

# Waste Management Project

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### 183-H Basin Waste Disposal

Received engineering evaluation/cost analysis approval and initiated transfer of 183-H Basin waste to the Environmental Restoration Disposal Facility (ERDF) for disposal. Currently, the 12,300 containers represent 60% of wastes stored in Central Waste Complex (CWC) facilities.



## INTRODUCTION

The Waste Management Project consists of Project Baseline Summary (PBS) RL-CP02, *200 Area Materials and Waste Management*, except for the Environmental Restoration Disposal Facility (ERDF), which is work scope managed by another Site contractor. Additional scope was reassigned from the Central Plateau Project in July 2003: RL-RS01, South Hanford Industrial Area; RL-SC01, Near Term Stewardship; RL-SS03, Groundwater Management and Monitoring; and RL-SS04, Groundwater Vadose Zone Integration.

NOTE: Unless otherwise noted, all information contained herein is as of the end of July 2003.

## NOTABLE ACCOMPLISHMENTS

**Transuranic (TRU) Waste Program:** Shipped 157 cubic meters (m<sup>3</sup>) to date to the Waste Isolation Pilot Plant (WIPP) versus 78 m<sup>3</sup> planned for FY 2003, including four shipments in July. Completed shipments to the Central Waste Complex (CWC) of Sand, Slag and Crucible pipe over-pack containers (POCs) from the Plutonium Finishing Plant (PFP). RL approved the National Environmental Policy Act (NEPA) Categorical Exclusion (CX) for full operation of the non-destructive Assay (NDA) and non-destructive examination (NDE) units.

**TRU Waste Retrieval:** A revision to the project Notice of Construction to more accurately reflect the operating process was submitted to the Washington Department of Health. A Document Safety Analysis requirement for precise tracking of drums has been implemented by completing an upgrade to the Solid Waste Information and Tracking System for real-time scanning. Safety basis training has been initiated. The mobile office for field support personnel has been installed. Fabrication for the Drum Venting System has been completed and testing was initiated. The scopes and schedules for the Low Level Burial Grounds Independent Verification Review and TRU Retrieval Project Readiness Assessment have been integrated.

**Mixed Low Level Waste (MLLW) Treatment:** Completed twenty shipments totaling 257 m<sup>3</sup> of 183-H Basin waste to ERDF. This waste stream represents approximately 60% (3,730 m<sup>3</sup> or 12,300 containers) of currently stored MLLW at the CWC. Twenty to twenty-four shipments a month are currently being scheduled, dependent on the availability of resources and funding. Completed seven shipments totaling 99 m<sup>3</sup> of MLLW debris and radioactive lead solids to ATG, Inc. (ATG). Received five MLLW shipments totaling 50 m<sup>3</sup> (63 m<sup>3</sup> pre-treatment volume) of macroencapsulated debris and radioactive lead solids from ATG.

**Liquid Waste Processing:** The 200 Area Effluent Treatment Facility treated 3.8 million gallons of Operable Unit UP-1 groundwater and ERDF leachate. The 300 Area Treated Effluent Disposal Facility treated and disposed of 4.1 million gallons of industrial wastewater, supporting cleanout of several 300 Area facilities.

**Groundwater Protection:** The U Plant Closure Area Waste Sites Focused Feasibility Study, Draft A (DOE/RL-2003-23) and the Proposed Plan, Draft A (DOE/RL-2003-24) were submitted to the Environmental Protection Agency and the Washington State Department of Ecology (Ecology) (M-015-47) as scheduled.

A contract was awarded to decommission 57 wells in the U Plant and PFP area. The subcontractor commenced decommissioning on July 30, 2003, toward a contract completion date of October 30, 2003.

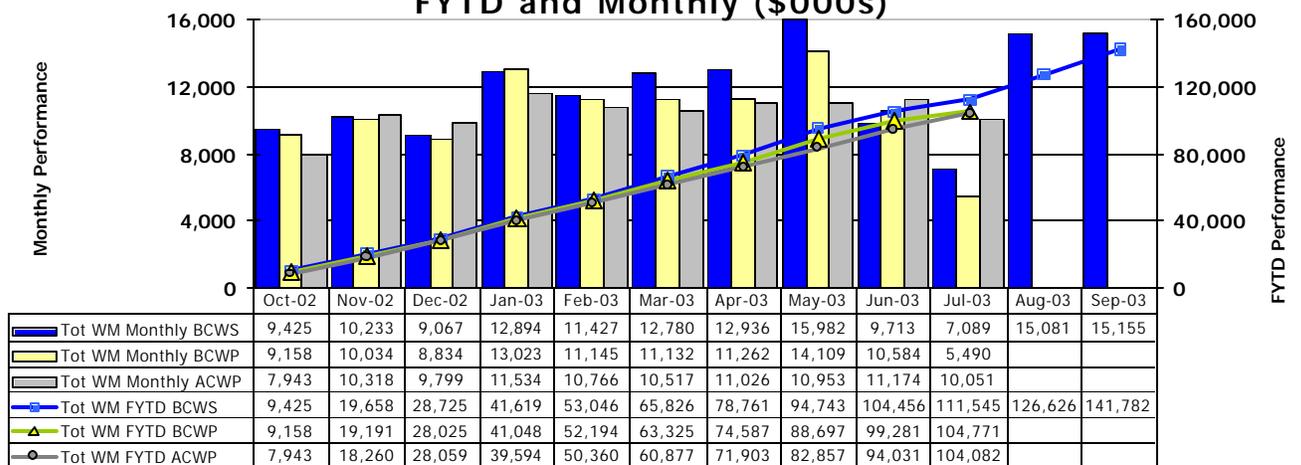
## FY 2003 SCHEDULE/COST PERFORMANCE (\$000)

