

Nuclear Facility Deactivation and Decommissioning (D&D), Remainder of Hanford (RL-0040)

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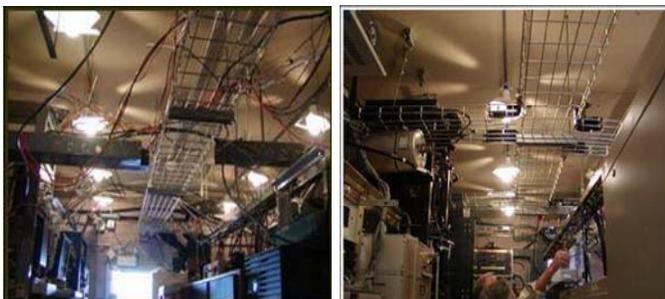
212-N

Retrieved crates from mezzanine level



200 North Site

Completed waste site 5 excavation



Before

After

***L-598, Near Term Repairs
4 Repeater Facilities cable
management clean-up
effort***

Overview

This section addresses Project Baseline Summary (PBS) RL-0040, Nuclear Facility Deactivation and Decommissioning (D&D), Remainder of Hanford. There are three major components to this work scope:

- Central Plateau Deactivation & Decommissioning (R. E. Wilkinson),
- Waste Sites Remediation (B. H. Ford), and
- Reliability Projects (R. G. Slocum).

NOTE: Unless otherwise noted, all information contained herein is as of the end of May 2007.

Notable Accomplishments

PBS RL-0040, Nuclear Facility D&D, Remainder of Hanford

Central Plateau D&D:

200-UW-1 U Plant Zone Waste Site Remediation:

- Justification of the STOMP model (Volume I) transmitted to Fluor Hanford (FH), CH2M HILL, Pacific Northwest National Laboratory (PNNL), the U.S. Department of Energy, Richland Operations Office (RL), and the U.S. Department of Energy, Office of River Protection (ORP) for external review on June 8, 2007. The 200-UW-1 Operable Unit (OU) Remove, Treat, and Disposal (RTD) Remedial Action Goal (RAG) Technical Basis document (Volume II) was transmitted for internal FH review on June 11, 2007.
- 241-U-361 Tank sample analysis Letter of Instruction (LOI) accepted by Advanced Technologies and Laboratories International, Inc. (ATL).

200 North Sites – RTD:

- Initiated sites 2 and 3 closure reports.
- Completed waste site 5 excavation.
- Sampled waste site 5.
- Started waste site 7 excavation.

221-U Facility Canyon:

- Completed U Canyon Reactivation Health and Safety Plan (HASP).
- Issued the Cell 30 Vessel Contents Removal Study.
- Incorporated final review comments into the Canyon Grout and Void Fill Study.
- Issued the U Canyon Railroad Tunnel Reactivation Study.
- Distributed the U Canyon Waste Acceptance Study for FH internal review.
- Submitted the Cell 30 Design Safety Analysis (DSA) to Safety Review Board for review.

212-N Facility:

- Retrieved crates #12, 14, 15, 16, and 17 from the mezzanine level. Fourteen of fifteen crates have been retrieved to-date - only crate #20 remains.
- Nondestructive assay (NDA) completed on nine crates.
- Contaminated Equipment Special Packaging Authorization (CE SPAs) for crates #4, 7, 8, and 9 were approved by RL.

PUREX and Canyons:

- Continued development of the draft Multi-Canyon Project Management Plan.
- Began PUREX Data Quality Objective (DQO) process.

Notable Accomplishments, continued

Waste Sites Remediation:

- Completed BC Cribs Treatability Test Plan, Draft A, Data Quality Objective (DQO) and Sampling and Analysis Plan (SAP).
- SAP for characterizing the A-2 and A-21 cribs was approved by EPA.

Reliability Projects:

- Completed and submitted the DOE Order 430.1B, Real Property Asset Management, impact analysis and cost estimate to RL on May 17, 2007.
- Completed and submitted the 2005 Energy Policy Act Reliability Standards (Section 1211) mitigation plans, and other related documents to meet June 2007, compliance deadline date.
 - RL submitted compliance documents to the Western Electric Coordinating Council (WECC) headquarters in Salt Lake City.
- Continued progress on current year reliability projects.
 - Awarded the rock crushing and chip seal construction contract for L-515, *Chip Seal from Route 4S between Wye Barricade and Route 11A*, on May 10, 2007.
 - Completed definitive design for L-614, *Repeater Sites Safety Renovation*, on May 16, 2007.
 - Solicited bids for L-626, *100B Export Water System Reliability Enhancements*, water line installation and sprinkler construction on May 16, 2007.
 - Completed definitive design for L-615, *273E Renovations*, on May 16, 2007.

