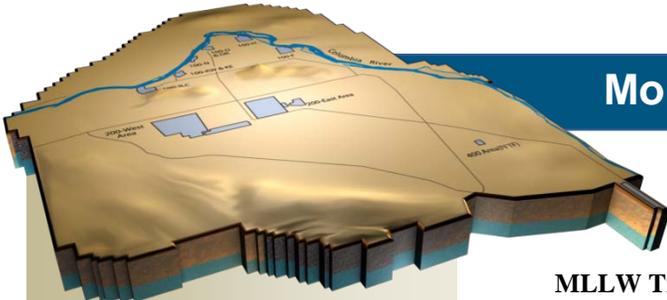


Section C

Solid Waste Stabilization and Disposition (RL-0013)



Monthly Performance Report

**MLLW Treatment
Support
CWC Expansion Area,
preparing to load
overpack container (on
loan from Tank Farms)
for shipment to PFNW**



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DOE/RL-2008-69, Rev. 16
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1



BROKK Excavator

**Mobile Radioactive
Decontamination
Unit**



PROJECT SUMMARY

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

American Recovery and Reinvestment Act (ARRA)

Weekly and monthly Recovery Act Reporting continued. Shipped 40.0m³ M/LLW and completed 62.9m³ of M-91-42 waste during the month. TRU Retrieval set up Mobile Radioactive Decontamination Unit (MDU) trailer and initiated development of operating procedures. Next Generation Retrieval (NGR) received the Real-Time Radiography trailer, BROKK excavator, and Gamma Assay trailer. Alpha Caisson Retrieval completed and release Material at Risk (MAR) and Energetic Chemical reports. TRU Project repackaged 148 TRU containers, shipped 277 containers, and received 182 containers at T Plant. The Waste Receiving and Processing Facility (WRAP) completed non-destructive examination (NDE) for 347 drums and 88 non-destructive assay (NDA) drums. The Environmental Restoration Disposal Facility (ERDF) container maintenance facility construction is complete and turned over to operations. In addition, three of the 14 new roll-on/roll-off-style trucks for transporting containers arrived on site. The mixed waste disposal trenches received 12 offsite shipments (35 containers) and shipped two leachate Beall tankers to the Effluent Treatment Facility (ETF).

Base

The WFMP continued maintaining facilities in a safe and compliant condition. The Waste Encapsulation and Storage Facility (WESF) continued support to Energy Savings Performance Contract construction demolition and upgrade activities. The Canister Storage Building completed the annual RAD-Vault inspections. The Central Waste Complex (CWC) received 17 on-site transfers (395 containers), two off-site shipments (six containers), shipped five off-site shipments (140 containers), and 23 on-site transfers (712 containers). Low Level Waste Burial Grounds (LLBG) placed two concrete lifts into Module 10 waste encasement. The 200 Area Treated Effluent Disposal Facility (TEDF) discharged 2.0M gallons. Slightly Irradiated Fuel Project was awarded 2010 Project of the Year by Project Management Institute Columbia River Basin Chapter. The Mixed Waste Disposal Trenches received approval and commenced the back fill to grade over Trench 8 and Trench 16.

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 Grounds.	Implement a point-of-generation approach to waste management that minimized the transport and handling of wastes.	10/1/11	On schedule
		No exceedances of permit conditions. Participate in readiness assessment and establish process to confirm permit levels have been met.	9/30/2010	On schedule
10-EMS-WFM-OB2-T1	Reduce the levels of air pollution and increase the energy efficiency of WESF Plant heating and cooling operations.	Eliminate the use of the refrigerant R22.	2/26/2010	Behind schedule ECD March 31, 2010
		Inactivate the fuel oil fired steam plant and replace with heat recovery chiller and electrical resistance heaters.	2/26/2010	Complete August 2009
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.	3/30/2010	On schedule

