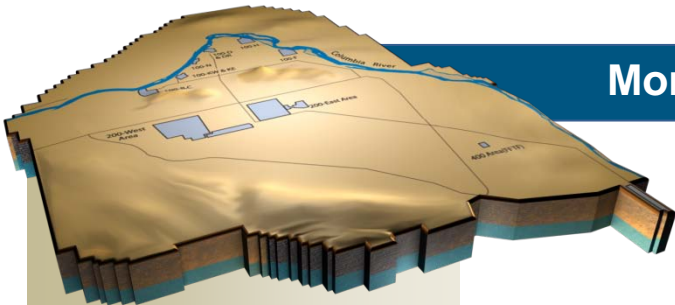


# Section C

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



### Monthly Performance Report

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Deliverable C.3.1.3.1 - 1

**3A Trench 17 Boxes  
4-11 Removal and  
Over-packing**



**TSCA-M/LLW Loaded  
at the CWC for Offsite  
Treatment**



**Received and placed the  
Navy Reactor Compartment  
ex-USS Triton #1**

## PROJECT SUMMARY

The Waste and Fuels Management Project (WFMP) focused on delivering safe, compliant performance.

### **American Recovery and Reinvestment Act (ARRA)**

Training of personnel Nuclear Chemical Operators (NCOs) and Radiological Control Technicians (RCTs) continued with mockup and on-the-job (OJT). In addition, installation of office and restroom trailers was completed. M/LLW shipped 29.4m<sup>3</sup> and completed 56.0m<sup>3</sup> of M-91-42 waste during the month. In addition, M/LLW shipped 1.0m<sup>3</sup> of M-91-43 waste. TRU Retrieval successfully shipped 268.2 cubic meters (m<sup>3</sup>) of waste to treatment, storage, or disposal (TSD) facility, removed 62.5m<sup>3</sup> of suspect-TRU waste from waste trenches, and initiated excavation to assess removal of 3A Trench 17 Boxes 3 and 12. Next Generation Retrieval (NGR) project issued the Functional Requirements Document for review and briefed Carlsbad Field Office Manager on planned single waste stream, “box & go,” and TRU waste shredding. The Safety Design Strategy for the Alpha Caisson Retrieval Project was completed and is in final sign-off cycle. The Waste Receiving and Processing Facility (WRAP) completed Nondestructive Examination (NDE) of 305 drums and Nondestructive Assay (NDA) of 338 drums. Central Characterization Project (CCP) implementation continued supporting programmatic WIPP certification startup activities at WRAP. The removal of the remaining CO2 blaster equipment was completed at T Plant. Continued procurement activities and staff ramp-up for waste deliveries to the ERDF including training of newly hired teamsters, preparations for use of 9 roll off transports, and use of “Super Dump Trucks” in support of soil remediation for BC Control Area. The mixed waste disposal trenches received seven offsite shipments (17 containers), one on-site transfer (two containers) and shipped two on-site transfers (two ETF tankers).

### **Base**

The WFMP continued maintaining facilities in a safe and compliant condition. The Waste Encapsulation and Storage Facility (WESF) continued support of Randolph Construction for roof replacement activities. The Central Waste Complex (CWC) shipped nine off-site shipments (303 containers), shipped 9 on-site transfers (601 containers), and received 34 on-site transfers (193 containers). The 200 Area Treated Effluent Disposal Facility (TEDF) processed 1.5M gallons. The mixed waste disposal trenches received and placed the Navy Reactor Compartment ex-USS Triton #1 (non-PBS funded).

## TARGET ZERO PERFORMANCE

	CM Quantity	FYTD Quantity	Comment
Days Away, Restricted or Transferred	0	0	N/A
Total Recordable Injuries	0	0	N/A
First Aid Cases	3	3	<p>On 10/1/09 a RCT trainee experienced back pain upon standing up from a seated position at the conclusion of a training demonstration at HAMMER. The employee was transported to AMH for evaluation and diagnosed with a severe back strain. AMH prescribed muscle relaxers and pain medication. The employee was directed to see their personal physician and then return to AMH before released to work. The employee had been seen previously by a private physician and chiropractor for an earlier back injury prior to employment on this project. Currently pending determination if this is a pre-existing condition. (20507)</p> <p>On 10/21/09 an MSA/M&amp;EC teamster supporting ERDF Transportation was tightening tarps on the ERDF cans at the 200W Laydown Yard (west of CWC), when the individual stepped on a rock and twisted their knee. The teamster was taken to AMH for evaluation and released to full duty, given over-the-counter non-prescription medications, an ice pack and instructions to follow up at AMH in a week if the symptoms do not improve. (20518)</p> <p>On 10/20/09 an M&amp;EC maintenance employee reported redness on the palm of the hand from a possible bug bite after reaching into a locker. Employee was transported to AMH for further evaluation, and provided skin care, non-prescriptive medication and returned to work with a restriction which did not affect the worker from performing any of their normal job functions. (20520)</p>
Near-Misses	0	0	N/A

