



# THE HANFORD SITE

## Budget Overview for Fiscal Year 2020 Fiscal Year 2021 Budget Public Priorities

Bill Hamel

Assistant Manager for River and Plateau

- Presentations by U.S. Department of Energy (DOE), U.S. Environmental Protection Agency and Washington State Department of Ecology
- DOE accomplishments and planned work
  - ✓ One DOE - Hanford presentation
- Regulatory perspective
- Questions and answers
- Your input for fiscal year 2021 submittal
- Vote on your priorities for Hanford cleanup

- Currently executing fiscal year 2019 appropriations
  - What we are doing now
- Congress is considering fiscal year 2020 funding
  - What we will be doing
- Tonight's focus is to get public input on fiscal year 2021 budget requests
  - What we are requesting for fiscal year 2021



The bluffs near F Reactor along the Columbia River

- Continuity of Operations (COOP) / Landlord
- Tank Maintenance
- Facility Risk Mitigation
- Critical Infrastructure
- Groundwater Pump and Treat
- Direct-Feed Low-Activity Waste (DFLAW) Capability
- Cesium/Strontium (Cs/Sr) Dry Storage Mortgage Reduction
- Tank Closure
- Tank Waste Retrieval in AX Farm



A cocooned reactor near the Columbia River

(\$ in Thousands)

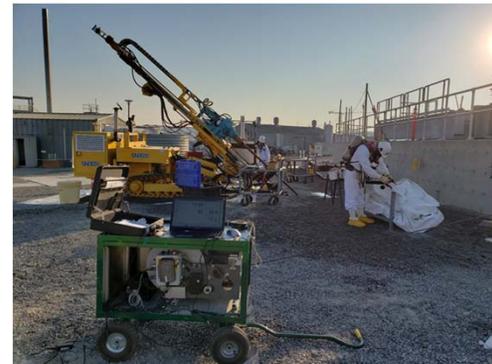
PBS	PBS Title	FY 2018 Enacted	FY 2019 Enacted	FY 2020 President's Request
ORP-0014	Radioactive Liquid Tank Waste Stabilization and Disposition	719,000	771,947	677,460
ORP-0014	15-D-409, Low-Activity Waste Pretreatment System	93,000	56,053	0
ORP-0014A	Low-Level Waste Off-Site Disposal	0	0	10,000
<b>Tank Farms</b>		<b>812,000</b>	<b>828,000</b>	<b>687,460</b>
ORP-0060	Waste Treatment and Immobilization Plant (WTP) Low-Activity Waste, Balance of Facilities, and Analytical Laboratory (LBL)	630,000	655,000	640,000
ORP-0060	WTP High-Level Waste	75,000	60,000	30,000
ORP-0060	WTP Pretreatment	35,000	15,000	20,000
<b>WTP</b>		<b>740,000</b>	<b>730,000</b>	<b>690,000</b>
ORP-0070	WTP Commissioning	8,000	15,000	15,000
<b>Total</b>	<b>Office of River Protection Funding Summary</b>	<b>1,560,000</b>	<b>1,573,000</b>	<b>1,392,460</b>

### Fiscal Year 2020 Planned Activities

- Maintain Tank Farms in a safe condition
- Reduce inventory at the Liquid Waste Processing Facilities (LWPF) by two million gallons
- Continue tank integrity activities



Evaporator pump repairs



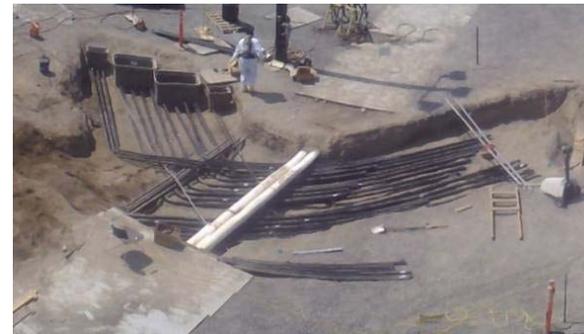
Borehole sampler staged for deployment in A Farm

## Fiscal Year 2020 Planned Activities

- Continue tank farm upgrades to support DFLAW activities
- Continue 242-A Evaporator facility repairs
- Continue 222-S Laboratory operations and upgrades to support DFLAW



