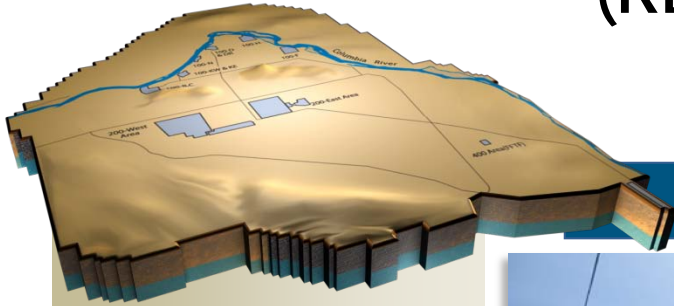


Section C

Solid Waste Stabilization and Disposition (RL-0013)



Monthly Performance Report

L.T. Blackford
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Waste and Fuels
Management Project



**Waste
Encapsulation and
Storage Facility
Roof Upgrades**

**Waste Retrieval: 3A
Trench 17 Box 24
Removal**



**4B Trench 11
Removal of Five
Metal Containers**



April 2011
CHPRC-2011-04, Rev. 0
Contract DE-AC06-08RL14788
Deliverable C.3.1.3.1 - 1

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 74 cubic meters (m³) to processing, (1,151 total under ARRA) and completed 51 m³ during the month (1,004 total under ARRA); M-91-43 – shipped 63 m³ to processing (235 m³ total under ARRA) and completed 24 m³ during the month (131 m³ total under ARRA), Transuranic (TRU) Retrieval removed 188 m³ of contact handled (CH)TRU waste from the trenches and shipped 145 m³ of CH TRU waste and 36 m³ of Remote Handled (RH) TRU waste. Next Generation Retrieval (NGR) removed 178 drums (37.0 m³) and one box (1.0 m³); completed assay of 73 drums (Gamma Assay), three drums (Passive/ Active Neutron [PAN] Assay System), and one box (portable assay).

TRU Repackaging completed repackaging of 127 m³ of TRU waste during the month and TRU Disposition completed 13 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 “ready to serve” demonstrations on Multi-Canister Overpack (MCO) receipt and MCO Handling Machine operations.

The Central Waste Complex (CWC) mobilized and began work on the Navy project to re-grade the route 2S curve; shipped 42 on-site transfers, 425 containers and received 9 shipments, 92 containers.

Liquid Effluent Facilities sent 1.3M gallons of treated effluent to the state-approved land disposal site and continued with Basin 43 Processing Campaign (processed 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	1	5	4/21/11 An employee fell when walking on a carpeted floor surface in an office area. The employee reported that their shoe caught on the carpeting causing them to fall. As a result of the fall the employee suffered a fracture to their right knee. An inspection of the area where the event occurred did not identify any unusual or unsafe conditions associated with the walking surface. Days Away case.(21925)
Total Recordable Injuries	1	10	Same as above case.
First Aid Cases	5	117	4/5/11: Simple Green, an all purpose cleaner, was being used to clean walls and floors. When an employee entered the area, the employee developed a headache and throat irritation. (21883) 4/7/11: While carrying a bag of instruments, employee describes a feeling of their leg seeming to give out and nearly fell to floor. Felt pain in the leg. (21891) 4/15/11: Employee was performing routine container transport activities and noticed pain in foot. (21904) 4/13/11: While unloading a double stacked salt container, the lid opened and struck hand. (21902) 4/21/11: During a response to an emergency drill, employee carried heavy bag (approx. 40 lbs) and felt pain in lower back and neck area. (21921)
Near-Misses	0	1	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 74 m³ to processing (1,151m³ total under ARRA)
 - Completed 51 m³ (1,004 m³ total under ARRA)
- M-91-43 MLLW:
 - Shipped 63 m³ to processing (235 m³ total under ARRA)
 - Completed 24 m³ (131 m³ total under ARRA)

- MLLW key performance parameters (KPP) of 1,800 m³:
 - Shipped 1,386 m³ to date
- Completed shipment of the remaining sodium metal contaminated debris waste package from the CWC to Impact Services located in Tennessee. Of the 40 packages shipped, parts of two packages remain to be processed.
- Initiated shipment of the large M-91-43 MLLW packages from the CWC (nondestructive analysis [NDA] campaign resulted in drop out from TRU management)
- Completed the treatment and disposal of the legacy beryllium powder “P015” designated waste package in storage at the CWC since the late 1990’s
- Shipped the last of three high Cs-137/Sr-90 legacy Tank Farm M-91-43 MLLW boxes from the CWC to Perma-Fix Northwest (PFNW) by use of the Contaminated Equipment Special Packaging Authorization

