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# ***Fiscal Year 2009, 2010 and American Recovery and Reinvestment Act***

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

### ***Briefing to Budgets and Contracts Committee***

Delmar Noyes, Waste Treatment Plant (WTP) Project

Janet Diediker, Tank Farms Project

Tom Fletcher, Tank Farms Project

May 28, 2009



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## ***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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# Fiscal Year (FY) 2010 Congressional Budget Request

## \$ in Thousands

FY 2008	FY 2009 Original Appropriation	*FY 2009 Additional Appropriation	FY 2010
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### River Protection Budget Summary

#### Defense Environmental Cleanup

Office of River Protection

*Tank Farm Project*

	292,351	319,943	326,035	408,000
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*Waste Treatment and Immobilization Plant*

01-D-16A: Low Activity Waste Facility	141,699	160,000	-	100,000
01-D-16B: Analytical Laboratory	44,590	65,000	-	55,000
01-D-16C: Balance of Facilities	71,345	75,000	-	50,000
01-D-16D: High Level Waste Facility	175,389	125,000	-	160,000
01-D-16E: Pretreatment Facility	250,698	265,000	-	325,000
Subtotal, Waste Treatment and Immobilization Plant	683,721	690,000	-	690,000

	976,072	1,009,943	326,035	1,098,000
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Total, River Protection	976,072	1,009,943	326,035	1,098,000
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\* American Recovery and Reinvestment Act (ARRA) Funds



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# Waste Treatment Plant Project

## ORP-0060



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# ***FY 2009 Planned Accomplishments***

## ***Waste Treatment Plant - \$690M***

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- Complete approximately 75% of the WTP design, and approximately 47% of construction
- Low Activity Waste (LAW) Facility will be 68% complete overall
- Analytical Laboratory (LAB) will be 43% complete overall
- Balance Of Facilities (BOF) will be 52% complete overall
- High Level Waste (HLW) Facility will be 48% complete overall
- Pretreatment (PT) Facility will be 46% complete overall



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# ***FY 2010 Planned Accomplishments***

## ***Waste Treatment Plant - \$690M***

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Complete approximately 82% of the WTP design and approximately 54% of the construction

### LAW Facility - 75% complete - \$100M

- Complete fabrication of melter #1 and #2 lid and balance of components
- Continue installation of commodities throughout facility
- Complete erection of the switchgear building and truck bay

### LAB – 48% complete – \$55M

- Complete installation of the waste collection tank pit elevated concrete
- Continue to install bulk piping
- Continue to install commercial and Quality Level heating ventilation and air-conditioning duct

### BOF – 56% complete - \$50M

- Complete construction on the Water Treatment Building which supplies de-mineralized water to plant processes such as steam plant, ion exchange processes, decontamination, and Laboratory operations.
- Complete concrete slab (560 cubic yards) and wall placement for the Anhydrous Ammonia Tank Facility, including slab piping and conduit



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# ***FY 2010 Planned Accomplishments***

## ***Waste Treatment Plant - \$690M (continued)***

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### High Level Waste Facility – 56% complete - \$160M

- Continue civil build out, installation of piping, hangers, heating, ventilation, and air-conditioning duct, and other commodities, with the following significant achievements:
  - Erect structural steel and decking slabs
  - Complete prerequisite civil/structural construction to release the installation of pipe hangers at the 0-foot elevation
  - Complete forming, rebar, and placement of concrete for 25 walls and 11 slabs on the 0- to 37-foot elevations (first to third stories) for a total of 4,720 cubic yards of concrete placed

### Pretreatment Facility – 54% complete - \$325M

- Set into position one of four ultrafiltration vessels
- Concrete placements through the year will total approximately 3,000 cubic yards, with completion of walls and slabs to the upper elevation of the facility
- Structural steel erection will continue for the 56-foot to 77-foot elevations (third to fourth stories) in an east-west direction, with an additional 1,900 tons of steelwork being erected throughout the year
- Pipe section installation will progress, with a total of 16,800 additional liner feet of pipe being installed in the building, taking the total to 60,000 linear feet installed



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# Tank Farms Project

## ORP - 0014



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# ***FY 2009 Planned Accomplishments***

## ***Tank Farm - \$319.9M***

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### Base Operations

- Double Shell Tank (DST)/Single Shell Tank (SST) operations, Surveillance, and Maintenance
- Safety, Quality, and Radiation Protection Programs
- 222-S Laboratory
- Tank Sampling
- DST Space Management
- DST Integrity
- 242-A Evaporator Campaigns
- Tank Sampling (Core, Grab and Vapor)
- Environmental Compliance
- Engineering
- Radiological Controls
- Site Services
- Business Services
- Waste Management
- Training, Procedures, and Standards Compliance
- ORP/Tank Operations Contract (TOC) Management Administration
- WTP Electricity