TARGET ZERO PERFORMANCE

	CM Quantity	FYTD Quantity	Comment
Days Away, Restricted or Transferred	0	1	N/A
Total Recordable Injuries	0	1	N/A
First Aid Cases	3	17	<p>2/3/10 - An NCO at CWC reported that they had slipped and fell in one of the warehouses. The employee reported experiencing right hip pain, but wasn't sure it was due to the fall or recent personal exercise activities. The employee was transported to AMH for evaluation, diagnosed with right quad strain, and provided non-prescription medication and ice. Employee was returned to work with no restrictions. (20690)</p> <p>2/3/10 – An employee attending an asbestos worker class at HAMMER cut their left thumb with a razor knife while cutting plastic sheeting. Employee was transported to AMH for evaluation. Wound was cleaned and bandaged. A “Return to work with Restriction” was issued. Restriction is to keep the left thumb dry and clean. The restriction expires Feb 5. No PPE was provided. HAMMER IH/Safety is reviewing the training plan for this course to see if PPE was to be prescribed and correct the training plan. (20691)</p> <p>2/26/10– An employee at T-Plant reported an irritation in their right eye. Employee was transported to AMH for evaluation. AMH flushed employee's eye, cause of eye irritation was not identified. Employee was returned to work with no restrictions. (20734)</p>
Near-Misses	0	0	N/A

KEY ACCOMPLISHMENTS

ARRA

13.01 Project Management

- Training continued for the ARRA funded staff
- Continuing weekly and monthly ARRA reporting

13.04 Mixed Low Level Waste (MLLW) Treatment

- Shipped 93m³ of ARRA funded MLLW to treatment facilities, and completed 69m³
- The Site Specific LDR Variance for the “P015 Drums” was submitted to the WDOE
- Loaded and shipped the large yellow Type A metal box, on loan from Tank Farms, with three containers from the CWC Expansion Area, (supports M-91-43 PMB shipment commitments)
- M-91-42 TPA:
 - 40.0m³ shipped and 62.9m³ completed during month
 - 8,144m³ shipped and 7,982m³ completed since January 2003 (Base & ARRA)

- M-91-43 TPA:
 - 22.3m³ shipped and 0m³ completed during month
 - 693m³ shipped and 662m³ completed since January 2003 (Base & ARRA)

13.05 TRU Retrieval

- Developed Retrieval Corrective Action Plan; hazard identification & control, improvements to event response and other actions are in progress
- Continued planning 3A Trench 17 Boxes 82 and 80 repackaging and held Lessons Learned meeting with D&D Project on articulated excavator tools
- Resolved hydrogen issue on 3A Trench 17 Box 3; issued USQ for Transportation & Packaging (USQt) and approved work package to ship
- Completed large FRP box lift fixture repair and testing; ready for use at 3A on Box 3
- Set up Mobile Radioactive Decontamination Unit (MDU) trailer and initiated development of operating procedures
- Received and set up new 4B/4C restroom facility MO2323
- Next Generation Retrieval (NGR)
 - Received the Real-Time Radiography trailer, BROKK excavator, and Gamma Assay trailer
 - Issued the Trench Face Process System Requirements Compliance Matrix Document
- Alpha Caisson Retrieval
 - Completed and released Conceptual Design Report
 - Completed and released Material at Risk (MAR) and Energetic Chemical reports
 - Started final design on the Waste Retrieval System (WRS)
 - Started preliminary design on the Waste Processing System (WPS)

13.06 TRU Repackaging

- Initiated use of the empty drum storage structure (229W)
- Completed repairs to the Empty Drum Compactor and compacted 144 containers
- Shipped 299 containers from T Plant
- Received 237 containers to T Plant
- Shipped one empty roll off box and two Connex boxes to ERDF

13.07 Waste Receiving and Processing Facility (WRAP)

- Non-destructive examination (NDE) 347 drums
- Non-destructive assay (NDA) 88 Non-WIPP drums
- Continued support of Pu-238 activities
- Completed Facility Operation class room training for 21 nuclear chemical operators (NCOs) – Working OJT/OJE

13.10 ERDF Additional Capabilities

- Work on the facility access road continued with the completion of the structural fill
- The facility power pole and overhead lines were installed and workers performed electrical tie-ins at the utilities pole
- Interior electrical finishes continue and ecology blocks were placed at the facility property edge
- Additional concrete pours were performed on the exterior concrete pad
- Workers also prepared the facility floor and sealed it with a protective coating
- Final touches including fencing and equipment labeling were completed
- A formal walk-down with operations, engineering, safety, and fire protection personnel was performed
- The access road and the electrical installation for the Container Maintenance Facility are complete