13.05 TRU Retrieval

- CH-TRU Retrieval Volumes
 - Removed 188 m³ CH-TRU waste from trenches – 1,526 removed to date
 - Retrieved 145 m³ CH-TRU waste (shipped to Treatment, Storage, Disposal Facility) – 990 m³ retrieved to date
- TRU Retrieval Activities
 - Excavated and removed 3A Trench 17 Boxes 24 and 25 (108.8 m³)
 - Completed mitigation of Trench 17 areas contaminated from rodent infestation and fogged the interior of 3A Trench 17 Box 27
 - Developed procedure for excavation within high contamination area (HCA) and performed excavation of 3A Trench 17 Boxes 26 and 27
 - Shipped one 3A Trench 8 CH container (3.2 m³) to PFNW
 - Shipped three RH large culverts (25.3 m³) to CWC
 - Removed 14 metal containers (41.7 m³) from 4B Trench 11
 - Completed 4B Trench 11 portable assay of twelve waste containers
 - Awarded contract for specially designed overpack container for 4B Trench 11 metal Box 101
- NGR
 - Removed 178 drums (37.0 m³) and one box (1.0 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
 - Completed assay of 73 drums (Gamma Assay), three drums (PAN), and one box (portable assay)
 - Vented drums assaying TRU and x-rayed nine drums in the Real-Time-Radiography System
 - Loaded and prepared six 8’ x 4’ x 4’ waste boxes containing six drums each and one 9’ x 5’ x 5’ waste box containing one filter box for shipment to PFNW

13.06 TRU Repackaging

- T- Plant Repack
 - Processed 45 parent drums and created 90 offspring drums
 - Generated three drums from glovebag change outs
 - 216-Z-9 Repack Campaign & Equipment

- Vented 54 drums in 2706-T Building
- Completed re-write and approval of DO-100-061, Drum Waste Processing for debris waste
- Waste Receiving & Packaging Facility (WRAP) Repack
 - 23 drums repacked
 - Draft Beryllium Negative Exposure Assessment in review for Process Area operations
- RH/Large Package Repackaging
 - Size reduction of large-container Transuranic mixed (TRUM) waste packages shipped from CWC:
 - 458 m³ shipped to date (378 m³ repackaged to date)
 - Initiated NDA of the repacked drums and boxes at PFNW
 - 86 m³ of MLLW dropout waste generated
 - 71 m³ of TRUM waste repackaged
 - Supported Washington River Protection Solutions Point-of-Generation TRUM Repack (200m³): Shipped 12.3m³ from LLBG 3A to PFNW for repackaging

13.07 WRAP

- Nondestructive examination: 186 drums (127 for Central Characterization Project [CCP])
- NDA: 255 drums – 133 for CCP
- Flammable gas analysis sampling: 160 drums
- Received 76 TRU drums and nine standard waste boxes (SWB) from Plutonium Finishing Plant
- Continued review and approval of the Beryllium Negative Exposure for the Process Area
- Completed installation of new floor scale for SWB weighing operations in 2404WC

13.08 T-Plant

- Received 33 containers at T Plant
- Shipped 107 containers from T Plant
- Initiated effort to expand available storage space for additional drums for repack/venting by shipping out completed repackaged and other 55- gallon waste drums
- Beryllium Program
 - 94 percent of remaining T-Plant Operations personnel and 100 percent of remaining T-Plant RadCon personnel are cleared beryllium workers

13.15 TRU Disposition

- Shipments to the WIPP: Current Month total – 13, total WIPP shipments to date – 97

Base

13.02 Capsule Storage & Disposition

- WESF
 - Continued upper roof upgrades
 - Continued pool cell cleaning
 - Continue capsule relocation activities
 - Resumed canyon maintenance activities
 - Completed replacement of MO-232 roof

- WESF K1 & K3 Heating, Ventilation, and Air Conditioning Upgrades
 - Completed and released Conceptual Design Report
 - Updated and issued Functional Design Criteria, Revision 1
 - Completed Notice of Construction Application/the American Society of Mechanical Engineers Code on Nuclear Air and Gas Treatment (AG-1) Compliance Matrix

13.03 Canister Storage Building

- Completed “ready to serve” demonstrations on MCO receipt and MCO Handling Machine operations
- Completed installation of additional heat pump in shift office
- Completed annual air compressor maintenance
- Completed warm weather preparations

