

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

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**Hood in Crate #1
wrapped and ready
for loading into new crate**



**Last wall of crate
being attached**

212-N Facility

**Re-staging
Crate #19**



**Weighing
Crate #19**



**Hanford Fire Department rescue truck
received on site on March 26, 2007**

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 March 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:

- Draft Record of Decision (ROD) completed and transmitted to RL, the U.S. Environmental Protection Agency (EPA) and the Washington State Department of Ecology (Ecology) for review (February 28, 2007), comments due March 21, 2007
- 241-U-361 sample analysis Letter of Instruction (LOI) drafted and reviewed
- 241-U-361 job/site walkdowns with CH2M HILL sampling crew

200 North Sites – Remove, Treat and Dispose (RTD):

- Completed mobilization and setup of queue area and trailers
- Completed characterization sample analysis for sites 216-2, 3, 5 and 7
 - Results show that sites 2 and 3 do not require remediation

221-U Facility Canyon:

- Developed retrieval concept and process methodology to support Cell 30 Vessel Contents Removal study
- Grout engineering consultant's report supporting the Canyon Void Fill and Grout Study was completed
- Issued Railroad Tunnel Reactivation Study draft for review
- Began resolution of review comments from regulators on the Remedial Design/Remedial Action Work Plan (RD/RAWP)

212-N Facility:

- Repackaged and retrieved damaged crates #1 and #5. Seven of 15 crates have been retrieved NDA completed on five crates
- Fabrication and delivery of shipping containers continue. Ten containers have been received to-date
- Contaminated Equipment Special Packaging Authorization (CE SPA) checklist for crates #4, 5, 7, 8, and 9 was submitted for RL approval. Processing of the One-Time Request for Shipment (OTRS) has been suspended

D&D:

- Completed D&D of Building 2715M (11th industrial building in FY 2007)

PUREX and Canyons:

- Continued scoping the Multi-Canyon Project Management Plan
- Initiated the PUREX Data Quality Objective (DQO) process and conducted interviews with RL and EPA

Notable Accomplishments, continued

Waste Sites Remediation:

- RL senior management approved the 200-IS-1 pipeline DQO in early March.
- FH submitted the DQO to RL in early March. It was approved by DOE, and sent to Ecology and EPA for their review in late March as well.

Reliability Projects:

- Awarded long-lead pump procurement contracts and completed NEPA documentation for L-626, *100B Area Export Water System Reliability Enhancements*
- The 2005 Energy Policy Act impact analysis baseline change request was approved by RL
- Received RL letter of direction to initiate DOE Order 430.1B, Real Property Asset Management, impact analysis and cost estimate
- Submitted list of proposed general plant projects and construction project data sheets for the RL Field Budget Call in preparation of the FY 2009 Budget Request
- Issued the Request for Proposal for Project L-515, *Chip Seal Route 4S/Wye Barricade to Route 11A*, on March 28, 2007
- Completed 60 percent design for Project L-614, *Repeater Sites Safety Renovation*, on March 22, 2007

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

	Projected FY 2007 Funding	FY 2007 Fiscal Year Spend Forecast	Variance
Nuclear Facility D&D, Remainder of Hanford	\$ 69.5	\$ 64.9	\$ 4.6

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
Current Period (Month)	\$5.3	\$4.4	\$4.9	-\$0.9	-17.2%	-\$0.5	-10.9%	\$67.1
Cumulative-to-Date (FY 2004-Present)	\$217.3	\$214.2	\$211.5	-\$3.2	-1.5%	\$2.7	1.2%	\$330.9

Numbers are rounded to the nearest \$0.1M.

CTD Schedule Performance (-\$3.2M/-1.5%):

The favorable schedule variance (SV) for Central Plateau D&D Project (CP D&D) (+\$1.1M) is due to:

- Delays in performing 216-U-8 and 216-U-12 barrier work scope due to delay in the 200-UW-1 Record of Decision (ROD) approval (-\$1.2M). A baseline change request (BCR) is in process to include deep vadose zone characterization and defer the 216-U-12 barrier.
- Delays in Surveillance & Maintenance (-\$1.0M) for the B Plant and PUREX filter change outs due to late receipt of materials and resource availability. Delays in the REDOX and U Plant fan replacements resulting from delays in receipt of exhaust fans and follow on QA receipt inspection issues. It is expected that a portion of some surveillance and maintenance (S&M) activities will carry over into next fiscal year.
- Delays in procurement of a portable decontamination trailer (-\$0.3M). The trailer is expected to be received in June.
- Offset by accelerated completion of post contract period demolition projects in previous years (+\$3.7M).

