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# ***Fiscal Year 2011 Budget Briefing***

## ***Office of River Protection***

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July 22, 2009



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# Key Points

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- ORP is achieving significant accomplishments in the Tank Farm and Waste Treatment Plant (WTP) and is committed to meeting our compliance commitments
- This briefing reflects the schedules/priorities as discussed with Ecology
- This briefing presents planned work scope accomplishments to be performed in Fiscal Year (FY) 2011



# Funding Profile

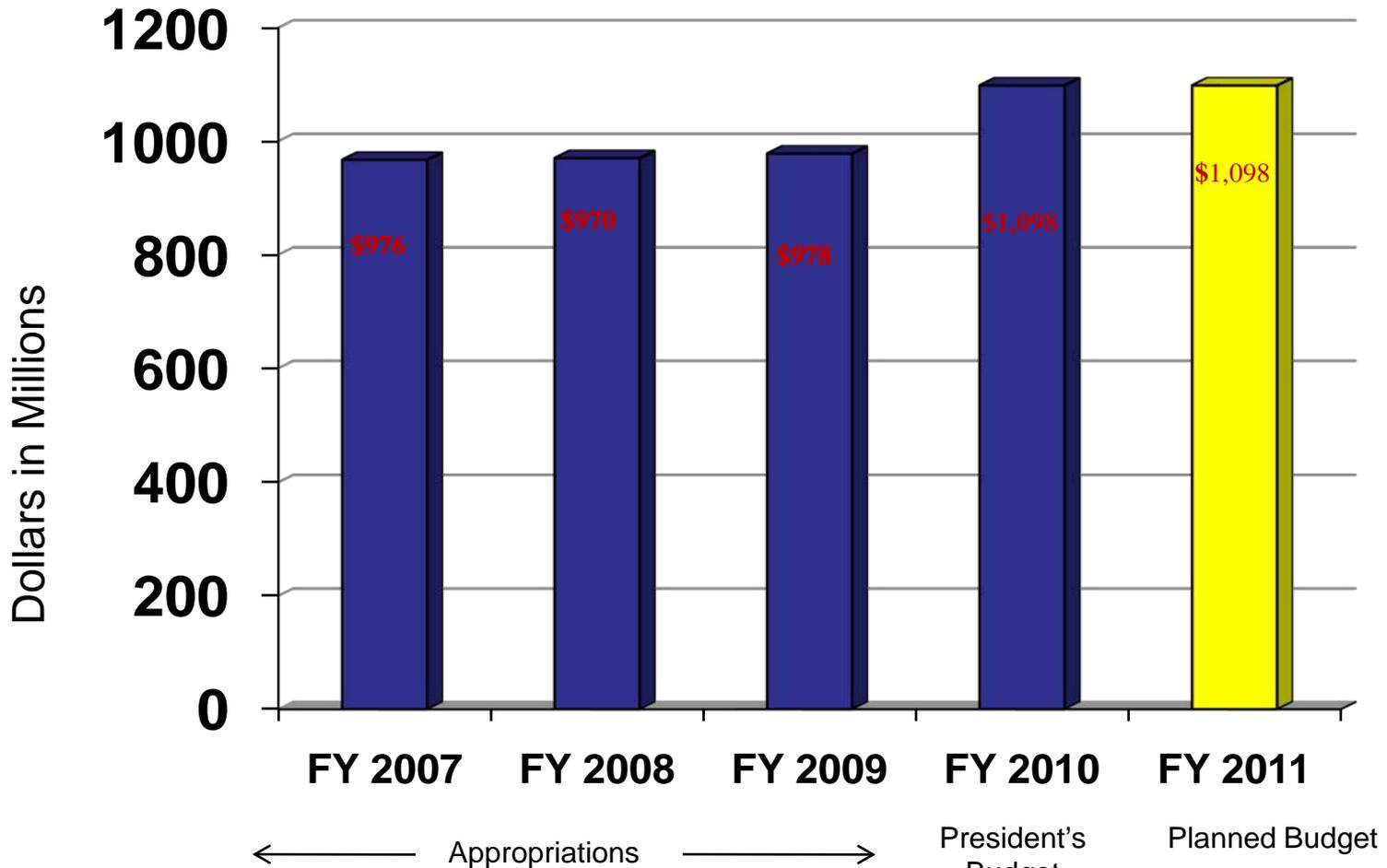
PBS	PBS Title	FY 2009 Omnibus	FY 2010 President's Budget	FY 2011 Planning Budget
ORP-0014	Radioactive Liquid Tank Waste Stabilization and Disposition	319,943	408,000	408,000
ORP-0060	Major Construction - Waste Treatment Plant	-	-	-
	Low Activity Waste Facility	160,000	100,000	57,500
	Analytical Laboratory	65,000	55,000	2,500
	Balance of Facilities	75,000	50,000	5,000
	High Level Waste Facility	125,000	160,000	255,000
	Pretreatment Facility	265,000	325,000	370,000
	<b>Total ORP-0060</b>	<b>690,000</b>	<b>690,000</b>	<b>690,000</b>
<b>Total - ORP</b>	<b>Total (Excludes Program Direction)</b>	<b>1,009,943</b>	<b>1,098,000</b>	<b>1,098,000</b>



