

FY 2007, FY 2008, and FY 2009 Budget

Office of River Protection

***Office of River Protection
Budget Briefing***

March 2007



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Topics

- ORP FY 2006 Appropriations Funding, FY 2007 and FY 2008 Planned Funding and FY 2009 Targets
- FY 2007, FY 2008 and FY 2009 Planned Accomplishments for WTP
- Planned Tank Farm Activities for FY 2007, FY 2008 and FY 2009
- FY 2007, FY 2008 and FY 2009 Planned Accomplishments for Tank Farms
- Significant ORP Milestones for FY 2007, FY 2008 and FY 2009
- ORP Priorities



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FY 2006 Appropriations Funding, FY 2007 and FY 2008 Planned Funding and FY 2009 Targets - \$ in Thousands

	FY 2006 Approp	FY 2007 Planned	FY 2008 Request	FY 2009 Targets*
Defense Environmental Cleanup				
<u>Office of River Protection</u>				
<i>Tank Farm Activities</i>				
ORP-0014: Radioactive Liquid Tank Waste Stabilization and Disposition	327,109	276,656	272,972	270,554
ORP-0100: River Protection Community and Regulatory Support	466	471	471	468
<i>Subtotal, Tank Farm Activities</i>	327,575	277,127	273,443	271,022
<i>Waste Treatment and Immobilization Plant</i>				
ORP-0060: Major Construction-Waste Treatment Plant				
01-D-16A: Low Activity Waste Facility	161,376	186,000	143,000	78,000
01-D-16B: Analytical Laboratory	44,552	59,000	45,000	29,000
01-D-16C: Balance of Facilities	64,352	57,000	72,000	21,000
01-D-16D: High Level Waste Facility	102,964	177,000	177,000	195,000
01-D-16E: Pretreatment Facility	147,515	211,000	253,000	367,000
<i>Subtotal, Waste Treatment and Immobilization Plant</i>	520,759	690,000	690,000	690,000
<i>Subtotal, Office of River Protection</i>	848,334	967,127	963,443	961,022
Program Direction	17,530	22,069	22,333	22,881
Subtotal, Defense Environmental Cleanup	865,864	989,196	985,776	983,903
Total, River Protection	865,864	989,196	985,776	983,903

*Reflects target reallocation for WTP line items.



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FY 2007 Planned Accomplishments

Waste Treatment and Immobilization Plant (PBS ORP-0060):

- **LAW Facility**
 - Design will be 97% complete and construction will be 54% complete
 - Place Exhaust Stack
 - Close-In of LAW main facility completed
 - Construction will begin on Annex Building and Container Import Bay
- **LAB Facility**
 - Design will be 93% complete and construction will be 43% complete
 - Facility structural steel, siding, and roofing will be complete
 - Installation of Fire Proofing/Protection, Hot Cell walls/liner plate, and special coatings will have begun
- **BOF Facility**
 - Design will be 87% complete and construction will be 56% complete
 - The Water Cooling Tower, Fuel Oil Pump-house, water tanks, and Water Treatment Building will be completed



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FY 2007 Planned Accomplishments (Continued)

Waste Treatment and Immobilization Plant (PBS ORP-0060):

- **HLW Facility**
 - Design will be 81% complete and construction will be 26% complete
 - Final Seismic Spectra will be certified
 - Design emphasis on piping systems, cable trays, and power distribution systems
- **PT Facility**
 - Design will be 70% and construction will be 29% complete
 - The testing required for supporting resolution of External Flowsheet Review Team and multiple overflow issues will be completed, and engineering will advance the design based upon the results from these tests



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FY 2008 Planned Accomplishments

Waste Treatment and Immobilization Plant (PBS ORP-0060):