## KEY ACCOMPLISHMENTS

### ARRA

#### 13.01 Project Management

- Training continued for the ARRA-funded staff
- Support of installation of office and restroom trailers was completed

#### 13.04 Mixed Low Level Waste (MLLW) Treatment

- Ramped up shipment of Legacy LLW from the CWC and WRAP to Offsite processing.
- M-91-42 TPA:
  - 29.4m<sup>3</sup> shipped and 56.0m<sup>3</sup> completed during month
  - 7,993m<sup>3</sup> shipped and 7,852m<sup>3</sup> completed since January 2003
- M-91-43 TPA:
  - 1.0m<sup>3</sup> shipped and 0m<sup>3</sup> completed during month
  - 662m<sup>3</sup> shipped and 647m<sup>3</sup> completed since January 2003

#### 13.05 TRU Retrieval

- Shipped 268.2 cubic meters (m<sup>3</sup>) of waste to treatment, storage, or disposal (TSD) facility
- Removed 62.5 m<sup>3</sup> of waste from waste trenches
- Assayed 5 boxes using Portable Box Assay
- Disassembly of 3A Trench 17 Boxes 82 and 80
  - Completed Simulation Test Site (STS) trench mock-up activities for disassembling Box 82 lid using the long-reach grabbing and cutting tools.
  - Verified tools and methodology and integrated STS lessons learned into work instructions.
  - Completed fabrication of the wooden cover box for Box 82
  - Initiated procurement of additional tools and materials based on STS mock-up
- Initiated excavation to assess removal of 3A Trench 17 Boxes 3 and 12
- Received 12 concrete shielded overpacks for high-dose containers
- Next Generation Retrieval (NGR)
  - Issued Functional Requirements Document for review
  - Briefed Carlsbad Field Office Site Manager
    - Single Hanford Retrieval Waste Stream and use of Standard Waste Boxes were well received
    - Planned “Box and Go” and TRU Waste shredding was rejected
    - Investigating “Direct Transfer” instead of “Box & Go” for TRU containers without WIPP prohibited items.
- Alpha Caisson Retrieval
  - Issued draft Functional Design Criteria for review
  - The Project Review Board Charter was approved
  - Determined that the project will proceed under RCRA regulatory framework
  - Completed Safety Design Strategy; in final sign-off cycle
  - Selected caisson access from the top for further conceptual development
  - Completed second in-process design review of AREVA’s General Arrangement drawings
  - Project Chief Engineer and Operations Manager visited AREVA’s Mobile Hot Cell operation in France to evaluate functionality as it applies to the project

#### 13.06 TRU Repackaging

- Completed repack of 62 containers (12.9 m<sup>3</sup>) at T Plant
- Continued the training of Nuclear Chemical Operators (NCOs) and Radiological Control Technicians (RCTs)

- T-Plant staff continued mock up training, and OJT training with the new hire NCO's in TRU repack operations.
- Continued the operation of two repack lines in a training mode
- Continued Pu-238 preparation activities

### **13.07 Waste Receiving and Processing Facility (WRAP)**

- Nondestructive Examination (NDE) 305 drums
- Nondestructive Assay (NDA) 338 drums
- 65 drums and five SWBs received from PFP
- Implemented cold weather protection inspections

### **13.08 T Plant**

- Treatment and disposal activities
  - Completed the removal of remaining CO2 blaster equipment including the supporting connex box
  - Supported completion of demolition and disposal of the old change trailer 221-TB
  - Supported completion of preparations and removal to excess of the two double walled stainless steel tanks near 277T
- Shipments/Receipts/Compaction
  - Shipped 104 completed Repack containers to the Central Waste Complex (CWC)
  - Shipped 13 Puck drums
  - Shipped one waste box and two roll off boxes