- Facility National Electric Code inspections were performed and the facility workers finished leveling, placing, and compacting the top course material for the access road, bringing it to final grade

13.15 TRU Disposition

- Consolidate Project Personnel at WRAP Complex
- Three CCP Idaho Process Knowledge (PK) documents reviewed
- 1034 Idaho drum data sheets through Public Release process
- Continuing close-out schedule for Hanford TRU program
 - Final three NCRs in closure signatures
 - Cancelled 45 of 53 procedures
 - Revised 12 of 22 procedures
- Toured Idaho RH and CH waste processing facilities
- Met with DOE-CBFO and CCP Senior Management in Carlsbad
- Coordinating new trailers at WRAP to support new staff
- CCP implementation:
 - NDE: 105 drums
 - HSGS: completed ten HSG samples
 - Flammable gas sampling: CCP mobilization June/July
 - NDA: Completed CCP recalibration of GEA-A & GEA-B
 - Completed TRUPACT-II maintenance – ready to ship

13.21 Mixed Waste Disposal Trenches

- Shipped three leachate Beall tankers to ETF
- Received 11 offsite shipments, 30 containers
- Received one on-site shipment, 22 containers

Base

13.02 Capsule Storage & Disposition

- Waste Encapsulation and Storage Facility (WESF)
 - Continued support to Energy Savings Performance Contract construction demolition and upgrade activities

13.03 Canister Storage Building

- Completed installation of Multi-Canister Overpack Handling Machine fall protection system
- Completed replacement of failed Gaseous Effluent Monitoring System sample pump

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 five off-site shipments, 140 containers
- Completed 23 on-site transfers, 712 containers
- Received 17 on-site transfers, 395 containers
- Received two off-site shipments, six containers
- Low Level Waste Burial Grounds (LLBG)
 - 218-W-3AE – Received approval and commenced the back fill to grade over Trench 8 and Trench 16

13.11 Liquid Effluent Facilities

- Received (February) 43 tankers; (35K gallons)

- Treated (February) 2.7M gallons
- 200A Treated Effluent Disposal Facility (TEDF) discharged (February) 2.0M gallons
- Received ERDF leachate (~191,000 gallons) at LERF Basin 44
- Maintenance activities
 - Repaired steam leak in the Thin Film Dryer Room
 - Initiated repairs to the disposal sample pump
 - Initiated installation of new PC5000 Leak Detection System (WRPS ARRA funded)
 - Completed rebuild of Pump Station #3 check valves
- 310/340 Facilities
 - Completed Operability Acceptance Testing; working punch list items
 - Operating the Retention Transfer System; four batches discharged to City of Richland
 - Continued performing preventive maintenance activities (PMs) for systems that will remain active after turnover (HVAC, fire, and compressed air)
 - Trained Stationary Operating Engineers on systems they will be operating after turnover
 - Rekeyed and reprogrammed OMNILOCKS for the RTS facilities in anticipation of turnover

13.12 Integrated Disposal Facility

- Maintained the facility in a safe and compliant condition

13.16 Off Site Spent Nuclear Fuel (SNF) Disposition

- Slightly Irradiated Fuel (SIF)
 - Slightly Irradiated Fuel Project was awarded 2010 Project of the Year by Project Management Institute Columbia River Basin Chapter
 - Issued the Definitive Design for Project W-105, Interim Storage Cask Pad #3, which includes the Container Restraint System (CRS)
 - Completed Plant Forces Work Review for Project W-105

13.21 Mixed Waste Disposal Trenches

- Maintained the trenches in a safe and compliant condition

MAJOR ISSUES

Issue Statement – Potential hydrogen hazard in inner containers in 3A Trench 17 Box 3 exceeds the Retrieval Boxes One-Time Requests for Shipment authorized payload for shipment to the Central Waste Complex.

Corrective Actions – Obtain Transportation authorization from RL to permit shipping FRP boxes with inner containers greater than 5% hydrogen.