- **LAW Facility**
 - Design will be 100% complete and construction will be approximately 62% complete.
 - Engineering completes routing of all facility cabling
 - Facility Annex will be dried in
 - Complete issuing all long length piping for fabrication
 - Complete piping system design will be completed
- **LAB Facility**
 - Design will be 100% complete and construction will be approximately 51% complete
 - Receive the Hot Cell High Integrity Ventilation fans at the WTP Warehouse in preparation for installation
 - Complete installation of the roof and siding
 - Issue all the drawings required for fabricating the long length pipe segments
 - Complete designs of all major facility specific systems
- **BOF Facility**
 - Design will be 100% complete and construction continues on multiple facilities
 - Install the overhead piping racks between the Glass Former Storage Facility, the Steam Plant, and the LAW facility
 - Complete construction on the Fire Waste Pumphouse and the Non-Radioactive Liquid Waste Effluent Tanks



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FY 2008 Planned Accomplishments (Continued)

Waste Treatment and Immobilization Plant (PBS ORP-0060):

- **HLW Facility**
 - Design will be approximately 85% complete and construction will be approximately 30% complete
 - Ramp-up construction in the 1st quarter FY 2008
 - Focus on concrete walls from main level to second level, initiate elevated slab placements and structural steel installations on 2nd level and, piping installation in the basement corridors
 - Civil design to be complete for 2nd level elevated slabs, 4th level's/roof's electrical and instrumentation cable layouts and, structural steel for roof. Continue 4th level piping design. Major equipment purchases.
- **PT Facility**
 - Design will be approximately 73% complete and construction will be about 34% complete
 - Ramp-up construction during the 1st quarter of FY 2008
 - Complete civil design of 3rd level walls and 4th level elevated slabs
 - Continue with piping design in the black and hot cells
 - Procure Major equipment items
 - Emphasis will be on concrete walls from elevation 2nd to 4th levels, elevated slabs on the 2nd and 3rd levels, piping installation in the black and hot cell, heating/air ducting design and fabrication, fire protection piping, misc. equipment sets, and initiation of installation of seismic upgrade kits in the vessels.
 - Resolution of technical issues resulting from the External Flowsheet Review Team will be completed



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FY 2009 Planned Accomplishments

Waste Treatment and Immobilization Plant (PBS ORP-0060):

Target Accomplishments - \$690M

- **LAW Facility**
 - Construction will be approximately 72% complete
 - Install piping, cable, cable trays, conduit, instrumentation and control wiring, and ventilation ducting
 - Install melter pour cave cooling panels, glass former mixers, and catalytic oxidizers
 - Start assembling the two melters
- **LAB Facility**
 - Construction will be approximately 75% complete
 - Install ventilation duct, process and handling systems, cable, cable tray and piping
 - Install major electrical equipment
 - Fabricate the Autosampling System will be completed, and the system delivered to the site
- **BOF Facility**
 - Complete construction of the Anhydrous Ammonia Tank, Cooling Tower, Fuel Oil Pump House and Steam Plant
 - Install the Commodity Racks, piping, and electrical systems
 - Erect the Glass Former Storage Facility building structural steel



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FY 2009 Planned Accomplishments (Continued)

Waste Treatment and Immobilization Plant (PBS ORP-0060):

- **HLW Facility**
 - Design will be approximately 90% complete and construction will be approximately 39% complete
 - Civil design will be completed for the main facility concrete and structural steel
 - Complete placements of slabs and walls of the 3rd level
 - Install the melter shield doors and rails
- **PT Facility**
 - Design will be approximately 83% complete and construction will be approximately 43% complete
 - Issue the design for the top level (El. 98) concrete slabs and Control Building
 - Construct concrete walls above the 3rd level
 - Install the Hot Cell cranes, and vertical and horizontal shield doors
 - Install remaining Elevation 0 Vessels



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Planned Tank Farm Activities for FY 2007, FY 2008 and FY 2009* - \$ in Millions