13.07 WRAP

- Maintained the facility in a safe and compliant condition

13.09 Central Waste Complex (CWC)

- Shipped ten on-site transfers, 499 containers
- Shipped eight offsite shipments, 21 containers
- Received 42 on-site transfers, 425 containers
- Received nine offsite shipments, 92 containers
- Mobilized and began work on the Navy project to re grade the route 2S curve
- Completed the removal of the shield wall around MO-288 Dispatch building

13.11 Liquid Effluent Facilities (LEF)

- Received 29 tankers (243K gallons)
- Treated effluent to State-Approved Land Disposal Site: 1.3M gallons
- 200A Treated Effluent Disposal Facility discharged 410K gallons
- Received Environmental Restoration Disposal Facility (ERDF) leachate (124K gallons) at Liquid Effluent Retention Facility Basin 44
- Continued operating the 310 Area Retention Transfer System (ten batches/311K gallons)
- Received twelve drums of Waste Sampling and Characterization Facility wastewater
- Received 1,000 gallons of 50 percent sodium hydroxide
- Loaded and shipped ten powder drums to ERDF
- Continued with Basin 43 Processing Campaign (processed 1.3M 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: Institute multiple summer shifts to maximize daylight hours and mitigate heat impacts, use staff rotation to extend operational effectiveness, retrieval established as a priority resulting in obtaining required outside resources, deploy additional excavation crew at 12B and complete the 12B ramp, early purchase of material required to remove and overpack waste containers, and implemented actions required to remove drums from 4B Trench 7.

Status – Performance Measurement Baseline and Performance Based Incentive milestones could be at risk.

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 – EPA Tier 1 audit completed with two Corrective Action Reports

Issue – Competing special nuclear material (SNM) and Am-241 possession limits at PFNW will restrict some TRUM shipments to PFNW during FY2011

Corrective Action – Establish a priority for waste shipment to PFNW based on Performance Indicator (PI) objectives; Actively work with PFNW to reduce turn-around time for waste residing at PFNW; PFNW to determine alternatives that would reduce the overall SNM/Am-241 inventories at PFNW

Status – Priorities established, additional Waste Management Representative assistance provided to PFNW to aid in reducing turn-around time; and the majority of the MLLW dropout drum shipments from 12B and 4B have been shifted to late summer time frame.

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 Complexities	Accelerate "next generation" retrieval	●	↔	Significant container degradation encountered; Draw down of MR implemented March for additional summertime overtime shifts. However, continuing issues with container integrity are expected and OT may not be adequate to mitigate all impacts.
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
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
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 document 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	1.1	1.3	0.9	0.2	15.1	0.4	27.8
TRU Waste	<u>11.9</u>	<u>13.3</u>	<u>10.9</u>	<u>1.5</u>	12.4	<u>2.5</u>	18.5
ARRA Total	13.0	14.6	11.8	1.6	12.7	2.8	19.3
Base	<u>5.9</u>	<u>6.4</u>	<u>6.9</u>	<u>0.5</u>	7.7	<u>(0.6)</u>	-8.7
Total	18.9	21.0	18.7	2.1	11.1	2.3	10.8

Numbers are rounded to the nearest \$0.1M

ARRA

Current Month (CM) Schedule Performance (+\$1.6M/+12.7%)

RL-0013 MLLW Treatment – MLLW Treatment – Within Threshold - Schedule recovery for Large Type A waste container shipments to PermaFix Northwest.

RL-0013 TRU Waste – Accelerated RH/Large Package Commercial Repack, and schedule recovery for TRU Retrieval work planned in prior period(s).

CM Cost Performance (+\$2.8M/+19.3%)

RL-0013 MLLW Treatment – Within Threshold - Delay in receipt of costs for 435.1 waste disposal, efficiencies in Large Type A waste container shipments to PFNW.

RL-0013 TRU Waste – Delay in receipt of costs for RH/Large Package Commercial Repack , lower usage based services and G&A than planned, efficiencies in TRU Characterization and Shipping and T-Plant; partially offset by increased materials, subcontractors, and labor in support of TRU Retrieval (including cost transfer for crane & rigging charges from prior months).

Base

CM Schedule Performance (+\$0.5M/+7.7%)

Completion of Effluent Treatment Facility (ETF) Thin Film Dryer vessel procurement planned in prior period, completion of Next Generation CH TRU Retrieval electrical utility procurement previously delayed by site prep, partially offset by delayed start to WESF K1/K3 Upgrades Definitive Design pending decision to move forward with final design.

CM Cost Performance (-\$0.6M/-8.7%)

Increased assessments above plan; partially offset by completion of ETF TFD vessel without commensurate costs.