FY 2007 Funds vs. Spend Forecast (\$M)

	Projected FY 2007 Funding	FY 2007 Fiscal Year Spend Forecast	Variance
RL-0040 Nuclear Facility D&D, Remainder of Hanford	\$ 69.5	\$ 65.4	\$ 4.1

Schedule/Cost Performance (\$M)

Nuclear Facility D&D, Remainder of Hanford	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 (FY07/CTD)
Current Period (Month)	\$2.2	\$5.2	\$4.8	\$3.0	132.4%	\$0.4	8.0%	\$60.7
Cumulative-to-Date (FY 2004-Present)	\$223.7	\$223.6	\$220.6	-\$0.1	0.0%	\$3.0	1.3%	\$320.8

Numbers are rounded to the nearest \$0.1M.

CTD Schedule Performance (-\$0.1M/-0.0%):

The schedule variance (SV) for the Central Plateau D&D Project (CP D&D) organization (+\$2.6M) is due to:

- Delays in W-42 pipeline removal backfill due to resolution of RAGs and delays in vadose zone characterization due to critical resources working on RAGs which is considered a higher priority (-\$0.4M).
- Delayed receipt of exhaust fans for REDOX/U Plant and delays in PUREX HEPA filter change outs due to outside resource availability (-\$0.4M).
- Delays in procurement/installation of the decon and shower trailers (-\$0.3M).
- Offset by demolition of post contract period structures (+\$3.6M).

Schedule/Cost Performance (\$M), continued

CTD Schedule Performance, continued:

The improving unfavorable SV in Waste Sites (-\$1.8M) is due to the following:

- Delays in engineering studies/miscellaneous (-\$0.3M). No impacts; studies will be replanned to FY 2008.
- Delays in the scheduled MW-1 (\$-0.8M) feasibility study activities due to competing priorities. No impacts; recoverable.
- Delays in the Remedial Investigation Report (RIR), Feasibility Study (FS) and Proposed Plan (PP) for 200-PW-1/3/6 (-\$0.1M).
- Delays in SW-2 collaborative DQO which is taking longer than planned due to a large number of regulatory participants, issues and concerns; resources focusing on DQO causing additional delays in other SW-2 scope (work plan, modeling, and data management and passive vapor sampling) (-\$0.4M). Impacts and recovery: based on assessments by the project lead, recovery of this schedule variance will be possible only with a baseline revision.
- Other miscellaneous delays (-\$.04M).
- Offset by completion of workscope in FY 2005 and 2006 accelerated from FY 2008 (+\$0.2M).
- Offset by early start of down posting surveys at 200-UR-1 (+\$0.2M).

The unfavorable SV for Reliability Projects (-\$0.8M) is primarily due to the following factors:

- L-626, *100B Export Water System Reliability Enhancements*, was delayed due to pump procurement and environmental impact assessment complexities (-\$0.3M). A change in the project construction schedule logic will allow installation activities (removal of old pumps and the pre-installation activities for the new pumps) concurrent with assembly of pumps offsite.
- Numerous projects were delayed due to resource unavailability (i.e., L-614, *Repeater Sites Safety*, and update of Infrastructure Reliability Master Plan) (-\$0.3). Projects have been initiated.
- L-515, *Chip Seal Route 4S from Wye Barricade to Route 11A*, rock crushing activities delayed to June to allow independent testing of crushed rock material (-\$0.2M) No impact. Workscope is scheduled to be completed in July 2007.

CTD Cost Performance (+\$3.0M/+1.3%):

The favorable cost variance (CV) for CP D&D (+\$7.3M) is primarily due to the following factors:

- Prior year cost overruns in Remediation Projects (-\$3.3M) resulting from:
 - Additional direct push sampling during field investigation to determine contamination levels.
 - Greater than planned effort to resolve FS/PP comments and Remedial Design SAP.
 - Delays in barrier construction without reductions in staffing levels.
 - Lateral spread of contamination resulting in more waste containers being shipped to ERDF than planned.
 - Higher than planned sampling costs for 200 North RTD Waste Sites.
- Completion of U Ancillary Facilities in less time than planned, resulting in less level of effort costs. Efficiencies completing demolition of post contract period structures. Offset by cost overruns demolishing 233-S resulting from a first-of-a-kind demolition being more challenging than planned (+\$0.9M).
- Primarily due to prior year efficiencies in staff resulting from not replacing budgeted staff and loaned labor to higher priority projects within D&D (+\$2.7M).
- Prior and current year variance distributions (passbacks) (+\$4.1M).