**Schedule Performance:** Variances for PBSs RS01, SC01 and SS04 are within established thresholds and therefore are not addressed. The RL-CP02, -\$5,039K, unfavorable schedule variance is primarily the result of TRU Retrieval training, procedural and readiness implementation being behind schedule. Contractors have been hired to recover the schedule for readiness documentation and procedure updates. TRU Retrieval readiness assessment demonstration is tentatively scheduled for the end of September. The receipt of the sludge from K Basin is behind due to delays in preparation of the readiness assessment. T-Plant has received RL authorization to proceed with startup for receipt and storage of K Basin Sludge. The shallow trench development has been deferred to FY 2004. The CWC fire deficiency upgrades are behind due to finalization of work scope. The CWC upgrades are now scheduled to start in August and will finish early next year. The RL-SS03, -\$1,444K, unfavorable variance is the result of a delay in selection of groundwater remediation treatment options, delay in award of a well decommissioning contract, and delays in the Modutank closure due to delays in regulator approval of the remediation plan. Approximately \$1.1M in carryover into FY 2004 is projected.

**Cost Performance:** Variances for PBSs CP02, RS01, SC01 and SS04 are within established thresholds and therefore are not addressed. RL-SS03, +\$1,107K, cost efficiencies have been achieved in the labor for pump and treat activities, reduced sampling for well drilling and lower material and labor costs for the 200-ZP-1 work.

		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
RL-CP02	200 Area Materials & Waste Mgm't	90,047	85,009	85,621	-5,039	-6%	-612	-1%	114,420
RL-RS01	South Hanford Industrial Area Clean Up	186	199	192	13	7%	7	3%	253
RL-SC01	Near Term Stewardship	2,009	1,807	1,720	-203	-11%	86	5%	2,482
RL-SS03	Groundwater Management & Monitoring	16,582	15,138	14,031	-1,444	-10%	1,107	7%	21,445
RL-SS04	Groundwater/Vadose Zone Protection	2,721	2,619	2,518	-102	-4%	100	4%	3,181
<b>Total Waste Management Project</b>		<b>111,545</b>	<b>104,771</b>	<b>104,082</b>	<b>-6,774</b>	<b>-6%</b>	<b>689</b>	<b>1%</b>	<b>141,782</b>

### Performance Analysis FYTD and Monthly (\$000s)



## MILESTONE ACHIEVEMENT

Number	Milestone Title	Type	Due Date	Forecast Date	Status/Comment
M-91-22	T Plant ready to rec. Canister & fuel wash sludge from K Basin	TPA	2/29/2004	2/29/2004	Letter to RL drafted recommending milestone deletion
M-26-07A	Submit Evaluation of Status of Development of Tritium Treatment Technology	TPA	3/31/2004	3/31/2004	On schedule
M-26-01N	Submit Annual Hanford LDR Report	TPA	4/30/2004	4/30/2004	On schedule
M-91-07	Complete W-113 for Post 1970 CH TRU / TRUM Retrieval	TPA	9/30/2004	TBD	TPA renegotiation ongoing
M-91-12A	Treat 240 Cubic Meters by 12/31/2004	TPA	12/31/2004	TBD	Letter of completion submitted to RL (treatment equivalency)
M-15-39A	Complete Chemical Sewer Group Field Work Through Sample Collection and Analysis	TPA	9/30/2003	8/30/2003	Final analytical results were rec'd on June 30. The final report is being prepared for delivery on August 30.
M-03-403	Optimization Plan for the Closure of the Central Plateau	RL	9/30/2003		On Schedule
M-03-224	Submit 1 200 NPL RI/FS (RFI/CMS) Work Plan	TPA	12/31/2003		On Schedule
M-03-124	Install RCRA Groundwater Monitor Wells at Rate of up to 50 in CY 2003, if required	TPA	12/31/2003		On Schedule
M-03-239	Submit Part B Permit Applications or Closure/Post Closure Plans for all RCRA TSD Units Except 216-A-10, 216-A-36B, 216-A-37-1, 207-A South Retention Basin, 216-S-10 Pond, 216-S-10 Ditch, 241-CX-70, 241-CX-71, and 241-CX-72	TPA	2/28/2004		On Schedule
M-03-227	Submit 200-TW-1 and 200-TW-2 OU Feasibility Study and Proposed Plan to EPA and Ecology	TPA	3/31/2004		On Schedule
M-03-230	Submit 200-CS-1 Chemical Sewer Group Remedial Investigation Report	TPA	5/31/2004		On Schedule
M-03-233	Submit 200-PW-2 OU Remedial Investigation Report Including Past Practice Waste Sites in 200-PW-4 General Process Waste Group	TPA	6/30/2004		On Schedule
M-03-236	Initiate Intermediate Design and Authorization Safety Analysis for Remedial Actions at the 618-10 ans 618-11 Burial Grounds	TPA	9/30/2004		On Schedule