### **13.10 ERDF Additional Capabilities**

- Completed training of newly hired teamsters
- Completed preparations for use of 9 roll off transports
- Initiated use of "Super Dump Trucks" for soil remediation
- Continued procurement activities and staff ramp-up for waste deliveries to the ERDF

### **13.15 TRU Disposition**

- AMWTP Shipment Gap Analysis completed/Issues identified and addressed.
- Developing Close-out Schedule for Hanford TRU Program.
- Comprehensive Inventory Database for 2008 was verified and validated.
- Central Characterization Project (CCP) implementation continued:
  - Supporting CCP requests for public releases of AK documents
  - Supporting programmatic WIPP certification startup activities at WRAP
    - Nondestructive Examination vs. Real Time Radiography
    - Nondestructive Assay
    - Head Space Gas Sampling

### **13.21 Mixed Waste Disposal Trenches**

- Shipped two on-site transfers, two ETF Tankers
- Received seven offsite shipments, 17 containers
- Received one on-site transfers, two containers

**Base****13.02 Capsule Storage & Disposition**

- Waste Encapsulation and Storage Facility (WESF)
  - Continued support to Randolph Construction for roof replacement
  - Lower roof repair suspended due to lower ambient temperatures
  - Continued support to the Energy Savings Performance Contract construction demolition and upgrade activities

**13.07 Waste Receiving and Processing Facility (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)**

- Completed nine off-site shipment, 303 containers
- Completed nine on-site transfers, 601 containers
- Received 34 on-site transfers, 193 containers

**13.11 Liquid Effluent Facilities**

- Received (October) 48 tankers; (CY) 519 tankers
- Treated (October) 0 gallons; (CY) 22M gallons
- 200A Treated Effluent Disposal Facility (TEDF) discharged (October) 1.5M gallons; (CY) 334M gallons
- Maintenance activities
  - Completed 3 tank inspections to meet permit requirements (SWRT Tank B, Concentrate Tank B, and Verification Tank A)
  - Commenced routine Cold Weather Protection activities
  - Received 2 tankers of wastewater from a new generator (212 NPR)
  - Replaced lamps and tubes in Ultra Violet/Oxidation (UV/OX) unit
  - Completed decon and change out of blades on the Thin Film Dryer rotor
  - Completed draining and lock and tag of 92 percent acid lines for replacing diaphragm valves (#1 priority for EZAC)

**13.16 SNF Disposition**

- Slightly Irradiated Fuel (SIF)
  - Continued progress toward transfer of SIF to the 200 Area ISA

**13.21 Mixed Waste Disposal Trenches**

- Maintained the trenches in a safe and compliant condition
  - 218-W-5 - MWT 34 – Placed fall protection railing along South end and commenced surface sealing of the top of Module 3.
  - 218-E-12B – Concentrated effort in progress to minimize the spread of contaminated tumbleweeds, sprayed herbicides to control growth, rad-rover tractor contracted to perform extensive survey to determine extent of conditions.
  - 218-E-12B – Trench 94 – Received and placed the Navy Reactor Compartment ex-USS Triton #1 (non-PBS funded).



## MAJOR ISSUES

**Issue Statement** – Retrieved FRP boxes at CWC require improvements for long-term outdoor storage. Deteriorated boxes present potential for contamination spread and loss of containment.

**Corrective Actions** – Develop options for improved storage; review options with management to select preferred storage option(s); establish priority; develop recovery schedule to complete improvements; design/procure/implement selected options.

**Status** – Options have been developed, the preferred option(s) has been selected and the priority has been established. The recovery schedule has been completed. Completing interim actions to stabilize boxes expected to complete Spring of 2010.

**Issue Statement** – Integrity of Retrievably Stored Waste (RSW) containers is significantly less than expected. Increased resources are required to retrieve containers. Retrieval volumes required to meet TPA milestones or PBIs may not be reached.

**Corrective Actions** – Use multiple crews for concurrent retrieval; redirect resources to alternate retrieval sites; stabilize deteriorated containers pending in trench processing or alternate disposition.

**Status** – Hired additional staff, implemented multiple trench retrieval activities, and initiated interim stabilization preparations.

