

# ***FY 2009 Congressional Budget Request***

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***Environmental Management***

***Office of River Protection***

## **Strengthening the Foundation of our Future: Investments to Maximize Risk Reduction**

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**Office of River Protection**

**February 4, 2008**



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## Office of River Protection FY 2009 Priorities

- Construct Waste Treatment and Immobilization Plant (WTP) by FY 2019
- Complete WTP Low Activity Waste, Analytical Laboratory, and Balance of Facilities by FY 2012
- Continue to develop retrieval technology and retrieve approximately 1 tank per year
- Continue conceptual planning and technology development for pretreatment system
- Continue to develop bulk vitrification technology
- Enhance Single-Shell Tank (SST) Integrity Program



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	FY 2007 Final Operating Plan	FY 2008 Approp	FY 2009 Cong Request
<b>River Protection Budget Summary</b>			
<b>Defense Environmental Cleanup</b>			
Office of River Protection			
<i>Tank Farm Activities</i>	277,127	285,818	288,443
<i>Waste Treatment and Immobilization Plant</i>			
01-D-16A: Low Activity Waste Facility	186,000	141,699	160,000
01-D-16B: Analytical Laboratory	59,000	44,591	65,000
01-D-16C: Balance of Facilities	57,000	71,345	75,000
01-D-16D: High Level Waste Facility	177,000	175,389	125,000
01-D-16E: Pretreatment Facility	211,000	250,698	265,000
Subtotal, Waste Treatment and Immobilization Plant	690,000	683,722	690,000
Subtotal, Office of River Protection	967,127	969,540	978,443
Subtotal, Defense Environmental Cleanup	967,127	969,540	978,443
<b>Total, River Protection</b>	<b>967,127</b>	<b>969,540</b>	<b>978,443</b>



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	FY 2007 Final Operating Plan	FY 2008 Approp	FY 2009 Cong Request
<b>River Protection Budget Summary - PBS Level</b>			
<b>Defense Environmental Cleanup</b>			
<u>Office of River Protection</u>			
<i>Tank Farm Activities</i>			
ORP-0014: Radioactive Liquid Tank Waste Stabilization and Disposition	276,656	285,351	288,443
ORP-0100: River Protection Community and Regulatory Support	471	467	0
Subtotal, Tank Farm Activities	277,127	285,818	288,443



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FY 2007 Final Operating Plan	FY 2008 Approp	FY 2009 Cong Request
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### **River Protection Budget Summary - PBS Level**

Waste Treatment and Immobilization Plant			
01-D-16A: Low Activity Waste Facility	186,000	141,699	160,000
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## Significant Changes From FY 2008 to FY 2009

### **Tank Farm Activities**

#### **ORP-0014 / Radioactive Liquid Tank Waste Stabilization and Disposition - \$3,092K**

- Less focus on retrievals
- More focus on developing Interim Pretreatment at Tank Farms to support early LAW

#### **ORP-0100 / River Protection Community and Regulatory Support - (\$467K)**

- Transferred activities in FY 2009 to the Richland Operations Office to support the Hanford Advisory Board for public involvement related to the cleanup mission at the Hanford Site

### **ORP-0060 Waste Treatment and Immobilization Plant**

#### **ORP-0060 / Major Construction-Waste Treatment Plant - \$6,278K**

- The increase is due to the FY 2008 rescission in the Omnibus bill, *Consolidated Appropriations Act, 2008 (HR 2764)*



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FY 2008 Planned Accomplishments

**Waste Treatment and Immobilization Plant (WTP) - \$684M, 47% complete, 81% design, 38% construction, ~3,300 employees**

**PBS ORP-0060**

- **LAW - 76% complete - \$142M**
  - Design will be 98 percent complete
  - Complete installation of 7,400 feet of piping in the Wet Process Cells
  - Complete installation of wall partitions at the -21' and 3' levels
- **LAB – 44% complete - \$45M**
  - Complete siding and roofing installations and application of structural steel fireproofing
  - Complete preassembly and setting of the facility stack with internal ducting
  - Complete installation of fire protection piping in the facility and hot cell
- **BOF – 51% complete - \$71M**
  - Complete setting of the glass former facility silos; chiller compressor facility equipment and bulk pipe installations; high voltage cable pulls to the Low-Activity Waste Facility, and, installation of electrical distribution equipment in the switchgear building