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# ORP Funding and Planned Budget

(Dollars in Millions)



Note: These numbers exclude Program Direction funding  
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# American Reinvestment and Recovery Act Funding Focus Areas

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Tank Farm infrastructure to support Waste Feed Delivery to WTP - \$326M



- Tank Farm Infrastructure
  - Ventilation at AP/SY Farms
  - Waste Transfer Infrastructure
  - Level Rise Modifications
  - Control Systems
  - AP Farm Valve Pits

- Other Infrastructure
  - Wiped Film Evaporator
  - Core Sampling Truck

- Waste Feed Infrastructure
  - DST Control Systems (AN, AP, AW, AY/AZ, SY Farms)
  - AW/AN Exhauster D&D
  - Tank Waste Mixing Demonstration
  - Transfer and Condensate line upgrades

- Facility Upgrades
  - 242-A Evaporator Upgrades
  - 222-S Laboratory Upgrades
  - ETF Upgrades

To date, 207 jobs have been created



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# Office of River Protection Near-Term Focus

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- Constant safety vigilance and focus
- Reduce overall lifecycle cost/project risks
- Prepare predictable/consistent waste feed delivery system
- Retrieve tank waste to prepare feed to WTP and identify technical needs
- Expand retrieval technology toolbox
- Execute Recovery Act Tank Farm infrastructure upgrades
- Increase WTP focus on project performance and increase accountability
- Resolve the few remaining WTP design technical issues
- Continue WTP construction progress
- Work closely with Regulators, tribes, stakeholders and public on existing work to further progress



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# Tank Farms Project

## ORP-0014

New sluicer being lowered into  
04A-Pit in SST-C104



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# Tank Farm Project Near-term Objectives/Priorities

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# ***FY 2011 Planned Accomplishments***

## ***Tank Farms Base Operations***

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### Base Operations

- DST/SST Operations, Surveillance, Monitoring and Maintenance
- 222-S Laboratory Operations
- 242-A Evaporator Campaigns
- Tank Sampling and Analysis (Core, Grab and Vapor)
- Conduct Ultrasonic Testing and DST System Pit Integrity
- Conduct DST to DST Transfers
- NDE Equipment Replacement
- Construction and Commissioning
- Continue implementation SST Integrity Expert Panel recommendations (i.e., SST Structural Analysis and Visual Inspections)

### Base Operations

- Facility Management
- ESH&Q
- Waste Management
- WTP Electricity
- Business Services
- ORP/TOC Management and Administration
- Hanford Pension
- Site Services
- Project Integration
- Fee/Management Reserve



242-A Evaporator



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# ***FY 2011 Planned Accomplishments***

## ***Tank Farms Retrieval/Closure***

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### ***Bulk Retrieval Activities***

- Complete C-107 Bulk Retrieval
- 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
- Initiate C-104 Hard Heel design