## 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-007: TRU Retrieval Contamination Levels	Accelerate "next generation" retrieval	●	↔	No near-term impacts
WSD-008: Classified Waste Storage Limitations	Implement mobile shredding; evaluate establishing secure storage at CWC or other location	●	↔	Researching mobile shredding feasibility
WSD-013A: TRU Waste Volumes or Characteristics - Retrieval	Implement in-trench assaying as part of Next Generation retrieval	●	↔	No issues regarding unexpected waste volumes or characteristics experienced to date
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
<b>WSD-018: CSB Major Equipment Failure</b>	<b>Risk accepted without mitigation</b>	●	↔	<b>Risk is very unlikely; reclassified as RL risk</b>
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
WSD-043: Orphan Wastes	Obtain regulatory relief for "no path forward" wastes	●	↔	Working to identify treatment options for all waste currently in storage
PRC-042: Resource Availability	Evaluate onsite posting of additional positions, substitution of less radiologically intensive work in lieu of currently scheduled higher risk work, consolidating work teams/work areas, etc. Conduct job fairs; contract with alternate resource providers; develop training programs and work with local educational facilities and union halls to train required job specialties; establish company-wide prioritization for resource assignments	●	↓	RCT shortage will impact TRU retrieval; teamster shortage may temporarily impact waste shipments to ERDF.
Retrieval Area Issues	<b>Potential to impact project scope, schedule and cost as a result of issues identified outside the RS burial</b>	●	↓	<b>Working to identify operational impacts/issues with the Non-RS burial grounds.</b>



## 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 (%)	Budget at Completion (BAC)
<b>ARRA</b>	9.2	7.6	5.7	(1.6)	-16.9	1.9	25.1	109.4
<b>Base</b>	<u>6.5</u>	<u>6.0</u>	<u>4.5</u>	<u>(0.5)</u>	-7.4	<u>(1.5)</u>	-24.9	<u>92.5</u>
<b>Total</b>	<b>15.7</b>	<b>13.6</b>	<b>13.2</b>	<b>(2.0)</b>	<b>-13.0</b>	<b>0.4</b>	<b>3.1</b>	<b>201.8</b>

Numbers are rounded to the nearest \$0.1M.

#### ARRA

##### CM Schedule Performance (-\$1.6M/-16.9%)

The current month negative schedule variance is primarily attributable to delays in ERDF hiring, equipment purchases, and maintenance facility activities; delay in TRU Retrieval activities due to container degradation; partially offset by early shipment of FY 2010 MLLW.

##### CM Cost Performance (+\$1.9M/+25.1%)

The current month positive cost variance is primarily due to missed accruals for 435.1 Compliance waste disposal activities, efficiencies in TRU repackaging activities, and continued charges to Base-funded elements which shifted to ARRA funding in FY 2010.

#### Base

##### CM Schedule Performance (-\$0.5M/-7.4%)

The current month negative schedule variance is within reporting threshold; however, it is primarily due to continued delays in Next Generation TRU Retrieval procurements partially offset by the returns of FY 2009 legacy LLW from treatment facilities.

##### CM Cost Performance (-\$1.5M/-24.9%)

The current month negative cost variance is primarily attributable to a system error which allocated material purchases for multiple projects to WFMP, increased allocation to G&A and Direct Distributables, and continued charges to Base-funded elements which shifted to ARRA funding in FY 2010.

## Contract-to-Date (\$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)
<b>ARRA</b>	32.9	31.9	31.2	(1.0)	-3.1	0.7	2.2	241.3
<b>Base</b>	<u>155.7</u>	<u>153.1</u>	<u>146.1</u>	<u>(2.7)</u>	-1.7	<u>7.0</u>	4.6	<u>1,601.0</u>
<b>Total</b>	<b>188.7</b>	<b>185.0</b>	<b>177.3</b>	<b>(3.7)</b>	<b>-2.0</b>	<b>7.7</b>	<b>4.2</b>	<b>1,842.3</b>

Numbers are rounded to the nearest \$0.1M.

### ARRA

#### CTD Schedule Performance (-\$1.0M/-3.1%)

The CTD negative schedule variance is primarily due to delays in ERDF hiring & procurements coupled with delays in TRU Retrieval activities caused by the discovery of significantly deteriorated boxes, the inability to make progress while resolving the 85-gallon Overpack issues, a respirator failure and associated recovery actions, and weather impacts. This is partially offset by the acceleration of FY 2010 MLLW treatment and TRU Repackaging activities.