Water line installation

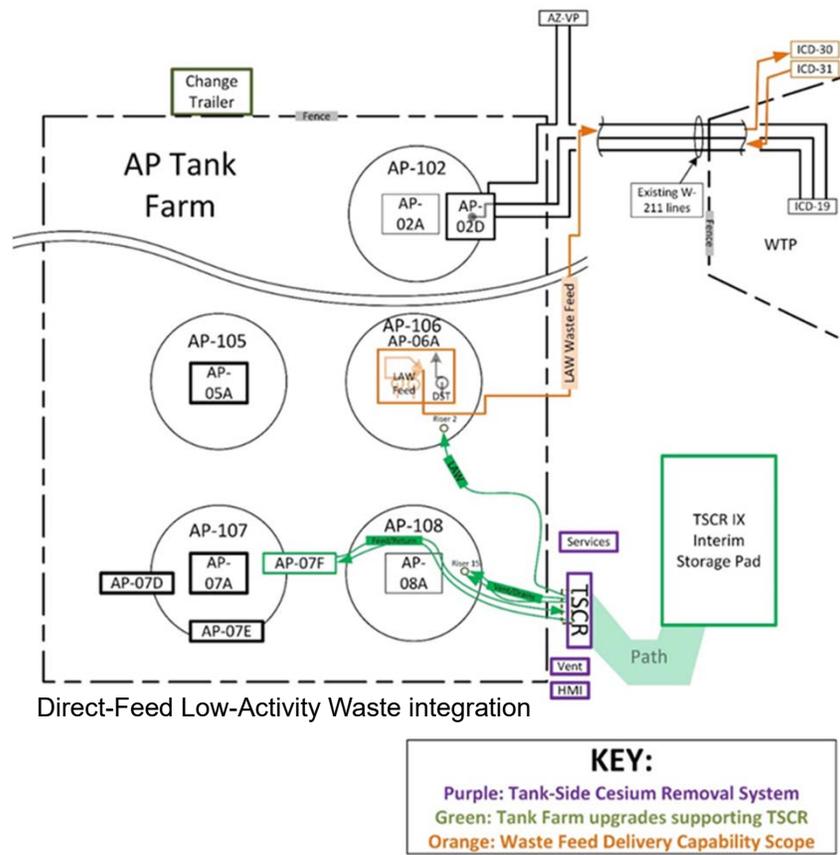


Electrical infrastructure installation

# Tank-Side Cesium Removal System – 15-D-409-01

## Fiscal Year 2020 Planned Activities

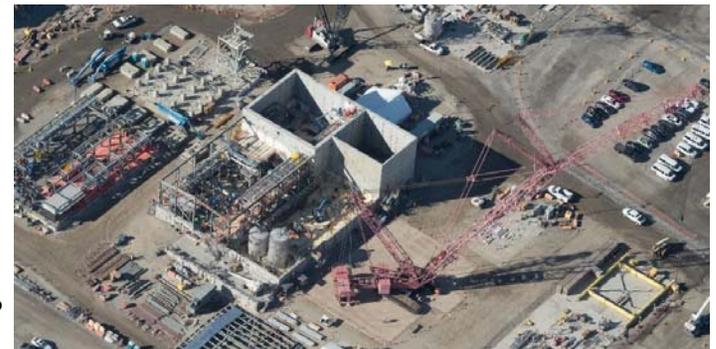
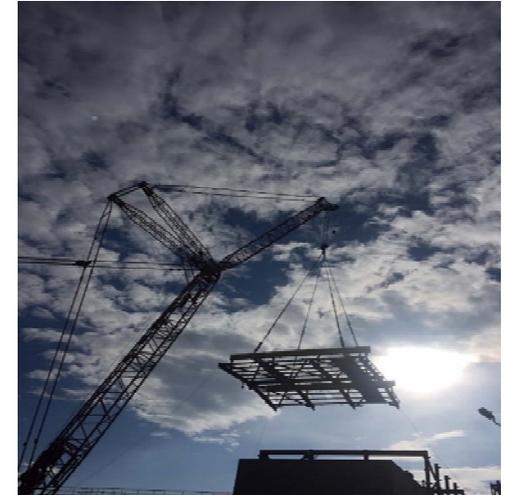
- Complete TSCR factory acceptance testing
- TSCR system delivered
- Complete TSCR installation
- Complete TSCR construction acceptance testing
- Complete storage pad construction



## Fiscal Year 2020 Planned Activities

- Complete startup testing of process and building systems for LAW
- Initiate startup testing of EMF systems and components
- Complete startup testing for support of BOF
- Complete startup testing for LAB components and systems
- Continue engineering on HLW design

