FY 2011 Congressional Budget Request

Environmental Management
Office of River Protection

Shirley J. Olinger, Manager
Office of River Protection
February 1, 2010
Office of River Protection
Fiscal Year 2011 Focus

- Do Work Safely
- Complete proposed TPA/Consent Decree milestones for Tank Farms and WTP
- Deploy hard-heel SST retrieval technology
- Further C-Farm closure activities
- Complete Recovery Act Tank Farm infrastructure upgrades to prepare reliable/consistent WTP waste feed
- Accelerate completion of WTP engineering, reduce project risk, and improve project confidence
- Achieve 65% WTP total project completion
- Continue to look for opportunities to reduce overall lifecycle costs/project risk
- Collaboratively work with Regulators, Tribes, Stakeholders and Public to further progress
- Finalize Tank Closure and Waste Management EIS for final issuance of ROD
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(x$1,000)

|--------------------------------|-------------|-----------------------|-----------------|

**River Protection Budget Summary**

**Defense Environmental Cleanup**

Office of River Protection

**Tank Farm Activities**

<table>
<thead>
<tr>
<th>Activity</th>
<th>FY 2009</th>
<th>FY 2009 ARRA</th>
<th>FY 2010</th>
<th>FY 2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waste Treatment and Immobilization Plant*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>01-D-16A: Low Activity Waste Facility (LAW)</td>
<td>160,000</td>
<td>-</td>
<td>100,000</td>
<td>57,500</td>
</tr>
<tr>
<td>01-D-16B: Analytical Laboratory (LAB)</td>
<td>65,000</td>
<td>-</td>
<td>55,000</td>
<td>2,500</td>
</tr>
<tr>
<td>01-D-16C: Balance of Facilities (BOF)</td>
<td>75,000</td>
<td>-</td>
<td>50,000</td>
<td>5,000</td>
</tr>
<tr>
<td>01-D-16D: High Level Waste Facility (HLW)</td>
<td>125,000</td>
<td>-</td>
<td>160,000</td>
<td>260,178</td>
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<tr>
<td>01-D-16E: Pretreatment Facility (PT)</td>
<td>265,000</td>
<td>-</td>
<td>325,000</td>
<td>415,000</td>
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<tr>
<td><strong>Total, Waste Treatment and Immobilization Plant</strong></td>
<td>690,000</td>
<td>-</td>
<td>690,000</td>
<td>740,178</td>
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</tbody>
</table>

**Total, Office of River Protection**

|--------------------------------|-------------|-----------------------|-----------------|

* 2 control points – One for PT and one for LAW, LAB, BOF, and HLW

EM Environmental Management

safety  ❖  performance  ❖  cleanup  ❖  closure
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FY 2011 Planned Accomplishments
Tank Farms - $418M  PBS ORP-0014

Base Operations
- DST/SST operations, surveillance, monitoring and maintenance
- 222-S Laboratory operations
- Conduct 242-A Evaporator campaign
- Conduct seven DST to DST transfers
- Tank sampling and analysis
- Conduct DST ultrasonic testing and DST system integrity program
- Continue implementing SST Integrity Expert Panel recommendations (i.e., SST structural analysis and visual inspections)

Base Operations
- Facility Management
- WTP electricity
- Business Services
- Hanford pension
- Site Services
Bulk Retrieval Activities
• Complete C-107 bulk retrieval (deployment of MARS)
• Complete C-112 design and construction
• Complete C-101 design and initiate construction
• Initiate design on C-102 and C-105

Hard Heel Activities
• Complete C-108 and C-110 hard heel removal
• Complete C-109 hard heel design and construction

Other Retrieval Activities
• Complete procurement of 2nd Mobile Arm Retrieval System
• Remove ~ 6 hose-in-hose transfer lines
• Design SX Farm Interim Surface Barrier
• Continue tank closure demonstration activities
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FY 2011 Planned Accomplishments
Tank Farms - $418M  PBS ORP-0014

Waste Treatment and Immobilization Support
- Design SY-102 feed delivery system
- Design AY/AZ vent upgrade
- Continue Secondary Waste Treatment/Effluent Treatment Facility upgrade design

Technology Development and Deployment
- Continue to develop
  - Next generation melter
  - Lithium Bayer Pretreatment technologies for sodium mitigation
Waste Treatment and Immobilization Plant (WTP) - $740.178M

**LAW - 77% complete (currently 68%)- $57.5M**
- Complete 100% pipe fabrication isometrics/80% bulk process pipe installation
- Receive off gas mercury adsorber
- Receive liquid CO2 storage horizontal vessel

**LAB – 56% complete (currently 48%) – $2.5M**
- Receive two HEPA filter housings for the hot cell
- Install 90% bulk process pipe and 70% bulk conduit
- Construct the waste collection tank pit

**BOF – 59% complete (currently 52%) - $5M**
- Construct Water Treatment Building which supplies demineralized water for numerous critical processes
- Complete construction of BOF Switchgear Building
- Procure last major BOF equipment - emergency diesel generators
- Receive two ammonia vessels
Waste Treatment and Immobilization Plant (WTP) - $740.178M (continued)

**PBS ORP-0060**

**HLW – 65% complete (currently 49%) - $260.178M**

- Complete 90% design
- Receive HEPA filter housings/dampers for primary ventilation system
- Complete 50 walls/slabs at 14’ to 37’ elevation
- Install HEPA filter housings in filter cave
- Install stainless steel liners for 2 melter cells
FY 2011 Planned Accomplishments

Waste Treatment and Immobilization Plant (WTP) - $740.178M (continued)

PBS ORP-0060

PT – 63% complete (currently 48%) - $415M

- Complete 90% design
- Complete installation of structural steel framing to support roofing at 98’ elevation
- Complete placement of slabs at 77’ elevation, except a handful of cell tops (required to stay open for future vessel installation)
- Complete installation of all primary ventilation ducts below 56’ elevation
- Install 30 ton crane/shield doors for hot cell
- Place 1st major fabricated piping module in black cell above large waste feed receipt vessel
American Recovery and Reinvestment Act Work

FY 2011 Planned Accomplishments

<table>
<thead>
<tr>
<th>FY09 ARRA Appropriation</th>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
<th>Total</th>
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<tbody>
<tr>
<td>$26M</td>
<td></td>
<td>$180M</td>
<td>$120M</td>
<td>$326M</td>
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</table>

RA-1 Tank Farms Infrastructure Upgrades
- Design/fabricate upgraded AP/SY ventilation systems
- Complete SY electrical upgrades for future waste feed delivery demands
- Complete AP farm level rise modification increasing DST storage space (528,000 gallons)
- Design/install upgraded AZ farm ventilation control system
- Remove SST obsolete electrical infrastructure

RA-2 Other Infrastructure Upgrades
- Wiped Film Evaporator full-scale demo
- Procure/test MARS vacuum

RA-3 Facilities Upgrades
- Complete 222-S Laboratory upgrades
- Complete 242-A Evaporator upgrades

RA-4 Waste Feed Infrastructure Upgrades
- Upgrade/automate DST control system
- Complete AZ-1 condensate line upgrades
- Complete in-tank mixer pump design
- Remove DST obsolete equipment

RA-5 Waste Feed Transfer Line Upgrades
- Replace 8 RCRA non-compliant transfer lines in SY Farm