The improving unfavorable CV for Waste Sites (-\$0.7M) is due to the following:

- Unbudgeted resources for BC Cribs and Trenches (-\$0.4M) directed toward preparation of the focused feasibility study and the proposed plan, along with preparation of the confirmatory/design DQO and SAP documents.

Schedule/Cost Performance (\$M), continued

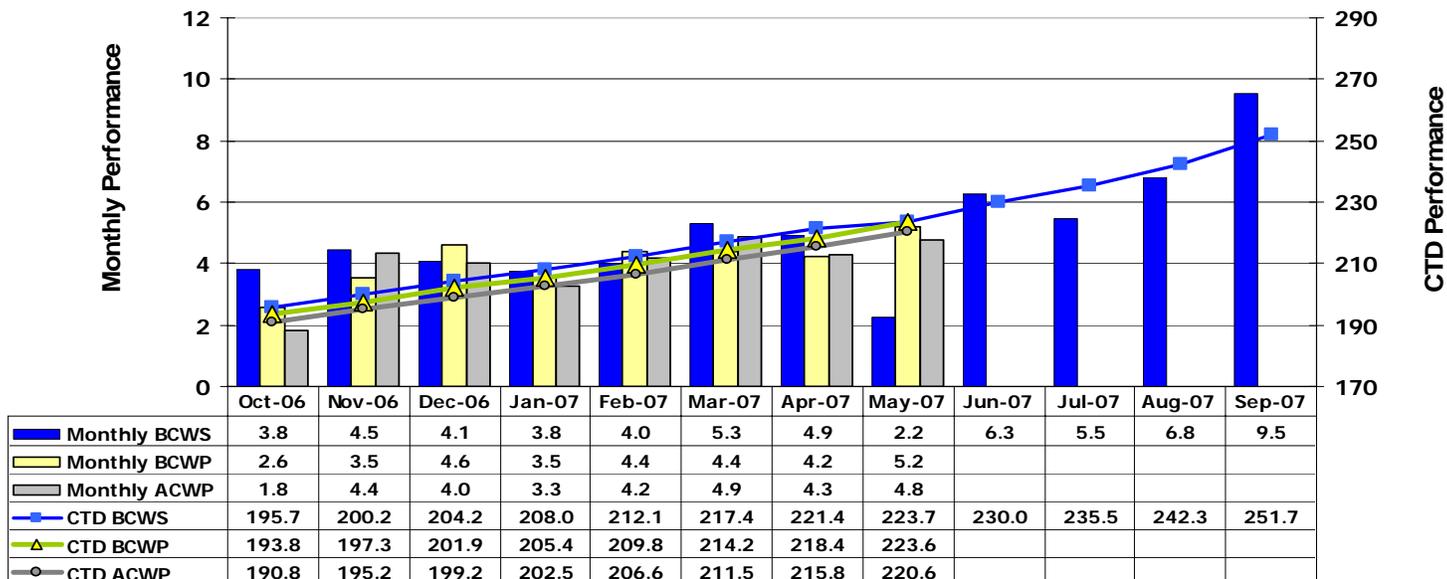
- Due to more document preparation support for CW-5 and TW-1/2 (-\$0.6M) required as a result of lessons learned (feasibility study and proposed plan development).
- 200-PW-2/4 (-\$1.0M) - Remedial Investigation (RI) sample costs higher due to highly contaminated samples; equipment replacement costs for unplanned contaminated equipment during the 216-A-10 field work; unplanned work and rework tied to the remedial investigation report (data compilation, preparation of the S-7 RI report, and a large number of comments on and difficulty with comment resolution).
- 200-PW-1/3/6 (-\$2.1M) - FY-04 Z-9 vertical borehole construction requiring more labor, analytical support and greater waste costs due to higher than expected radiological contamination found below ground and the discovery of carbon tetrachloride in the drill cuttings.
- Added subcontract costs to supplement the DQO for 200-UR-1 (-\$0.2M).
- 200-LW-1 (-\$1.6M) - Prior year variances associated with analytical costs which were planned for off-site analysis with a standard 45-day turnaround time, but analytical support has been provided by on-site labs with an expedited, quick-turn analysis to allow the lab data to be incorporated into the 200-TW-1 Feasibility Study and completion of the S-20, T-28, and Z-7 boreholes has cost more than planned.
- Offset by favorable variances for:
 - Lower than planned costs for A-4 borehole drilling activities at 200-MW-1 (+\$0.3M).
 - SW-1/2 (+\$0.2M) for completion of the RI Report early.
 - 600 Area Waste Sites (+\$0.6M) for completing the subcontracted preliminary design for less than planned.
 - Central Plateau Integration and Planning due to variance distributions (+\$3.8M).
 - Minor miscellaneous positive cost variances (+\$0.3M).