#### CTD Cost Performance (+\$0.7M/+2.2%)

The CTD positive cost variance is within reporting thresholds. However, positive cost variance is primarily attributable to efficiencies in MLLW 435.1 Compliance waste disposal activities due to direct disposal vs. planned treatment. This is partially offset by additional allocation for Ramp Up and Transition associated with increased ARRA spending within the PBS. Additionally, the TRU Retrieval project continues to incur cost while unable to make planned progress due to significantly deteriorated boxes, resolving the 85-gallon Overpack issues, a respirator failure and associated recovery actions, and weather impacts.

### Base

#### CTD Schedule Performance (-\$2.7M/-1.7%)

The CTD negative schedule variance within reporting thresholds and is attributable to delays in next Generation TRU Retrieval procurements, ETF fine filter upgrades, and returns of W5 waste.

#### CTD Cost Performance (+\$7.0M/+4.6%)

The CTD positive cost variance is primarily attributable efficiencies in MLLW Treatment, Liquid Effluents, Slightly Irradiated Fuel, CCP Support, SWOC facilities, and Project Management coupled with a labor reduction (continuity of service). This is partially offset by increased cost for TRU Retrieval activities associated significantly deteriorated containers and resolution of the 85-gallon drum Overpack issues.

**Contract Performance Report Formats are provided in Appendix A and Appendix A-1.**

## FUNDS vs. SPEND FORECAST (\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	FY 2010		
	Projected Funding	Spending Forecast	Variance
<b>ARRA</b>	105.8	126.1	(20.3)
<b>Base</b>	<u>110.8</u>	<u>94.6</u>	<u>16.2</u>
<b>Total</b>	<b>216.6</b>	<b>220.7</b>	<b>(4.1)</b>

Numbers are rounded to the nearest \$0.1M.

### Funds/Variance Analysis

Projected Funding includes FY 2009 uncosted and FY 2010 expected new Budget Authority (BA). Fiscal year 2010 ARRA expenditures are expected to exceed planned funds due to scope accelerations and the addition of DOE-directed shipments to WIPP commencing in March 2010.

### Critical Path Schedule

Critical Path analysis can be provided upon request.

### Estimate at Completion (EAC)

The BAC and EAC now include FY 2009 through FY 2018 (The PRC contract period).

### Baseline Change Requests

See Overview.

## 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 submitted in June defines CHPRC planning with respect to TPA milestones.

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-091-42J-T01	Treat 200 Cubic Meters of CH TRUM	TPA	9/30/09	4/30/09		Complete
M-91-40G-T01	Retrieve 9,950 Cubic Meters CH-RSW (Cumulative).	TPA	9/30/09	3/4/09		Field work completed. Awaiting RL completion letter.
M-16-93A	Submit implementation work plan to prepare TRU/TRUM waste.	TPA	12/31/09			On schedule

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-91-42F-T01	Complete Treatment Of 7,600 Cubic Meters CH-MLLW With Final Completion Of All CH-MLLW.	TPA	12/31/09	8/20/09		Complete
M-091-45	Complete Negotiations And Submit Change Package Replacing Specified M-91 TBD Dates	TPA	12/31/09			On schedule
C-026-07E	Tritium Treatment Technology Developments to Ecology and EPA	TPA	3/31/10			On schedule
M-091-03D-01	Submit Annual Revision of TRUM and MLLW PMP to Ecology	TPA	6/30/10			On schedule
M-091-43D-T01	Treat 300 CM per Year RH MLLW and Large Containers CH MLLW	TPA	6/30/10		8/31/09	Field work complete 8/31/09. Awaiting RL Completion Letter
M-091-40G-T02	Retrieve CH-RSW 10,700 Cubic Meters (Cumulative)	TPA	9/30/10			On schedule
M-091-42J-T02	Treat 200 Cubic Meters of CH TRUM	TPA	9/30/10			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)

WIPP provides shipping resources and manages the schedule for transportation of containers to WIPP. The schedule is variable and the number of shipments is controlled by DOE-Headquarter (HQ) on a complex-wide priority. Cost for shipment of waste offsite is borne by the Carlsbad Field Office (CBFO).

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 Carlsbad Field Office (CBFO).	Ongoing