	<u>FY 2007</u>	<u>FY 2008</u>	<u>FY 2009</u>
<u>Minimum Base/Essential Services</u>	\$251.6	\$256.2	\$251.1
- DST Integrity Project			
- DST/SST Operations			
- Tank Sampling			
- Vadose Zone			
- Tank Farm Life Extension Upgrades			
- 222-S Laboratory Operations			
- 242-A Evaporator Operations			
- Site Services			
- WTP Electricity			
- DOE Mission Support			
- Contractor Fee			
<u>Retrievals</u>	\$21.4	\$16.1	\$18.8
- Complete one retrieval per year			
<u>Supplemental Treatment</u>	\$3.7	\$0.7	\$0.7
- Pretreatment Developmental Testing			
- Complete DBVS CD-2			
- Complete full-scale test melt 38-D			
Total	\$276.7	\$273.0	\$270.6

*excluding carryover



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FY 2007 Planned Accomplishments

Tank Farms (PBS ORP-0014):

- Complete retrieval from 4 SST's transferring ~220,000 gallons and ~300,000 curies of waste utilizing innovative technologies (Salt Mantis, Sand Mantis, Rotary Viper, Fold-Track, Off-Riser Sampler) for a total of 8 SST's completed to date
- Continue Double-Shell Tank integrity activities (ultrasonic testing and visual examination of 4 DST's and 8 physical samples supporting DST chemistry control)
- Operate the 242-A Evaporator and perform one campaign processing approximately 650K gallons of tank waste
- Conduct radiological characterization for C Farm and the Tank Farm Project soils (Take 35 deep soil sample utilizing Direct Push, and deploy Surface Geophysical Exploration technology in two tank farms)
- Complete installation and monitor performance of interim surface barrier to control water infiltration through deep soils contamination in T Farm
- Complete DBVS technical enhancements consistent with the Expert Panel Review recommendations



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FY 2008 Planned Accomplishments

Tank Farms (PBS ORP-0014):

- Complete retrieval from 2 Single-Shell Tanks (SST) transferring ~130,000 gallons and ~1M curies of waste utilizing innovative technologies (Salt Mantis, Sand Mantis, Rotary Viper, Fold-Track, Off-Riser Sampler) for a total of 10 SST's
- Continue Double-Shell Tank integrity activities (ultrasonic testing and visual examination of 3 DST's and 3 physical samples supporting DST chemistry control)
- Operate the 242-A Evaporator and perform one campaign processing approximately 650K gallons of tank waste
- Conduct radiological characterization for C Farm and the Tank Farm Project soils (Take 35 deep soil samples utilizing Direct Push, complete on Borehole, and deploy Surface Geophysical Exploration technology in two tank farms)



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FY 2009 Planned Accomplishments

Tank Farms (PBS ORP-0014):

Target Accomplishments - \$271M

- Complete 3 DST Core Samples and analysis to support tank integrity
- Replace Evaporator HVAC exhaust side to protect against confinement loss
- Complete one additional C-Farm tank retrieval (for a total of 9 of 16 in C-Farm) to be completed
- Retrieve waste from 11 SSTs through FY 2009 (~15M curies/1.7M gal)
- Perform 3 DST to DST Transfers
- Perform 2 Cross-site Transfers
- Complete 2 Evaporator Campaigns for space management
- Complete AP Tank Farm Level Rise for DST space management
- Conduct pre-treatment developmental testing to support future supplement treatment activities

Over-Target Accomplishments

- Initiate DBVS Construction and Long-Lead Procurements
- Initiate S-109 Retrieval Construction to support DBVS
- Complete upgrades to AZ-102 in support of C-Farm retrievals tank blending
- Replace Double-Shell Tank Sampling Truck (1980's vintage)
- Initiate Supplemental Pretreatment Conceptual Design
- Initiate Tank C-200 Closure Demonstration



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Significant ORP Milestones for FY 2007, FY 2008 and FY 2009

No milestones have been missed or are in jeopardy of being missed due to ORP budget requests