## FY 2003 FH FUNDS VS. FORECAST (\$000)

	Expected Funds	Spend Forecast	Variance
<b>RL-CP02</b> Waste Management <b>Project Completion - Operating</b>	\$ 111,450	\$ 113,466	\$ (2,016)
<b>RL-RS01</b> South Hanford Industrial Area	\$ 153	\$ 247	\$ (94)
<b>RL-SC01</b> Near Term Stewardship	\$ 2,493	\$ 2,119	\$ 374
<b>RL-SS03</b> Groundwater Management & Monitoring	\$ 21,089	\$ 18,931	\$ 2,158
<b>RL-SS04</b> Groundwater Vadose Zone Integration	\$ 3,217	\$ 3,159	\$ 58
<b>Post 2006 - Operating</b>	<b>\$ 26,952</b>	<b>\$ 24,456</b>	<b>\$ 2,496</b>
<b>Total</b>	<b>\$ 138,402</b>	<b>\$ 137,922</b>	<b>\$ 480</b>

## ISSUES

**Receipt of an Administrative Order on Washington Hazardous Waste Management Act and Dangerous Waste Regulation:** Significant acceleration of retrieval, designation, treatment and certification of MLLW and TRU waste is required. The stay was extended through August 31, 2003, for section II.C.ii. The draft Sampling and Analysis Plan for burial ground 218-W-4C was completed and will be transmitted to RL on August 8, 2003. Until negotiations are concluded, the terms of the Order remain in effect and are difficult, if not impossible, to meet based upon current and planned waste retrieval, designation, treatment and certification capabilities for MLLW and TRU waste. Significant impacts include additional funding needs above the current baseline to execute new work scope, and the risk of being subject to enforcement by Ecology if the terms are not met.

**TRU Program Acceleration:** Increase production rates for TRU waste certification and shipment to the WIPP.

- Add bargaining unit resources at the Waste Receiving and Packaging (WRAP) plant to allow parallel TRU characterization efforts: Twenty-two bargaining unit resources have been added to date of 40 that were originally planned. Recent efficiency improvements at WRAP have somewhat reduced the need for the entire complement of resources. FH continues to evaluate resource needs, and plans to immediately transfer three additional nuclear chemical operators from T-Plant to WRAP. FH will reevaluate further resource needs at the end of the fiscal year.
- Accelerated Process Line (APL) implementation: Both the NDA and NDE units have arrived on site and are operational. Both units have been temporarily located outside of the 2403 building at the CWC until the modifications at 2404-WC are complete later this summer. The Head Space Gas Sample (HSGS) APL unit is due to arrive at Hanford in August. It is scheduled for installation in 2404W-C as soon as the heating, ventilation and air conditioning (HVAC) construction project is complete. The NEPA CX for operation of the NDA, NDE, and for the HSGS unit has now been approved by RL.
- Modify 2404-WC facility by adding a HVAC system for storage of drums (at temperature) prior to HSGS. Construction is progressing and is scheduled for completion by the end of August.

## **ISSUES, CONTINUED**

- Accelerate the certification of the PFP mixed oxide residue waste stream: The schedule for achieving certification of this stream has been finalized, with final certification scheduled for the end of September 2003. This effort will immediately release 195 POCs, around seven shipments, and potentially an additional 1,160 POCs, or 41 shipments, in early calendar year 2004.
- Implement solids sampling at PFP: Procedures and training are in place and were evaluated as part of the June 2003 audit. This effort is necessary to complete the characterization of approximately 600 Hanford Ash and Rocky Flats Ash POCs generated by PFP. Arrangements with the Idaho National Environmental and Engineering Laboratory have been tentatively made for receipt and analysis of solids samples on August 28, 2003.

**Buried TRU Drum Retrieval:** Initiate TRU drum retrieval by October 2003. FH responded to an RL request to evaluate feasibility of extensive project work scope acceleration of retrieving 4,100 m<sup>3</sup> by 2006, and adding box and uncontainerized waste retrieval. The increased retrieval rates were proposed by Ecology during negotiations to resolve the Administrative Order (see above Issue). The Defense Nuclear Facility Safety Board site visit is scheduled for August 27-28, 2003, to review the TRU Retrieval Project. The factor acceptance test is underway on the mobile drum venting system. Delivery to Hanford is expected by August 18, 2003. Training and qualification of workers is to be completed by early September. The Implementation Validation Review and the Readiness Assessment (RA) contractor review will both be started by September 2003. The final RL RA approval/startup will be initiated by October 2003.