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## FY 2008 Planned Accomplishments

### Waste Treatment and Immobilization Plant (WTP) - \$684M 47% complete, 81% design, 38% construction (continued)

#### PBS ORP-0060

- **HLW – 42% complete - \$175M**
  - Complete design of the second floor walls and structural steel framing for the facility roof
  - Issue electrical cable layouts for areas on the fourth floor
  - Erect structural steel up to 14' level
  - Install 200 tons of structural steel to support work for the second floor
- **PT – 42% complete - \$251M**
  - Release design for construction of reinforced concrete walls - 6,500 cubic yards of concrete, 1,400 tons of reinforcing steel, and 700,000 pounds of embeds
  - Complete structural steel erection up to elevation 56 ft - 6,000 tons of structural steel and place 6000 ft<sup>3</sup> of concrete
- **Technical Issues**
  - Resolve 6 of the remaining 13 technical issues by the External Flow sheet Review Team
  - Complete assembly of the Pretreatment Engineering Platform and initiate testing with simulant

#### The following milestones have been or will be met:

- Submit the WTP Semi-Annual Compliance Report (M-62-01P) - Completed
- Submit the WTP Semi-Annual Compliance Report (M-62-01Q) - due 7/31/2008

#### The following milestones are at risk due to technical issues:

- Complete assembly of LAW melter #1 (M-62-07B)
- Submit documentation stating the WTP has been constructed in compliance with the Permit (WTP-DWP-1)



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## FY 2008 Planned Accomplishments

### **Tank Farms ORP-0014 - \$285M, 1,246 employees**

- Manage tank farms in a safe and compliant manner
- Retrieve one C-Farm Single-Shell Tank (SST) -- 7 completed, 3 in progress, 2 in preparation
- Transition to new Tank Operations Contract
- Complete Demonstration Bulk Vitrification System design
- Initiate conceptual design for Interim Pre-treatment System for Early LAW
- Complete T-Farm Interim Surface Barrier
- Two Evaporator campaigns creating ~1 Mgal DST Space
- Complete 242-A Evaporator Integrity Assessments required every 5 years per RCRA permit
- DST Integrity work (ultra sonic testing/video inspections, corrosivity testing, and chemical sampling/control)
- Evaluate SST integrity (Expert Panel Review, collect data to support Structural Analysis)
- Continue Tank Closure and Waste Management Environmental Impact Statement (TC/WM)
- Removal of Hose in Hose Transfer lines
- Empty Catch Tanks

### **The following milestones have been or will be met:**

- Submit to Ecology a Phase 1 RFI report for all SST WMAs (M-45-55) - Completed
- Submit biennial updates to SST Retrieval Sequence document and DST Space Evaluation Document (N-45-02N) - due 3/1/2008
- Ecology and DOE agree to meet yearly for the purpose of assessing the adequacy of information, and the need for the establishment of additional agreement interim measures (M-45-56D) - due 7/31/2008

### **The following milestones are at risk due to technical and budget constraints:**

- Initiate negotiations of the SST waste retrieval and closure activities (M-45-00D)
- Negotiations shall be completed within 150 days (M-45-00D-A)



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FY 2009 Planned Accomplishments

**Waste Treatment and Immobilization Plant (WTP) - \$690M 56% complete, 89% design, 46% construction**

**PBS ORP-0060**

- **LAW - 87% complete - \$160M**
  - Design engineering will be complete
  - Continue installation of commodities throughout facility
  - Complete installation of glass container storage area insulated liner plate
- **LAB – 55% complete – \$65M**
  - Complete installation of epoxy coatings. Complete installation of heating, ventilation, and air conditioning fans, high efficiency particulate air filter housings and bulk commodities. Install approximately 20,000 linear feet of process piping (63%)
- **BOF – 58% complete - \$75M**
  - Complete the installation of the glass former facility silo's support equipment and interconnecting pipe. Complete construction and initiate the startup turnover process in the steam plant, water treatment, and electrical switchgear facilities