FY 2007 Milestones

- M-45-55 – Submit to Ecology for review and approval a primary document a phase 1 RFI report for all SST WMAs by 1/31/07. *(Change Request under the Tri-Party Agreement submitted, discussions ongoing)*
- M-45-05A – Complete waste retrieval from Tank S-102 by 3/31/07. *(Milestone will be missed due to pump failure on 3/15/07)*
- M-45-58 – Submit to Ecology for review and approval a corrective measures study for interim corrective measures for all SST WMAs by 6/30/07. *(Change Request under the Tri-Party Agreement submitted, discussions ongoing)*
- M-62-11 – Submit a Final Hanford Tank Waste Treatment Baseline – Following completion of negotiations required in M-62-08 by 6/30/07. *(Milestone will be delayed due to lack of supplemental Treatment data required by M-62-08)*

FY 2008 Milestones

- M-45-13 – Interim completion Tank S-112 waste retrieval and closure demonstration project by 12/31/07. *(Retrieval likely will be met, approved Risk Assessments and closure plan questionable)*
- M-45-15 – Interim completion of Tank S-102 waste retrieval and closure demonstration project by 12/31/07. *(Milestone will be missed due to pump failure on 3/15/07)*
- M-62-07B – Complete assembly of LAW melter #1 so that it is ready for transport and installation into LAW vitrification facility and move #1 melter into HLW vitrification facility by 12/31/07. *(Milestone will be missed due to delays in WTP construction)*
- M-45-00D – Initiate negotiation of SST waste retrieval and closure for 2008-2013 by 1/31/08. *(Milestone will be missed, unable to negotiate additional retrievals since C-Farm retrievals are not complete)*

FY 2009 Milestones

- M-62-09 – Start WTP cold commissioning by 2/28/09. *(Milestone will be delayed due to delays in WTP construction)*



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ORP Priorities

- Demonstration Bulk Vitrification System
- Continue Tank Retrieval
- Continue Vadose Zone Characterization
- Double Shell Tank Integrity Assessment
- Tank Closure & Waste Management EIS
- Continue construction on LAW, BOF, LAB
- Resume construction activities on HLW and PT
- Resolve External Flowsheet Review Team (EFRT) Issues
- Certify the Earned Value Management System

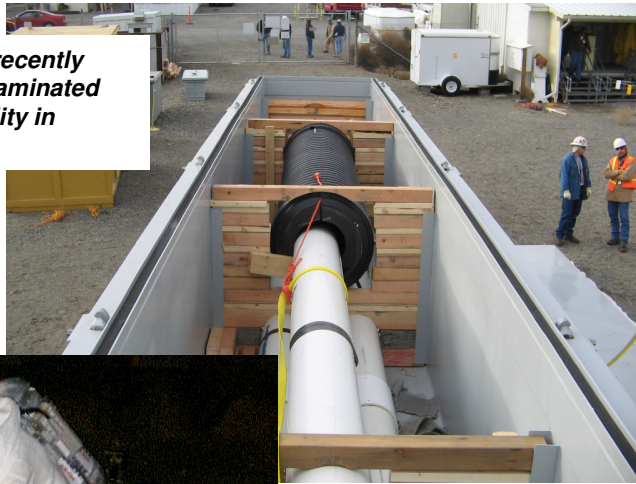


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Hanford Tank Farms

CH2M HILL's Super Box was recently used to ship long-length contaminated equipment to a treatment facility in Richland.



The Rotary Viper, a high pressure mixer, has been successfully installed in tank S-102 to help mobilize and pump stubborn tank waste.



Workers deploy the off-riser sampler system in single-shell tank C-103. Its mission is to obtain waste samples that were previously inaccessible to conventional techniques.

Workers retrieve cameras used in tank C-108 retrieval. Tank C-108 is the ninth Hanford single-shell tank to be in retrieval or completed.



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Waste Treatment and Immobilization Plant

Balance of Facility crews work on a CDF placement for an electrical ductbank north of LAW.



Structural steel was delivered to the Analytical Laboratory at the Construction Site in late November. Erecting structural steel is a significant milestone in the construction of the full-service laboratory.



A pipefitter performs grinding work on a large bore pipe within the Chiller Compressor Plant



A field engineer inspects an expansion joint installed within the Chiller Compressor Plant.



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