C-104 retrievals

### ***Other Retrieval Activities***

- Complete procurement of 2<sup>nd</sup> Mobile Arm Retrieval Tool
- Remove ~ 6 Hose-in-Hose Transfer Lines
- Design SX Farm Interim Surface Barrier
- Continue Closure Demonstration activities ( i.e., Initiate C-301 Catch Tank and 244-CR DQO/SAP & Characterization)



# ***FY 2011 Planned Accomplishments***

## ***Tank Farms – Waste Treatment and Immobilization Support***

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### Waste Treatment and Immobilization Support

- Initiate design of SY-102 Feed Delivery System
- AY/AZ Vent Upgrade Design
- Waste Feed Delivery Flow Sheet
- Continue Secondary Waste Treatment/Effluent Treatment Facility Design
- Waste Staging/Consolidation
- Blending Strategy Sampling
- Pretreatment Engineering Platform Phase II testing for filtration testing and Ultra-Filter Optimization



WTP under construction

### Technology Development and Deployment (EM-21)

- Continue Aluminum leaching studies
- Continue Next Generation Melter
- Development of improved glass formulations to reduce the ILAW capacity requirements and number of IHLW canisters produced
- Pursue Sodium Mitigation technologies recommended in sodium mitigation strategy



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# *Low Activity Waste Facility*

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# *Analytical Laboratory*

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# *Pretreatment Facility*

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# Pretreatment Progress

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# High Level Waste Facility

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# ***FY 2011 Planned Accomplishments***

## ***Waste Treatment Plant***

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### Low Activity Waste Facility – 77% complete

- Receive and install the Thermal Catalytic Oxidizer - a major off-gas component
- 80% of bulk process piping and 65% of bulk conduit installed
- Complete Civil, Structural and Architectural design efforts
- Start assembling both melters
- Install interior walls at the 3' level
- Paint interior walls at the 3' and 28' levels
- Install the C2 fans and various electrical equipment

### Analytical Laboratory – 56% complete

- 90% of bulk piping installed
- 70% of bulk conduit installed
- Start Construction Walk Downs for turnover to Start-Up

### Balance of Facilities – 59% complete

- Delivery of the Anhydrous Ammonia System
- Award purchase order for 4.16KV emergency diesel generator



# ***FY 2011 Planned Accomplishments***

## ***Waste Treatment Plant***

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### High Level Waste Facility – 65% complete

- Complete civil engineering design (Title II) and Architectural design
- Deliver Melter Off-Gas Blowers and the Acidic Waste Vessel
- Install the HEPA filter housing in Filter Cave
- Complete stainless steel liner installation in Pour Tunnels #1 and #2
- Install 39 Walls and 13 slabs
- Install piping, cable tray and HVAC ducting at the -21' level, and cable tray at the 0' level
- Install:
  - Melter cave, middle, and exterior shield door , and crane maintenance shield door
  - Melter cave cranes
  - Off-gas fans
  - Canister decon and waste neutralization vessels
- Commodity installation:
  - Concrete – 9,000 CY
  - Steel – 831 tons
  - Piping – 9,000 linear feet
  - HVAC – 74,000 pounds



# ***FY 2011 Planned Accomplishments***

## ***Waste Treatment Plant***

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### Pretreatment Facility – 63% complete

- Deliver Receive Cesium Ion Exchange heat exchangers and
- Deliver Cesium Nitric Acid Recovery reboiler and heat exchanger
- Install support frames in PT hot cell PA 21 for process jumpers and equipment
- Lift into position the lower pipe module for the LAW feed receipt cell – contains about 13,000 LF of stainless steel pipe, weighs 70 Tons, and is 37 ft x 54 ft
- Commodity Installation
  - Concrete – 3500 CY
  - Steel – 555 tons
  - Pipe – 63,500 linear feet
  - HVAC – 11,400 pounds
  - Conduit – 14,000 feet
- Install 12 slabs and 14 walls
- Install structural steel between 56' and 77' levels
- Complete the seismic upgrades for several Pretreatment vessels
- Receive piping and hangers

