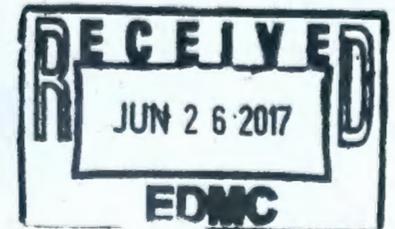




OFFICE OF
RIVER PROTECTION
United States Department of Energy

Budget Briefing

**FY 2018 President's Budget
FY 2019 Estimated Requirements**



Jon Peschong, One System Director

Presented by: U.S. Department of Energy – Office of River Protection

June 7, 2017



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Office of River Protection (ORP)

ORP is responsible for planning, integrating, and managing the River Protection Program executed by contractors performing work under ORP management. ORP has ~225 employees, both federal and contractor.

Washington River Protection Solutions (WRPS)

WRPS is the prime contractor responsible for safely managing and operating the Tank Farms. WRPS has 2,094 employees*.

Bechtel National, Inc. (BNI)

BNI is responsible for the engineering, construction, startup and commissioning of the Waste Treatment and Immobilization Plant. BNI has 3,044 employees*.

Wastren Advantage, Inc. (WAI)

WAI is the prime contractor responsible for managing the 222-S Laboratory. WAI has 56 employees.*

*As of September 30, 2016





- Safe Nuclear Operations and Base Operations
- Direct Feed Low-Activity Waste Approach
 - Tank Farms upgrades to support Direct-Feed Low Activity Waste
 - Low Activity Waste Pretreatment System Facility (LAWPS)
 - Low Activity Waste Facility, Balance of Facilities, Analytical Laboratory
- Tank waste retrievals
- Waste Treatment and Immobilization Plant technical issues resolution
- Waste Treatment and Immobilization Plant HLW and PT Production Engineering/EPC





(\$ in Thousands)

PBS	Project Baseline Summary (PBS) Title	FY 2016 Appropriation	FY 2017 Omnibus	FY 2018 President's Budget
ORP-0014	Radioactive Liquid Tank Waste Stabilization and Disposition	\$649,000	\$733,965	\$713,311
ORP-0014	15-D-409, Low Activity Waste Pre-Treatment System	\$75,000	\$73,000	\$93,000
Subtotal	Radioactive Liquid Tank Waste Stabilization and Disposition	\$724,000	\$806,965	\$806,311
ORP-0060	WTP – Subprojects A-D	\$595,000	\$593,000	\$655,000
ORP-0060	WTP – Subproject E	\$95,000	\$97,000	\$35,000
Subtotal	Major construction – Waste Treatment and Immobilization Plant (WTP)	\$690,000	\$690,000	\$690,000
ORP-0070	WTP Commissioning	\$0	\$3,000	\$8,000
Total – ORP	Office of River Protection Funding Summary	\$1,414,000	\$1,499,965	\$1,504,311