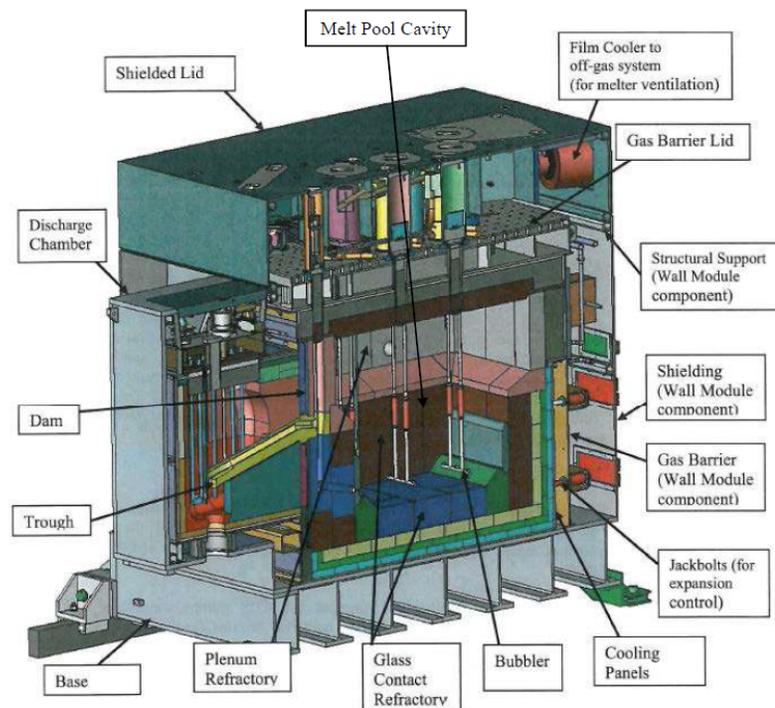
Installation of the roof structure for the EMF evaporator cell



EMF construction site at WTP

## Fiscal Year 2020 Planned Activities

- Begin receipt of long-lead consumables and equipment for WTP LAW operations
- Award contract for procurement and assembly of replacement LAW melter to support continued WTP LAW operations



Low-activity waste melter cutaway

(\$ in Thousands)

PBS	PBS Title	FY 2018 Enacted	FY 2019 Enacted	FY 2020 President's Request
RL-0011	Nuclear Material Stabilization and Disposition - PFP	26,067	46,200	0
RL-0012	Spent Nuclear Fuel Stabilization and Disposition	42,610	13,900	0
RL-0013C	Solid Waste Stabilization and Disposition – 200 Area	145,006	159,900	110,798
RL-0030	Soil and Water Remediation – Groundwater / Vadose Zone	132,363	132,158	106,600
RL-0201	Hanford Site-Wide Services	316,833	308,200	255,551
<b>Central Plateau Remediation</b>		<b>662,879</b>	<b>660,358</b>	<b>472,949</b>
RL-0040	Nuclear Facility D&D – Remainder of Hanford	68,042	74,192	34,750
RL-0041	Nuclear Facility D&D – River Corridor Closure Project	115,650	119,500	105,000
<b>River Corridor and Other Cleanup Operations</b>		<b>183,692</b>	<b>193,692</b>	<b>139,750</b>
RL-0013C	18-D-404 WESF Modifications and Capsule Storage	6,500	1,000	11,000
RL-0020	Safeguards and Security	81,990	86,686	86,778
RL-0042	Nuclear Facility D&D – Fast Flux Test Facility	2,240	2,240	2,500
RL-0100	Richland Community and Regulatory Support	10,121	10,121	5,121
<b>Total</b>	<b>Richland Operations Office Funding Summary</b>	<b>947,422</b>	<b>954,097</b>	<b>718,098</b>

D&D = Deactivation and Decommissioning,  
WESF = Waste Encapsulation Storage Facility

## Fiscal Year 2020 Planned Activities

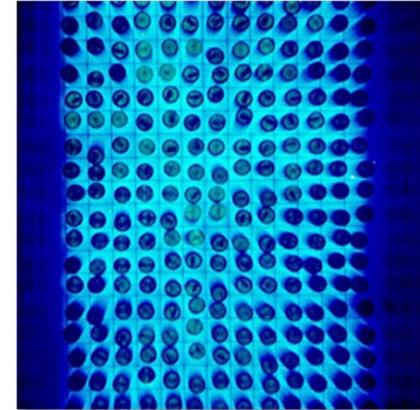
- Fiscal year 2020 PFP work scope will be accomplished with planned fiscal year 2019 carryover funds
- Sample and characterize building slabs in preparation for removal
- Transition PFP site to surveillance and maintenance mode
- Complete demolition of Plutonium Reclamation Facility wall stubs and debris loadout



PFP site once demolition is complete (artist's rendition)

## Fiscal Year 2020 Planned Activities

- Provide safe and compliant storage of Cs/Sr capsules at WESF, waste disposal, treatment, and storage facilities (Central Waste Complex, mixed waste disposal trenches, T Plant)
- Operate Environmental Restoration Disposal Facility and mixed waste disposal trenches
- Complete shipments of Sludge Transport & Storage Containers from 100 K West Reactor Basin to T Plant
- Award contracts for construction of WESF modifications to support transfer of Cs/Sr capsules to dry storage
- Start construction of WESF modifications



Cesium/strontium capsules in storage basin in Waste Encapsulation Storage Facility



Capsule Storage Area (artist's rendition)

