
Hanford HLW Program Challenges to Cleanup

NAS: Nuclear and Radiation Studies Board

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Office of River Protection



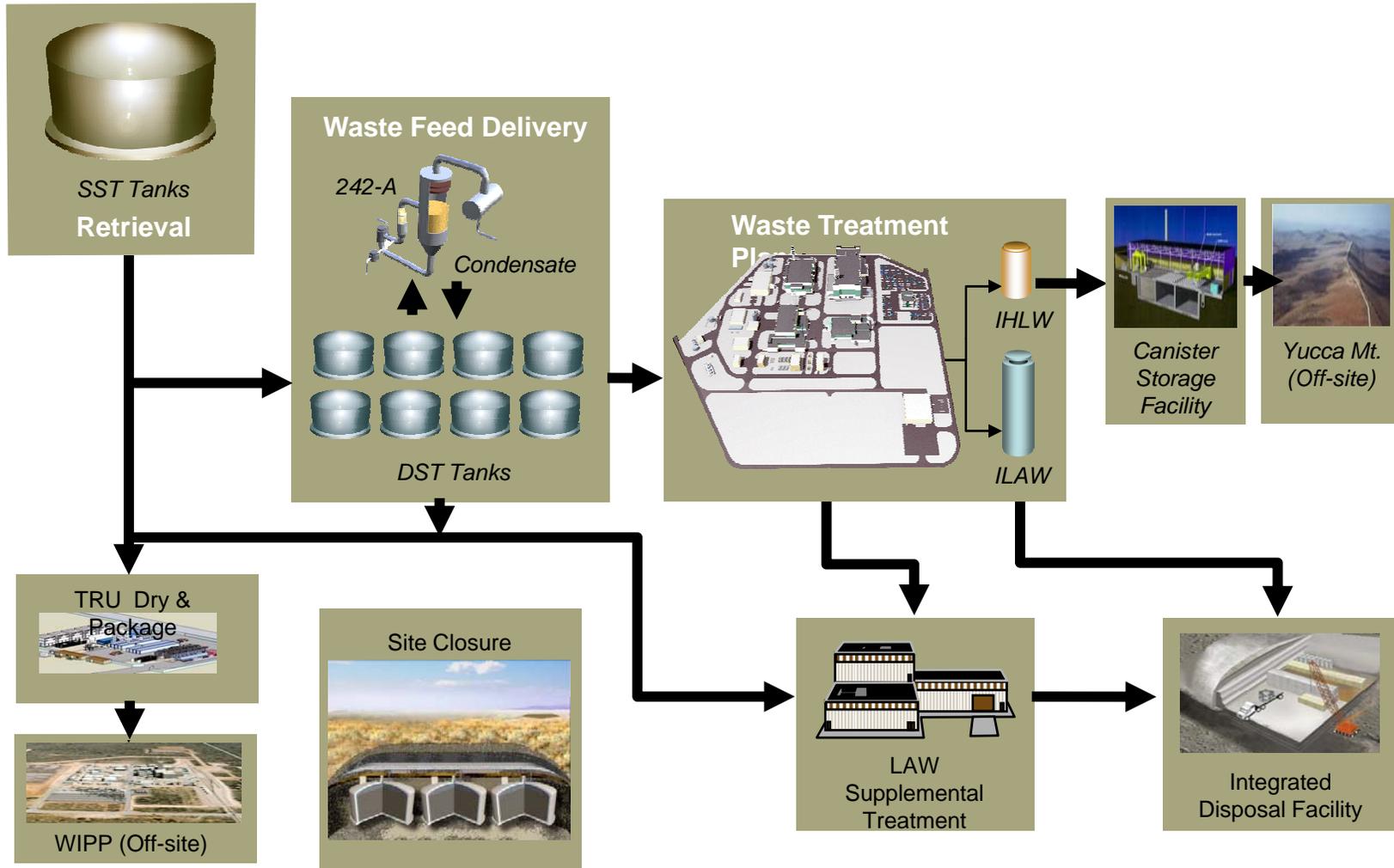
Bechtel National, Inc.