The Tank Farms A 200 Area Aerial Overview

200 West Area

200 East Area

Effluent Treatment
Facility Ponds

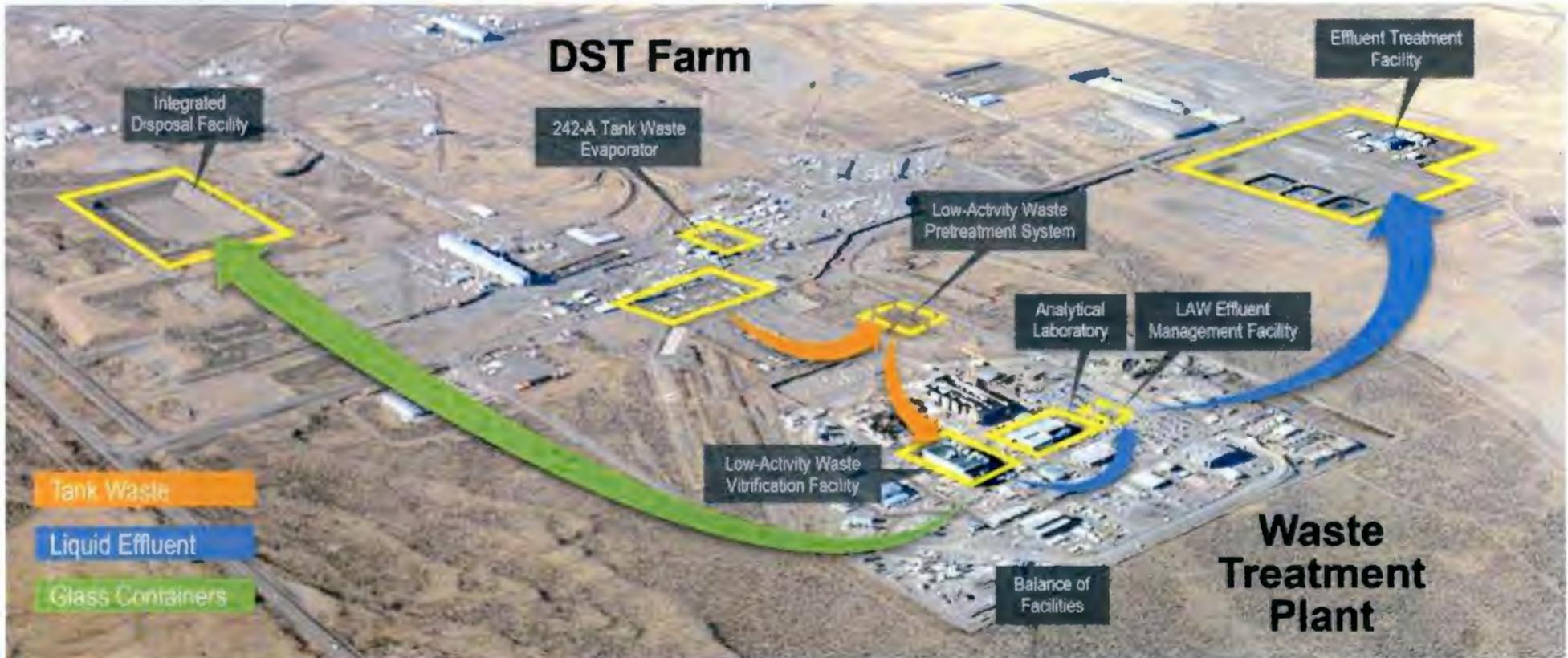
Waste Treatment and
Immobilization Plant

- Single-Shell Tank Farm
- Double-Shell Tank Farm





Direct Feed Low-Activity Waste Approach



First step in sequential approach to tank waste treatment and disposal

- DFLAW facilities and infrastructure actively working to startup as soon as 2022
- Provides earliest practicable tank waste disposition





Fiscal Year 2018 Planned Activities (\$713M)

- Maintain Tank Farms in a safe manner
- Continue 222-S Laboratory operations and sustainment upgrades
- Conduct 242-A Evaporator campaigns
- Continue DST AY-102 Settlement Agreement activities
- Complete retrieval of remaining tank in C-Farm (C-105)
- Continue Effluent Treatment Facility operations and complete cover replacement (Basin 42)
- Continue single-shell and double-shell tank integrity activities
- Continue tank farms preventive and corrective maintenance activities
- Continue upgrades in AP farm to support waste feed to LAWPS
- Continue construction activities in AX single-shell tank farm
- Continue Vapor Mitigation Strategies



C-105 – Installation of the slurry pump





Proposed FY2019 Work Descriptions

- Maintain Tank Farms in a safe manner
- 222-S Laboratory operations and sustainment upgrades
- 242-A Evaporator campaigns
- Effluent Treatment Facility operations and mission required modifications
- Single-shell and double-shell tank integrity activities
- Tank farms preventive and corrective maintenance activities
- Infrastructure upgrades in SST and DST Tank Farms
- Continue upgrades in AP farm to support waste feed to LAWPS
- A/AX single-shell tank farm retrieval activities
- Continue Vapor Mitigation Strategies
- Interim Barrier Activities



AY-102 – view inside tank following retrieval – currently 98% complete





Fiscal Year 2018 Planned Activities (\$93M)

- Conduct Technology Readiness Assessment to validate maturity of selected Critical Technology Elements
- Commence site preparation and fabrication of long lead procurement equipment
- Complete 90% design review
- Complete the Preliminary Documented Safety Analysis
- Submit the remaining two of three LAWPS RCRA permit modification request packages to Ecology
- Complete Critical Decision 2 (Approve Performance Baseline) and Critical Decision 3 (Approve Start of Construction) deliverables and submit to DOE-HQ for approval
- Award construction subcontract and mobilize to site for full construction



