Budget Briefing

FY 2018 President’s Budget
FY 2019 Estimated Requirements

Jon Peschong, One System Director


June 7, 2017
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
Key Cleanup Priorities

- 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)

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

<table>
<thead>
<tr>
<th>DFLAW Facilities</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Double shell tanks</td>
<td><strong>Upgrades required</strong> / DFLAW waste feed delivery upgrades (AP &amp; AW-Farms), air permits</td>
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<tr>
<td>242-A Evaporator</td>
<td><strong>Operating facility</strong> / No additional activities required</td>
</tr>
<tr>
<td>LAW Pretreatment System</td>
<td><strong>CD-1 approved, in design</strong> / Long-lead procurements, LAWPS RCRA permit</td>
</tr>
<tr>
<td>WTP LAW Vitrification Facility</td>
<td><strong>Construction underway</strong> / Startup and commissioning, planning including readiness, RCRA and air permits</td>
</tr>
<tr>
<td>Integrated Disposal Facility</td>
<td><strong>Construction complete</strong> / IDF performance assessment, upgrades, ORR, RCRA and air permits</td>
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<tr>
<td>LAW Effluent Management Facility</td>
<td><strong>In design</strong> / Construction, RCRA and air permits</td>
</tr>
<tr>
<td>Effluent Treatment Facility</td>
<td><strong>Operating facility</strong> / Minor additional activities required</td>
</tr>
<tr>
<td>State-approved land disposal site</td>
<td><strong>Operating facility</strong> / No additional activities required</td>
</tr>
<tr>
<td>Consolidated solid waste management</td>
<td><strong>Decision complete</strong> / 90-day storage pad</td>
</tr>
<tr>
<td>222-S Laboratory</td>
<td><strong>Operating facility</strong> / Minor additional activities required</td>
</tr>
<tr>
<td>WTP Analytical Laboratory</td>
<td><strong>Construction nearly complete</strong> / Startup and commissioning, RCRA permit, Lab DSA</td>
</tr>
<tr>
<td>WTP Balance of Facilities</td>
<td><strong>Construction underway</strong> / Transitioning to startup and commissioning, DFLAW upgrades</td>
</tr>
</tbody>
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- 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
“Protecting our workers, the public, and the environment”