## Fiscal Year 2020 Planned Activities

- Continue integration of site-wide groundwater and vadose zone cleanup activities; groundwater contamination monitoring; and operations, maintenance and modifications of existing remediation systems
- Continue operation of River Corridor and Central Plateau pump-and-treat facilities for treatment of at least 2.2 billion gallons of contaminated groundwater (removing uranium, carbon tetrachloride, nitrates, hexavalent chromium and technetium-99)
- Continue to meet TPA well-drilling commitments



Pump-and-treat facility on the Central Plateau

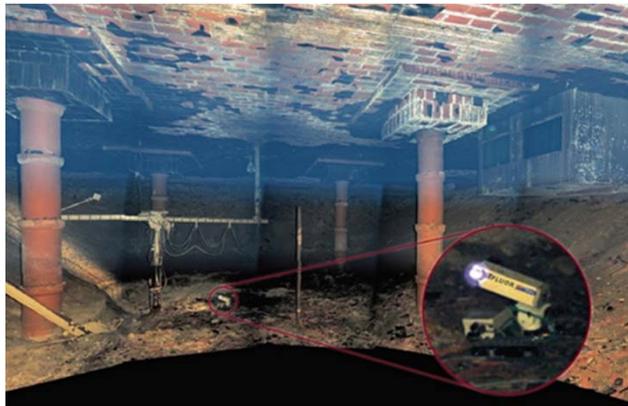
## Fiscal Year 2020 Planned Activities

- Provide site-wide services (fire, road, water) for day-to-day operations and cleanup
- Fund RL-direct services, including site integration, tribal commitments and emergency preparedness
- Rejuvenate, re-configure and right-size Hanford site infrastructure

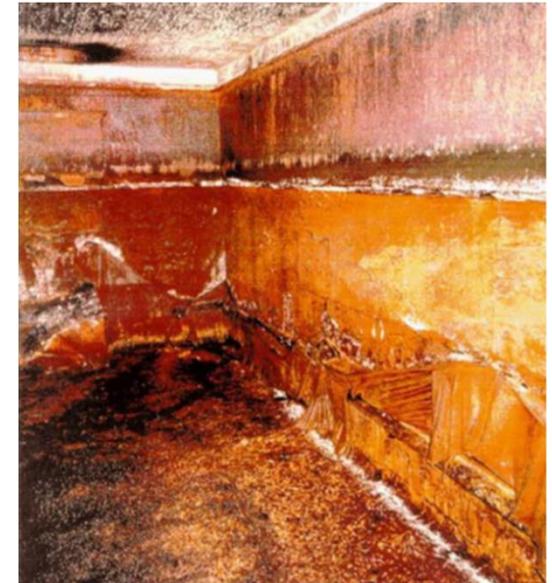


## Fiscal Year 2020 Planned Activities

- Continue surveillance and maintenance activities for inactive waste sites and surplus facilities on Central Plateau
- Continue canyon facility risk mitigation activities



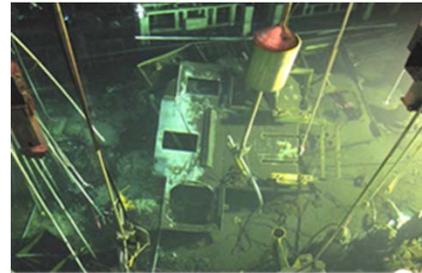
216-Z-9 crib interior



241-Z-361 tank interior

## Fiscal Year 2020 Planned Activities

- Complete micropile placement in 324 Building
- Complete B-Cell floor scoring and remove the B-Cell floor
- Perform remote excavation of the 300-296 highly contaminated waste site below the 324 Building
- Perform debris disposition and remove garnet/sand filter media from the 105 K West Reactor Basin in preparation for dewatering



Debris in the K West Reactor Basin



Micropile testing/demonstration



Remote excavator arm in airlock at 324 Building

## Fiscal Year 2020 Planned Activities

- Maintain appropriate and compliant safeguards and security programs at the Hanford Site, including protection of special nuclear material, classified matter, and government property at Hanford



Safeguards and security personnel threat response



In January 2019, Hanford's security organization hit 1.1 million safe work hours

## Fiscal Year 2020 Planned Activities

- Continue long-term surveillance and maintenance for Fast Flux Test Facility and support facilities



Fast Flux Test Facility in Hanford's 400 Area

## Fiscal Year 2020 Planned Activities

### Community and Regulatory Support

- Support Washington and Oregon emergency preparedness programs, Washington State Department of Health oversight and the Hanford Advisory Board

- 30-day public comment period – (ends June 15, 2019)
- Comments written, mailed, or emailed – [BudgetPriorities@rl.gov](mailto:BudgetPriorities@rl.gov)
- Comments included in budget submittal
  - Submittal reviewed by DOE-Environmental Management
  - DOE chief financial officer
  - Office of Management and Budget