Proposed FY2019 Work Descriptions

- Initiate construction activities





Fiscal Year 2018 Planned Activities (\$655M)

Low-Activity Waste (LAW) Facility, Analytical Laboratory, High-Level Waste (HLW) Facility, and Balance of Facilities (BOF)

- LAW Construction Complete
- Issue LAW Documented Safety Analysis (DSA)
- Complete placement of EMF concrete and structural steel
- Receive and install EMF evaporator
- Receive and install major EMF vessels
- Continue preservation maintenance of the HLW Facility
- Complete fabrication of HLW Facility RLD Vessels 7 & 8
- Complete delivery or suspension of current HLW procurements, and begin rebaseline of the HLW Facility



LAW Caustic Scrubber installation





Proposed FY 2019 Work Description

Low-Activity Waste (LAW) Facility, Analytical Laboratory, High-Level Waste (HLW) Facility, and Balance of Facilities (BOF)

- Analytical Laboratory startup and commissioning activities
- Balance of Facilities construction, startup, and commissioning activities
- LAW engineering, construction, startup and commissioning activities
- HLW re-baseline, advance design and restart construction



Three HLW Facility Autosampler units were received this spring.



This 25-ton crane will be installed in HLW melter cave two.





Fiscal Year 2018 Planned Activities (\$35M)

Pretreatment (PT) Facility

- Complete resolution of PT Technical Issue T4 (Vessel mixing)
 - Issue PJM Vessel Mixing and PJM Controls closure report and letter
- Continue PT Technical Issues Resolution T5 (Erosion/Corrosion)
 - Complete engineering studies to determine requirements for testing (Erosion)
 - Complete stress corrosion cracking testing; issue Confirmed Localized Corrosion Material Design Limits Report (Corrosion)
- Complete resolution of PT Technical Issue T6 (Optimization of PT Facility design)
- Complete resolution of PT Technical Issue T7 (Structural integrity of vessels)
 - Complete structural assessment of installed feed receipt vessels
 - Prepare plan for evaluation of structural design of remaining installed vessels
- Continue preservation maintenance of the PT Facility

Proposed FY 2019 Work Description

- Continue preservation maintenance of the PT Facility
- Initiate re-baseline efforts



Pulse jet mixer control testing is expected to be completed in early FY2018





Fiscal Year 2018 Planned Activities (\$8M)

- Complete studies to determine spare parts required following Hot Commissioning in 2021
- Initiate activities to procure long lead items if required based on studies
- Continue risk assessment to identify risk associated with WTP facility transition to operations
- Implement WTP facility transition risk mitigating strategies

Proposed FY 2019 Work Description

- Continue to define spare part requirements
- Award WTP Operations contract
- Development of Transition Plan





	DFLAW Facilities	Activities
Tank Farm Waste	Double shell tanks	● Upgrades required / DFLAW waste feed delivery upgrades (AP & AW-Farms), air permits
	242-A Evaporator	✓ Operating facility / No additional activities required
	LAW Pretreatment System	● CD-1 approved, in design / Long-lead procurements, LAWPS RCRA permit
	WTP LAW Vitrification Facility	● Construction underway / Startup and commissioning, planning including readiness, RCRA and air permits, LAW DSA
	Integrated Disposal Facility	● Construction complete / IDF performance assessment, upgrades, ORR, RCRA and air permits
Secondary Waste	LAW Effluent Management Facility	● In design / Construction, RCRA and air permits
	Effluent Treatment Facility	✓ Operating facility / Minor additional activities required
	State-approved land disposal site	✓ Operating facility / No additional activities required
	Consolidated solid waste management	● Decision complete / 90-day storage pad
Support Facilities	222-S Laboratory	✓ Operating facility / Minor additional activities required
	WTP Analytical Laboratory	● Construction nearly complete / Startup and commissioning, RCRA permit, Lab DSA
	WTP Balance of Facilities	● Construction underway / Transitioning to startup and commissioning, DFLAW upgrades



- Facility is currently operating and no significant modifications required to support DFLAW
- Facility is not operating, is under construction, or needs major modifications to support DFLAW





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***"Protecting our workers,
the public, and the environment"***



The Hanford Reach
White Bluffs Overlooking the Columbia River