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safety ❖ performance ❖ cleanup ❖ closure

River Protection Project

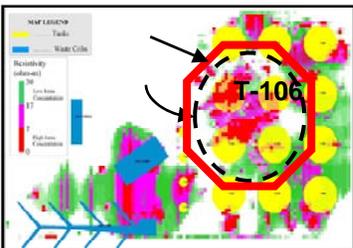


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RPP Achievements

Tank Farms



- Additional Low-Activity Waste Treatment Capacity
 - Performed integrated full-scale test
 - Pilot facility design almost complete

- Tank Retrieval and Closure Activities
 - Seven tanks retrieved to date
 - Two tanks in retrieval
 - Two tanks are being outfitted for retrieval
 - New retrieval technologies are working

- Integrated Disposal Facility (for onsite disposal of LAW)
 - Construction completed

- Soil Contamination from Past Leaks
 - Characterizing extent of contamination
 - Implementing remedial actions



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RPP Achievements

Waste Treatment and Immobilization Plant (WTP)

Waste Treatment Plant (WTP) Construction

- Construction 31% complete
- Design 74% complete

- Pretreatment Facility and High-Level Waste Facility
 - Resolved seismic concerns
 - Resume Construction
 - Deputy Secretary approved project baseline
- Low-Activity Waste Facility
 - Enclosure of facility
 - Completion of roof
 - Placement of roof stack
- Analytical Laboratory
 - Placement final steel
 - Placement of siding



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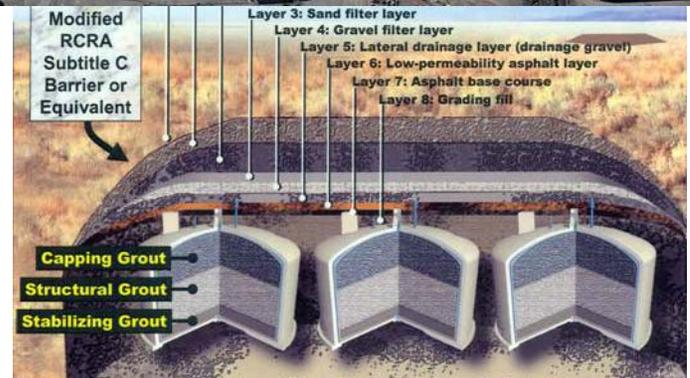
ORP Risks

Programmatic

- Maintenance of Core Technical Competency
- Aging Infrastructure
- Mission Definition

Technical

- Storage
- Retrieval
- Characterization
- Feed Delivery
- Separations (Pre-Treatment)
- Treatment (Immobilization)
- Waste Disposal Closure



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RPP Critical Risks Summary

“River Protection Project Federal Risk Management Plan”, August 2006

Risk No.	Risk	Life Cycle Impact (not in baseline)	
1	Supplemental LAW Treatment	>15 years	>\$15 Billion
2	Waste Management Closure Area	>15 years	>\$15 Billion
3	Single-Shell Tank Waste Retrieval	>10 years	>\$10 Billion
4	Single-Shell Tank Closure	>10 years	>\$10 Billion
5	DST Space Availability for Mission	5 years	\$5 Billion
6	Hydrogen Accumulation in Pipes and Ancillary Vessels	3 years	\$3 Billion
7	Viability of Remote Handled TRU Path to WIPP	2.5 years	>\$2 Billion
8	Funding Shortfalls to Meet Budgetary and Schedule Requirements	>3 years	>\$1 Billion
9	WTP Melter Failures	>1 year	>\$1 Billion
10	222-S Viability	1 year	\$1 Billion
11	Yucca Mountain Availability	1 year	\$800 Million
12	WTP Operational Readiness Review, CD-4	2 years	\$800 Million
13	Worker Health and Safety	>6 months	>\$600 Million
14	Disposition of WTP Failed Melter	>6 months	>\$500 Million
15	Viability of Contact Handled TRU Path to WIPP	>6 months	\$500 Million
16	Seismic	6 months	\$200 Million
17	Residual Tank Waste Determination	>6 months	\$100 Million
18	WTP Waste Acceptance	3 months	\$100 Million

Note: Revision due out 2nd quarter FY08; 7-10 additional risks currently under evaluation.



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RPP Road to Success

- On-going Risk Management
 - Always look for improvements
- Integration With All Resources
 - Hanford Site Contractors, Projects, and Offices
 - DOE Complex, Industry, Universities, International
 - Regulators and Stakeholders
 - Timely External Reviews
- Appropriate Testing Key to Technology Utilization
 - Test as integrated system, not individual components
 - Test at applicable scales and waste streams
 - Understanding downstream flowsheet implications



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