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## FY 2009 Planned Accomplishments

### Waste Treatment and Immobilization Plant (WTP) - \$690M 56% complete, 89% design, 46% construction (continued) PBS ORP-0060

- **HLW – 51% complete - \$125M**
  - Complete civil design for the main facility concrete and steel structures, including the roof and emissions stack. Complete piping design to over 94 percent
  - Continue concrete placements for the elevation 0 ft to 14 ft walls, the 14 ft slab, the 14 ft to 37 ft walls (~11,000 cubic yards), and elevation 37 ft slabs (~4,400 cubic yards). Continue structural steel installation in support of the concrete placements, 529 tons
- **PT – 49% complete - \$265M**
  - Complete design release for construction of the walls between the third and fourth floor (elevations 56 ft to 77 ft). Complete the design of the structural steel roof framing
  - Place 14,500 CY of concrete, 3,200 tons of rebar and 900,000 pounds of embeds in the walls and decks
  - Start erection of structural steel at the 56 foot level
- **Technical Issues**
  - Resolve the last seven technical issues by the External Flowsheet Review Team.
  - Complete Phase I testing with the Pretreatment Engineering Platform and demonstrate ultrafiltration system function and capacity

### The following milestones have been or will be met:

- Submit the WTP Semi-Annual Compliance Report (M-62-01R) - due 1/31/2009
- Submit the WTP Semi-Annual Compliance Report (M-62-01S) - due 7/31/2009

### The following milestones are at risk due to technical issues

- Start Cold Commissioning (M-62-09)
- WTP Final Compliance Date (WTP-DWP-32)



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## FY 2009 Planned Accomplishments

### **Tank Farms ORP-0014 - \$288M**

- Manage Tank Farms in a safe and compliant manner
- Retrieve one C-Farm SST -- 8 completed, 2 in progress, 2 in preparation
- Continue conceptual planning and technology development for the Interim Pre-treatment System and submit Critical Decision-1 Package
- Complete 2 Evaporator Campaigns and AP level rise creating DST space
- Continue Bulk Vitrification System Cold Testing
- Complete TC/MM EIS and issue Record of Decision
- Replace Evaporator confinement ventilation system (exhaust side)
- DST integrity work (3 core samples) and 2 cross-site transfers
- Continue to perform SST integrity evaluations (Implement Expert Panel recommendations)
- Replace tank sampling truck (1980's vintage)
- Complete AP Tank Farm Level Rise to create additional DST space
- Removal of Hose in Hose Transfer lines

### **The following milestones have been or will be met:**

- Submit to Ecology a corrective measures study for interim corrective measures for all SST WMAs (M-45-58) - due 12/31/2008
- Submit to Ecology the RCRA Field Investigation (RFI)/Corrective Measures (CMS) Work Plan for all SST WMAs (M-45-60) - due 12/31/2008
- Ecology and DOE agree to meet yearly for the purpose of assessing the adequacy of information, and the need for the establishment of additional agreement interim measures (M-45-56E) - due 7/31/2009

### **The following milestone is at risk due to technical and budgetary issues:**

- Complete startup and turnover activities for waste retrieval and immobilization systems for selected initial HLW feed tank (M-47-03A)



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Approved Baseline Workscope Not Included in FY 2009 Budget - \$102M

- Tank Farm Life Extension Upgrades for AN, AP, AW, AY, AZ, and SY
- Tank Farm Upgrades Program Support
- E-525 Project
- Vadose Zone
- Program Mgmt/General support additional scope/Fee
- DOE Mission Support
- 222-S Upgrades
- C-200 Closure Demonstration
- DBVS
- Supplemental Pretreatment



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