheduled for 7/1/11
- Replaced Tarp Cover on large FRP box in expansion area enabling reduction of associated radiological contamination area
- Initiated installation of replacement Fire Systems compressors in the Central Waste Complex 2403WA buildings. New conduit runs and disconnects have been installed in 2403WA and 2403WC
- Replaced the Primary pump (P-1) at the Mixed Waste Trench 34
- Continued to develop work package and procedure modification in support of U-Plant Cell 30 D-10 tank

13.11 Liquid Effluent Facilities (LEF)

- Received eight tankers (361K gallons)
- Treated effluent to State-Approved Land Disposal Site: 1.3M gallons
- 200A Treated Effluent Disposal Facility discharged 1.7M gallons
- Received Environmental Restoration Disposal Facility (ERDF) leachate (244K gallons) at Liquid Effluent Retention Facility Basin 44
- Continued operating the 310 Area Retention Transfer System (fifteen batches/483K gallons)
- Received eleven drums of Waste Sampling and Characterization Facility wastewater and four drums Vadose Zone condensate wastewater
- Loaded and shipped 40 powder drums to ERDF
- Continued with Basin 43 Processing Campaign (processed 1.9M gallons)

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

Issue – Avoid falling behind recovery plan to retrieve 2,500 m³ by September 30, 2011.

Corrective Action – Implement recovery plan: Work in multiple trenches to improve flexibility and mitigate impacts from weather and container conditions, deploy resources from completed KPP scope to supplement Retrieval crews (Repackaging NCOs and Ground Water HPTs reassigned), use alternate retrieval feed locations, initiate multiple summer shifts (6/13/11) to maximize daylight hours and mitigate heat impacts, closely coordinate shipments with MLLW and PFP to maximize ability for all projects to meet goals

Status – Corrective actions implemented and in progress. Performance Measurement Baseline and Performance Based Incentive milestones risk being mitigated.

Issue – TRUPACT II drum feed exhausted by July 2011; U. S. Environmental Protection Agency (EPA) approval to CCP to ship solid waste boxes required by July/August 2011.

Corrective Action – EPA Tier 1 approval by July 2011; Evaluating additional drum feed as contingency

Status – CCP has submitted Corrective Action Report (CAR) to CBFO for closure. CBFO to submit final re-certification report to New Mexico Environmental Department (NMED) in June

Issue – Disposition of the non-conforming waste (NCW) items discovered during processing of the sodium metal contaminated debris at IMPACT Services

Corrective Action – Issue a contract modification to allow IMPACT to process the NCW items (being worked, scheduled to be issued in July, 2011)

Status – IMPACT Services to submit technical proposal to process the NCW items (action complete)

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	
RL-0013/WBS 013				
WSD-007: CH TRU Retrieval Complexities	Accelerate "next generation" retrieval.			Significant container degradation encountered. Draw down of MR implemented in March for additional summertime overtime shifts. However, continuing issues with container integrity are expected and OT may not be adequate to mitigate all impacts. An additional draw down of MR to supplement current staffing levels was implemented in June 2011.
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.
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.

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	0.8	1.9	0.07	1.1	131.2	1.9	96.5
TRU Waste	<u>12.5</u>	<u>11.9</u>	<u>11.5</u>	<u>(0.6)</u>	-4.7	<u>0.5</u>	3.8
ARRA Total	13.4	13.9	11.6	0.5	3.8	2.3	16.8
Base	<u>7.2</u>	<u>6.6</u>	<u>6.6</u>	<u>(0.6)</u>	-7.7	<u>(0.04)</u>	-0.6
Total	20.6	20.5	18.2	(0.04)	-0.2	2.3	11.2

Numbers are rounded to the nearest \$0.1M

ARRA

Current Month (CM) Schedule Performance (+\$0.5M/+3.8%)

RL-0013 MLLW Treatment – Schedule recovery for M-91-43 waste shipments (partially related to realignment of shipping and treatment volumes with TRU Retrieval and TRU packaging), partially offset by delay in M-91-42 feed from TRU Retrieval.

RL-0013 TRU Waste – Suspension of RH/Large Package Commercial repack to align with FY2011/FY2012 priorities, coupled with delay in WRAP Repack due to 2404 WB recovery activities, delays in TRUPACT II shipments due to lack of certified feed (CCP working complex-wide priorities), partially offset by TRU Retrieval schedule recovery, and early receipt of T-Plant equipment scheduled for a later period.

CM Cost Performance (+\$2.3M/+16.8%)

RL-0013 MLLW Treatment – Delay of costs for M-91-42 completion, coupled with schedule recovery for M-91-43 waste without commensurate costs, negotiated cost reduction with vendor for ERDF waste containers.