Status – Potential inability to ship ~228 m³ (at least five boxes with inner containers) planned for retrieval from 3A Trench 17.

Issue Statement – Completion of April milestone for NGR start-up in 12B is at risk.

Corrective Actions – Develop critical path startup schedule (complete). Realign resources and update milestone if required (April 2010).

Status – Delay impacts achieving planned retrieval volumes.

Issue Statement – Retrieval Operations stand-down was directed due to week of 2/1/10 events in 4B Trench 11.

Corrective Actions – Develop Retrieval Corrective Action Plan (CAP).

Status – Excavation and removal activities on hold until hazard identification & control, and event response improvements have been completed which impacts retrieval volume targets and milestones.

Issue Statement – NGR Trench Face Process System regulatory strategy and containment tent exhauster

Notice of Construction (NOC) permit are not complete.

Corrective Actions – Develop path-forward for regulatory strategy with Environmental Compliance & Ecology (February 2010). Determine if exhauster will be “post-startup” item. Submit NOC changes to Environmental Compliance. Formally submit NOC to RL for transmittal to WDOH (April 2010).

Status – Regulatory strategy could delay startup schedule. NOC is needed to initiate exhauster procurement and could impact startup schedule; exhauster not available until Fall 2010.

Issue Statement – Contract issues with AREVA delayed start of preliminary design for Alpha Caisson Project Waste Processing System.

Corrective Actions – Evaluate schedule crash/fast-track options to not impact critical path for Project (October 2010).

Status – Potential 4-week Project schedule impact.

Issue Statement – WMP-331-PS-414, ‘Canister Storage Building (CSB) Radioactive Air Emissions,’ contains a State of Washington, Department of Health (DOH) requirement that pitot tubes be leak tested and inspected for contaminants annually. While developing responses to questions asked during a DOH stack inspection on 2/24/10, it was recognized that these required inspections are not being performed for the ‘annubar’ used for flow measurement in the CSB stack monitoring system. It appears these inspections have not been completed since 2003.

Corrective Actions – Required notifications have been completed. DOH was briefed on 3/8/10. Work package has been prepared to complete the required inspections and is scheduled for 3/18/10. Extent of Condition determined this to be isolated to the CSB exhaust stack. Issue has been entered into CRRS for causal analysis and corrective action tracking.

Status – Flow measurements are not in question as quarterly functional tests of the annubar have been completed with no abnormalities noted. Issue is under review with the DOH and may result in a Notice of Violation.

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-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
WSD-018: CSB Major Equipment Failure	Risk accepted without mitigation			Risk is very unlikely; reclassified as Unassigned Risk
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. RCT Hired and in training. Teamsters hired and in training.
Retrieval Area Issues	Potential to impact project scope, schedule and cost as a result of issues identified outside the RS burial grounds.			Issues with the Non-RS burial grounds resolved.

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)
ARRA	11.4	9.9	9.6	(1.5)	-13.3	0.3	3.5	139.2
Base	<u>7.0</u>	<u>7.8</u>	<u>8.3</u>	<u>0.8</u>	11.3	<u>(0.5)</u>	-6.5	<u>91.1</u>
Total	18.4	17.7	17.9	(0.7)	-4.0	0.2	0.9	230.3

Numbers are rounded to the nearest \$0.1M.

ARRA

CM Schedule Performance (-\$1.5M/-13.3%)

RL-0013 MLLW Treatment – Delay in delivery of ERDF transport trucks caused by procurement and manufacturer production issues, partially offset by early completion of ERDF Maintenance Facility and receipt of ERDF super dumps scheduled in prior months; and, by early shipment and disposal of MLLW to treatment facilities.

RL-0013 TRU Waste – Primarily due to suspension of retrieval activities due to upset conditions, coupled with delays in Next Generation Retrieval start up activities, procurement, and document preparation.

CM Cost Performance (+\$0.3M/+3.5%)

RL-0013 MLLW Treatment – Additional capabilities Maintenance Facility delay in subcontract invoicing and super dump/transport trucks received below planned cost; costs for 435.1 waste treatment are below plan due to efficiencies created by treating waste at ES-Clive rather than planned treatment at Perma-Fix Northwest (due to a waiver received from DOE).