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	41.1	36.8	35.1	(4.2)	-10.3	1.7	4.6	47.8	47.5	0.3
TRU Waste	<u>185.5</u>	<u>183.1</u>	<u>186.4</u>	(2.4)	-1.3	(3.3)	-1.8	<u>250.2</u>	<u>253.5</u>	(3.4)
ARRA Total	226.6	220.0	221.6	(6.6)	-2.9	(1.6)	-0.7	297.9	301.0	(3.1)
Base	<u>279.6</u>	<u>278.1</u>	<u>285.6</u>	(1.5)	-0.5	(7.5)	-2.7	<u>1,623.7</u>	<u>1,571.8</u>	<u>52.0</u>
Total	506.2	498.1	507.2	(8.1)	-1.6	(9.1)	-1.8	1,921.7	1,872.8	48.9

Numbers are rounded to the nearest \$0.1M

ARRA

CTD Schedule Performance (-\$6.6M/-2.9%)

RL-0013 MLLW Treatment – Mixed Low Level Waste shipments delayed due to receiving facility's inability to receive extra-large sized waste shipments pending permit/building modifications (permits now obtained), coupled with delay in receipt of M-91-42 waste feed from TRU Retrieval, delay in Large Type A Waste container shipments to PFNW; partially offset by 435.1 Compliance Waste processing being achieved ahead of schedule.

RL-0013 TRU Waste – T-Plant Repack impacted by need to vent drums with 90 mil liners, coupled with slow restart due to equipment issues for recovery operations for the Beryllium Program implementation, TRU Retrieval delays due to container shipping authorization, coupled with cancellation of remote controlled unit (robot) procurement and delayed closeout of Trench Face Processing System procurement due to on-going negotiations with vendor, delayed TRUPACT II shipping due to unavailability of WIPP conveyances and inability to characterize Standard Waste Boxes due to CCP's delayed start up of the High Energy Real Time Radiography equipment; partially offset by accelerated RH/Large Package Commercial Repack.

CTD Cost Performance (-\$1.6M/-0.7%)

RL-0013 MLLW Treatment – Mixed Low Level Waste costs below plan due to efficiencies created by treating waste at Energy Solution (ES)-Clive rather than planned treatment at PFNW due to a waiver received from DOE-HQ, decreased operational costs at CWC, efficiencies in Large Type A waste container shipments to PFNW; partially offset by higher subcontractor 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 installation and start up, coupled with increased resources for TRU Retrieval deteriorated waste containers, increased allocation for additional office space and other assessments as a result of increased Recovery Act expenditures; partially offset by efficiencies in TRU Characterization and Shipping, T-Plant and WRAP, delay in receipt of costs for RH/Large Package Commercial Repack, and lower overhead allocations.

Base

CTD Schedule Performance (-\$1.5M/-0.5%)

Delayed start of WESF K1/K3 Upgrades Definitive Design pending decision to move forward with final design, coupled with continued delays for WESF roof upgrades, CSB engineering activities delayed due to resource availability (assigned to higher priority activities), delay in ETF upgrades to determine fire protection requirements; acceleration of WRAP high-efficiency particle absorber filter replacement

(scheduled for FY2013).

CTD Cost Performance (-\$7.5M/-2.7%)

Increased assessments above plan, TRU Retrieval additional resources to deal with deteriorated containers and drum wedge issue, FY2009 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, and lower overhead 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 Base EAC increased \$15.9M from the prior month primarily due to updating of the Waste Management EAC to correct errors and omissions. An additional \$2.8M increase associated with the Displaced Workers Medical Benefits will occur from FY2012 through FY2014 as a result of an RL approved reduction in force to be implemented in September 2011.

FUNDS vs. SPEND FORECAST (\$M)

WBS 013/RL-0013 Waste and Fuels Management Project	FY2011		
	Projected Funding	Spending Forecast	Spend Variance
ARRA	162.5	162.5	0.0
Base	90.7	83.8	6.8

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-11-021R0, Transfer of Workforce Restructuring to ARRA Only

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		6/30/11	On Schedule
M-091-03D-02	Submit Revision of PMP for Disposition of No-Path-Forward Waste	TPA	6/30/11		6/30/11	On Schedule
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		9/30/11	On Schedule
M-091-44Z-002	Min. Annual PMM or Qtrly Notification of Cert. of CH/RH TRUM	TPA	12/31/11		12/31/11	On Schedule
C-026-07G	Tritium Treatment Technology Developments to Ecology & EPA	TPA (commitment)	3/31/12		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