RL-0013 TRU Waste – Within Threshold - TRU Retrieval schedule recovery without commensurate costs, delayed invoice for T-Plant equipment, and lower assessment costs, partially offset by late receipt of subcontractor costs for RH/Large Package Commercial Repack.

Base

CM Schedule Performance (-\$0.6M/-7.7%)

Suspension of WESF K1/K3 ventilation upgrades, ETF Thin Film Dryer Vessel replacement suspended until required (unit failure).

CM Cost Performance (-\$0.04M/-0.6%)

Within reporting thresholds.

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	43.0	40.3	36.8	(2.7)	-6.3	3.4	8.7	49.8	48.5	1.3
TRU Waste	<u>207.1</u>	<u>204.6</u>	<u>207.4</u>	<u>(2.5)</u>	-1.2	<u>(2.8)</u>	-1.4	<u>251.1</u>	<u>248.9</u>	<u>2.2</u>
ARRA Total	250.1	224.9	244.2	(5.2)	-2.1	0.7	0.3	300.9	297.3	3.6
Base	<u>292.7</u>	<u>290.4</u>	<u>299.3</u>	<u>(2.3)</u>	-0.8	<u>(8.9)</u>	-3.1	<u>1604.3</u>	<u>1571.3</u>	<u>33.0</u>
Total	542.9	535.3	543.6	(7.5)	-1.4	(8.3)	-1.5	1905.2	1868.7	36.5

Numbers are rounded to the nearest \$0.1M

ARRA

CTD Schedule Performance (-\$5.2M/-2.1%)

RL-0013 MLLW Treatment – Delay in receipt of M-91-42 feed from TRU Retrieval, coupled with delay of M-91-43 waste returns (receiving facility processing higher priority waste), partially offset by accelerated shipments of 435.1 waste.

RL-0013 TRU Waste – T-Plant Repack impacted by need to vent drums with 90 mil liners, WRAP Repack impacted by 2404WB recovery activities, delayed Characterization and Shipping operations due to NDA equipment issues and unavailability of certified feed, partially offset by accelerated RH/Large Package Commercial Repack and TRU Retrieval schedule recovery.

CTD Cost Performance (+\$0.7M/+0.3%)

RL-0013 MLLW Treatment – Mixed Low 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), negotiated cost reduction with vendor for ERDF waste containers, decreased operational costs at Low Level Burial Grounds (LLBG), efficiencies in Large Type A waste container shipments to PFNW and in Mixed Waste Disposal Trenches Upgrades, partially offset by higher costs for ETF Containment Berm repairs.

RL-0013 – TRU Waste – Increased materials and labor costs in support of the Trench Face Retrieval and Characterization System (TFRCS), increased resources for TRU Retrieval deteriorated waste containers, partially offset by efficiencies in TRU Characterization and Shipping, T-Plant, Waste Receiving and Processing (WRAP), and delay in receipt of costs for RH/Large Package Commercial Repack.

Base

CTD Schedule Performance (-\$2.3M/-0.8%)

Suspension of WESF K1/K3 ventilation upgrades, Canister Storage Building (CSB) engineering activities delayed due to resource availability (assigned to higher priority activities), ETF Thin Film Dryer Vessel replacement suspended until required (unit failure), partially offset by acceleration of WRAP HEPA filter replacement (scheduled for FY13).

CTD Cost Performance (-\$8.9M/-3.1%)

Increased assessments above plan, 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 subcontractor support for Transportation and Packaging; partially offset by efficiencies in LEF, MLLW, TRU Disposition. TRU Repackaging Interim Storage Area upgrades, Mixed Waste Disposal Trenches (MWDT), and lower General & Administrative 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 May to June, 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	157.8	4.7
Base	86.2	85.3	0.9

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-013-11-002R0, M-91 Waste Processing Reconciliation

BCR-R13-11-005R0, TRU Retrieval Complexities, Realized Risk

BCRA-PRC-11-036R0, Gen Admin & Metric Milestone Changes for June 2011

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 PRC Baseline Revision 2 Update, implemented in September 2010, defines 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-091-03E	Submit Annual Revision of TRUM and MLLW PMP to Ecology	TPA	6/30/11	6/27/2011		Complete
M-091-03D-02	Submit Revision of PMP for Disposition of No-Path-Forward Waste	TPA	6/30/11	6/27/2011		Complete
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	On Schedule
M-091-46G	Complete Offsite Shipment of 1,000 Cubic Meters of Small container CH TRUM	TPA	9/30/11	5/15/2011		Complete
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