Schedule/Cost Performance (\$M), continued

CTD Schedule Performance, continued:

The unfavorable SV in Waste Sites (-\$3.1M) is due to the following:

- Delays in engineering studies/miscellaneous (-\$0.4M). Impacts and recovery actions: None.
- Work scope placed on hold for BC Cribs & Trenches (-\$0.2M) and will be removed with a BCR. Impacts and recovery actions: None.
- Delays in PW-2/4 and LW-1 (-\$0.4M) due to activities being placed on hold pending the M-15 TPA baseline revision. Impacts: None; approve and implement the M-15 BCR.
- Delays in the scheduled MW-1 (\$-0.7M) feasibility study activities due to competing priorities. Impacts: None; this will be resolved with the approval and implementation of the M-15 BCR.
- 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) (-\$0.6M). Impacts and recovery: based on assessments by the project lead, recovery of this schedule variance will be possible only with a baseline revision.
- Delays in IS-1 pipeline mapping due to lack of resources (-\$0.1M). Impacts and recovery actions: None.

NOTE: Baseline activities for most operable units within RL-40 Waste Sites are being modified to address regulatory needs for supplemental characterization. In addition, the TPA change package for the M-15 milestones was approved by the respective parties on February 27, 2007, and a BCR is being developed to address this change package. This BCR will be sent to RL on May 11, 2007. The contract to date schedule variances for Operable Units PW-2/4, LW-1, and MW-1 should be resolved in this BCR.

The unfavorable SV for Reliability Projects (-\$1.2M) is primarily due to the following factors:

- L-626, *100B Export Water System Reliability Enhancements*, is delayed due to pump procurement and environmental impact assessment complexities. 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). Projects have been initiated.
- Workscope deferred beyond the contract period in re-rack baseline change request (BCR) remains in the baseline pending RL approval of the BCR. The BCR was recently approved and will be implemented in the April baseline.

CTD Cost Performance (+\$2.7M/+1.2%):

The favorable cost variance (CV) for CP D&D (+\$3.9M) is primarily due to the following factors:

- Prior year cost overruns in 200-UW-1 (-\$3.2M) for additional direct pushes during field investigation to determine contamination levels, greater than planned effort to resolve FS/PP comments and remedial design sampling analysis plan (SAP), and lateral spread of contamination resulting in more containers being shipped to ERDF than planned.
- Higher than planned sampling costs for 200 North RTD waste sites (-\$0.2M).
- Completion of U Ancillary facilities in less time than planned, resulting in less level of effort costs, efficiencies in 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).
- Due to prior year efficiencies in staff resulting from not replacing budgeted staff and loaned labor to higher priority projects within D&D (+\$2.1M).
- Due to prior year variance distributions (+\$4.1M).

Schedule/Cost Performance (\$M), continued

CTD Cost Performance, continued:

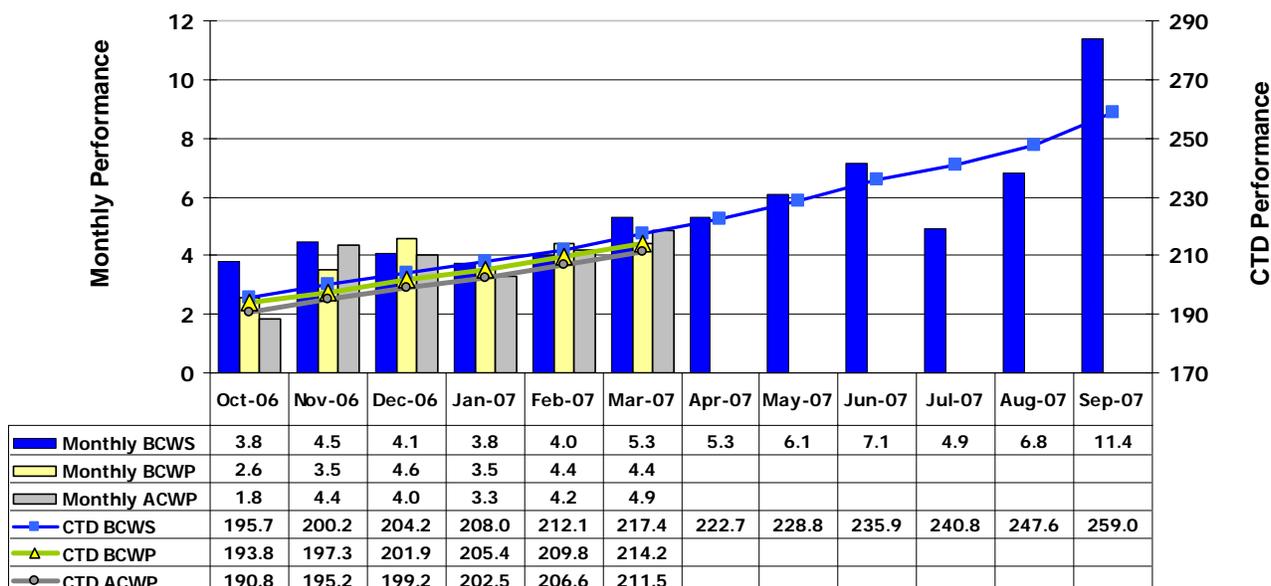
The unfavorable CV for Waste Sites (-\$0.8M) is due to the following:

- Unbudgeted resources for BC Cribs & 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.
- 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 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-1/2/6 (-\$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 tetra-chloride in the drill cuttings.
- 200-LW-1 (-\$1.5M) - 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:
 - 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.
 - CP Integration & Planning due to FY 2006 variance distributions (+\$3.4M).

The unfavorable CV for Reliability Projects (-\$0.6M) is primarily due to the increased cost of steel for facility and water projects offset by L-325, A-8 Substation, and CENRTC procurements underruns.

The favorable CV for Closure Services (+\$0.3M) is within established thresholds.

Performance Analysis CTD and Monthly (\$M)



Milestone Achievement

MSN	Milestone Title	Type	Due Date	Actual Date	Forecast Date	Status / Comments
M-015-45A	Submit 200-PW-1 OU Remedial Investigation Report	HQ	10/31/06	9/28/06		Completed ahead of schedule
M-091-40L-012	Quarterly Burial Ground vent/substrate sampling results (1st Qtr 2007)	HQ	12/15/06	11/1/06		Completed ahead of schedule
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
M-015-46B	Chemical Laboratory Waste OUs Feasibility Study	HQ	3/31/07		12/31/11	Behind schedule. M-15 tentative agreement changes date to 2011.
RL40.3a CPDD-07-011	Project Execution Plan reflective of an integrated groundwater source approach	RL	3/31/07	3/28/07		Completed ahead of schedule
RL40.2a CPDD-07-009	Draft "A" Excavation Treatability Test plan (including SAP) for the 200 Area BC Cribs and Trenches	RL	5/31/07			On schedule
M-091-40L-014	Quarterly Burial Ground vent/substrate sampling results (3rd Qtr 2007)	HQ	6/15/07			On schedule
MR.RL40.12 CPDD-07-004	212-N nuclear facility hazard reduction and downgrade	RL	11/30/07			RL letter (07-AMCP-0134), received April 4, 2007, approved extension of PI date from 6/30/2007 to 11/30/2007
MR.RL40.9c 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
MR.RL40.11 CPDD-07-002	Ten High Risk Industrial Facilities Demolished to Slab on Grade	RL	6/30/07	2/12/07		Completed ahead of schedule
MR.RL40.9a CPDD-07-003	U Plant Canyon Facility Waste Acceptance Study	RL	6/30/07			On schedule
MR.RL40.9b D&D-07-001	U Plant Accelerated Closure Engineering Studies	RL	6/30/07			On schedule
MR.RL40.10 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
M-091-40L-015	Quarterly Burial Ground vent/substrate sampling results (4th Qtr 2007)	HQ	8/31/07			On schedule
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
RL40.3b CPDD-07-007	Central Plateau Cleanup and Configuration Control Specification document	RL	9/30/07			On schedule