The unfavorable CV for Reliability Projects (-\$0.8M) is primarily due to the following:

- Increased in cost of steel prices for facility and water projects (-\$3.5M).
- Offset by underruns in L-325, *A-8 Substation*, (+\$1.5M), CENRTC procurements (+\$0.5M), and road refurbishments (+\$0.7M).

The favorable CV for Closure Services (+\$0.4M) is within established thresholds.

Performance Analysis CTD and Monthly (\$M)



Milestone Achievement

PBS	MSN	Milestone Title	Type	Due Date	Actual Date	Forecast Date	Status / Comments
RL-0040	M-015-45A	Submit 200-PW-1 OU Remedial Investigation Report	HQ	10/31/06	9/28/06		Completed ahead of schedule
RL-0040	M-091-40L-012	Quarterly Burial Ground vent/substrate sampling results (1st Qtr 2007)	HQ	12/1/06	11/1/06		Completed ahead of schedule
RL-0040	M-091-40L-013	Quarterly Burial Ground vent/substrate sampling results (2nd Qtr 2007)	HQ	3/15/07	2/13/07		Completed ahead of schedule
RL-0040	M-13-50 CPDD-07-012	Draft A RI work plan for supplemental waste site characterization	RL	3/31/07	3/23/07		Completed ahead of schedule
RL-0040	CPDD-07-011	Project Execution Plan reflective of an integrated groundwater source approach	RL	3/31/07	3/28/07		Completed ahead of schedule
RL-0040	CPDD-07-009	Draft "A" Excavation Treatability Test plan (including SAP) for the 200 Area BC Cribs and Trenches	RL	5/31/07	5/24/07		Completed ahead of schedule
RL-0040	M-091-40L-014	Quarterly Burial Ground vent/substrate sampling results (3rd Qtr 2007)	HQ	6/15/07	5/24/07		Completed ahead of schedule
RL-0040	CPDD-07-001	Safety basis document defining appropriate controls to allow disposition of U Plant Cell 30 tank contents	RL	6/30/07			On schedule
RL-0040	CPDD-07-002	Ten High Risk Industrial Facilities Demolished to Slab on Grade	RL	6/30/07	2/12/07		Completed ahead of schedule
RL-0040	CPDD-07-003	U Plant Canyon Facility Waste Acceptance Study	RL	6/30/07			On schedule
RL-0040	CPDD-07-004	212-N nuclear facility hazard reduction and downgrade completed	RL	11/30/07		9/20/07	Forecast ahead of schedule
RL-0040	D&D-07-001	U Plant Accelerated Closure Engineering Studies		6/30/07			On schedule
RL-0040	M-13-27 CPDD-07-014	Submit a revised RI/FS Work Plan for the 200-IS-1 and 200-SW-2 OUs	HQ	6/30/07	6/13/07		Completed ahead of schedule
RL-0040	CPDD-07-005	Three 200-CW-3, 200 North Cooling Water Group, waste sites remediated under the remove, treat, and dispose alternative	RL	7/31/07			On schedule
RL-0040	M-091-40L-015	M-91-40L.4C Quarterly Burial Ground vent/substrate sampling results (4th Qtr 2007)	HQ	8/31/07			On schedule
RL-0040	M-015-45B CPDD-07-006	Submit Draft A Feasibility Study and Proposed Plan for the 200-PW-1/3/6 Operable Unit Group.	HQ	9/30/07			On schedule
RL-0040	CPDD-07-007	Central Plateau Cleanup and Configuration Control Specification document	RL	9/30/07			On schedule
RL-0040	M-13-28 CPDD-07-013	Submit a revised RI/FS Work Plan for the 200-SW and 200-SW-2 OUs	RL	9/30/07			On schedule