RL-0013 TRU Waste – Negative variance primarily associated with continuing to incur costs without making TRU Retrieval progress due to upset conditions, and increased G&A/DD associated with Recovery Act expenditures; partially offset by TRU Disposition costs understated due to miscoding of charges (corrections in process).

Base

CM Schedule Performance (+\$0.8M/+11.3%)

TRU Retrieval schedule recovery (e.g. received BROKK Excavator planned for previous month); scope requirements met for RH/Large Package Capability.

CM Cost Performance (-\$0.5M/-6.5%)

Assessments G&A and direct distributable in excess of plan coupled with continued charging to Min Safe vs. base operations in T Plant and WRAP; partially offset by efficiencies in Central Waste Complex and Effluent Facilities Base Operations coupled with an accrual correction in Project Management.

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)
ARRA	76.8	72.3	67.8	(4.5)	-5.9	4.5	6.2	299.0
Base	<u>184.5</u>	<u>181.6</u>	<u>177.4</u>	<u>(2.9)</u>	-1.6	<u>4.2</u>	2.3	<u>1,568.3</u>
Total	261.3	253.1	245.1	(7.4)	-2.8	8.7	3.4	1,867.4

Numbers are rounded to the nearest \$0.1M.

ARRA

CTD Schedule Performance (-\$4.5M/-5.9%)

RL-0013 MLLW Treatment – Delay in delivery of ERDF transport trucks caused by procurement and manufacturer production issues partially offset by early shipment and disposal of MLLW to treatment facilities.

RL-0013 TRU Waste – Primarily due to delayed Next Generation Retrieval procurement, start up activities, and document preparation, coupled with the suspension of retrieval activities due to unknown item in burial grounds and upset conditions

CTD Cost Performance (+\$4.5M/+6.2%)

RL-0013 MLLW Treatment – Costs for waste treatment are below plan due to efficiencies created by treating waste at ES-Clive rather than planned treatment at Perma-Fix Northwest (due to a waiver received from DOE), and the ability to send waste directly to ERDF rather than the planned off-site treatment facility.

RL-0013 TRU Waste – TRU Retrieval - Experiencing efficiencies in TRU Repackaging, TRU facility operations; partially offset by continuing to incur costs without making TRU Retrieval progress; also experiencing increased allocations associated with Project Services and Office Space as a result of increased Recovery Act expenditures.

Base

CTD Schedule Performance (-\$2.9M/-1.6%)

Delay in Next Generation TRU Retrieval procurements and long term box storage remediation; delay in WESF roof upgrade pending weather improvements; and delays in receipt of W-5 waste returns from PermaFix Northwest to the Mixed Waste Disposal Trenches due to higher priority scope.

CTD Cost Performance (+\$4.2M/+2.3%)

Positive cost variances were attributable to Mixed Low Level Waste Treatment efficiencies (disposal vs. offsite treatment), TRU repackaging activities completed with less resources than planned, a FY09 reduction in labor rates, reduced labor requirements in Liquid Effluent Facilities (LEF), and Slightly Irradiated Fuel Preparations recognized project /contract efficiencies allowing completion under budget; partially offset by continued use of MSC support services above plan.

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
ARRA	153.5	132.5	21.0
Base	<u>108.7</u>	<u>97.9</u>	<u>10.8</u>
Total	262.2	230.5	31.8

Numbers are rounded to the nearest \$0.1M.

Funds/Variance Analysis

Projected funding includes FY 2009 uncosted and FY 2010 expected new budget authority.

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.

Baseline Change Requests

None.

MILESTONE STATUS

Tri-Party Agreement 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, submitted in January, defines CHPRC planning with respect to TPA milestones.

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
M-091-45	Complete Negotiations And Submit Change Package Replacing Specified M-91 TBD Dates	TPA	3/31/10			On schedule. Negotiations ongoing. Date extended one month by approved change request.
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

Number	Title	Type	Due Date	Actual Date	Forecast Date	Status/ Comment
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 by 9/30/10	TPA	9/30/10			Ahead of 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