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# ***FY 2009 Planned Accomplishments***

## ***Tank Farm - \$319.9M (continued)***

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### Retrieval/Closure

- Complete retrieval of C-110
- Complete construction and initiate retrieval operations on C-104
- Initiate Design of C-111
- Remove Hose-in-Hose Transfer Lines
- Conduct Proof-of-Concept for Enhanced Chemical Cleaning
- Complete Design, Fabrication and initial testing of Mobile Arm Retrieval Tool
- Complete liquid mitigation from UX-302A Catch Tank
- Complete 244-CR Vault Sump Pumping
- SST Integrity
- Complete Near Surface Characterization for TY Interim Barrier
- Complete Design of TY Farm Interim Barrier
- Complete Near Surface Characterization at SX Farm
- Deploy Surface Geophysical Exploration in S-SX and C Farm
- Conduct C Farm direct push activities



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# ***SST Retrieval and Closure Additional Omnibus Allocation***

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- Conduct direct Push in C Farm
- Accelerate C-104 retrieval activities
- Conduct sampling and analysis of C-108
- Restore S-102 exhauster
- Accelerate C Farm HIHTL removal and shipping
- Prepare criteria document for interim barriers
- Accelerate procurement for C-111



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# ***SST Retrieval and Closure Additional Omnibus Allocation***

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- Pursue new technology
- Procure critical spares
- Improve retrieval infrastructure
- Radiation instrumentation
- Outdoor NRTL-rated continuous air monitors
- Leak Detection Monitoring efficiencies
- Permanent crane pad at Cold Test Facility
- Closure demonstration off site
- Ventilators/Exhausters
- Develop hard heel strategy
- SX duct removal
- Removal of sludge cooler S/SX



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# ***FY 2010 Planned Accomplishments***

## ***Tank Farms - \$408M***

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### Base Operations

- DST/SST Operations, Surveillance, Monitoring and Maintenance
- DST Space Management
- 222-S Laboratory Operations
- Conduct 2 Evaporator Operations
- Tank Sampling and Analysis (Core, Grab and Vapor)
- Conduct Ultrasonic Testing on five tanks
- Conduct 15 DST to DST Transfers
- NDE Equipment Replacement
- Design, Fabricate and Install Corrosion Probe

### Base Operations

- Facility Management
- Safety, Quality and Radiation Programs
- Environmental Compliance
- Waste Management
- Engineering
- WTP Electricity
- Business Services
- ORP/TOC Management and Administration



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# ***FY 2010 Planned Accomplishments***

## ***Tank Farms - \$408M (continued)***

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### Retrieval/Closure

- Complete retrieval of C-104
- Conduct post-retrieval sampling/analysis of C-104 and C-110
- Initiate design on SSTs C-102, C-107, C-111 and C-112
- Initiate and complete retrieval operations on C-111
- Continue testing and procurement of Mobile Arm Retrieval System (MARS)
- Design large riser for MARS
- Remove ~5 Hose-in-Hose Transfer Lines
- Construct TY Interim Barrier
- Conduct Direct Push Waste Management Area C Vadose Zone Characterization supporting closure
- Conduct Surface Geophysical Exploration Characterization in two sites
- Expand SST Integrity work



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# ***FY 2010 Planned Accomplishments***

## ***Tank Farms - \$408M (continued)***

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### Other

- WTP Readiness Activities
- Conduct Applied Research and Development Activities with EM-21



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Tank Farms Project  
American Recovery and Reinvestment Act  
(ARRA)  
ORP - 0014



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# Tank Farm ARRA Funding Focus Area

PROJECT	WORKSCOPE	\$
ORP-0014	Tank Farm Infrastructure Upgrades to Support Waste Feed to the 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

Includes major subprojects only 17

ORP-09-0024

May 28, 2009

## ***May 2009 ARRA Update***

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- DOE authorized work to begin on April 7
- EM provided \$261 of \$326 million (80 % of ARRA allocation)
- ORP released \$42.5 million to TOC - WRPS
- Remaining 20% being held at DOE – HQ
- Released after projects demonstrate adequate performance
- Initiated Government Fair Cost Estimate
- Successfully completed the first EM Readiness Review on May 20 - 22
- Contractor starting projects, hiring and training workers
  - 84 procurements released – 73% to small businesses
  - Approximately 206 full-time equivalent jobs created
  - Recovery Act work is being incorporated into the WRPS baseline
    - 180 day plan to be delivered May 28, 2009



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