Environmental Management

Office of River Protection

FY 2012 Regulator Briefing

U.S. Department of Energy

February 14, 2011

Environmental Management: A National Responsibility

- ✓ We reduce risks and protect our workers, our communities and the environment through cleanup
- ✓ Our work is urgent and essential to the health and economic vitality of our communities and the nation and positions our Sites for future missions and use
- ✓ Our mission is not discretionary - it is a Federal obligation to address the cold war environmental legacy cleanup and honor our regulatory commitments
- ✓ We have demonstrated value for the American Taxpayer by delivering significant progress in the past several years in reducing risks and the overall liability - but our work is not done
- ✓ The Environmental Management portfolio is one of our nation's largest liabilities - we have a responsibility to relieve future generations of this environmental and financial liability
- ✓ Time is not on our side – costs and risks increase over time

Office of River Protection 2016 Cleanup Vision

Transition from a waste storage to a waste treatment and immobilization mission of Hanford's 53 million gallons of tank waste by 2016

- ✓ Deliver on regulatory commitments to the State of Washington and protect the Columbia River:
  - ✓ Complete construction of the Waste Treatment Plant: Complete the construction of the Waste Treatment Plant project and pivot the project from design/construction to commissioning/operations
  - ✓ Empty all 16 Single-Shell Tanks in C-Farm
  - ✓ Prepare Hanford's tank farm feed/delivery systems: Transfer waste feed to the Waste Treatment Plant when it becomes operational
- ✓ Turnover and commission 15 of 17 Waste Treatment Plant facilities: Commission the Laboratory, Low Activity Waste Facility, and Balance of Facilities to accelerate the treatment and immobilization of Hanford tank waste by 3 years
- ✓ Reduce the Hanford tank waste treatment mission up to 7 years and $16 Billion in life-cycle costs: Develop and deploy transformation technologies for supplemental treatment and secondary waste

Congressional Budget Request

FY 2011 Funding and FY2012 Budget Request

($$ in Thousands)

PBS	PBS Title	FY 2011 President's Budget	FY 2012 President's Budget
ORP-0014	Tank Farm Project	**418,000**	**521,391**
ORP-0060	Waste Treatment and Immobilization Plant	**740,178**	**840,000**
Total – *Office of River Protection Base Funding Total*		**1,158,178**	**1,361,391**

FY 2012 Planned Tank Farm Accomplishments

Base Operations

- DST/SST operations, surveillance, monitoring and maintenance
- 222-S Laboratory operations and upgrades
- Conduct 242-A Evaporator campaign and upgrades
- Conduct 9 DST to DST transfers
- Tank sampling and analysis
- Conduct DST ultrasonic testing and DST system integrity program
- Continue to perform SST Integrity evaluations and implement expert panel recommendations (i.e., SST structural analysis)
- Complete construction of SX Interim Barrier
- Continue removal of Hose-in Hose Transfer Line
- Facility Management
- WTP Electricity
- Business Services
- Site Services
- Pension

242-A Evaporator

FY 2012 Planned Accomplishments
Tank Farms (continued)

Retrievals

- Complete design, procurement and/or retrieval activities from 9 C-Farm Single-Shell Tanks
- Complete installation of MARS technology in Tank C-105
- Complete A350 Catch Tank Pumping

Projects

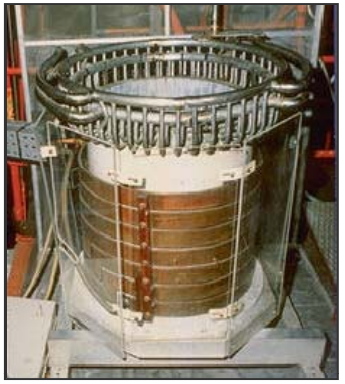
- Obtain Critical Decision-1 for the Interim Hanford Storage Facility
- Issue Interim Hanford Storage Conceptual Design Report
- Obtain Critical Decision-1 for the Secondary Waste Treatment
- Issue Conceptual Design Report for the Secondary Waste
- Obtain Conceptual Design-1 for Supplemental Treatment
- Complete Conceptual Design Report for Supplemental Treatment

An obsolete exhauster in the SY Tank Farm is being dismantled and removed.

FY 2012 Planned Accomplishments
Tank Farms (continued)

Technology Development

- Continue Immobilized Low-Activity Waste Form Testing
- Continue ILAW Glass Testing
- Rotary Microfilm
- Small Column Ion Exchange
- Next Generation Melters
- Wiped Film Evaporator
- Vadose Zone



SRS Mixing Demo

Waste Feed Preparations

- Initiate AW and AZ Farm Feed Delivery System including design and procurement
- AY/AZ Ventilation Upgrade Design, Procurement, Construction, Startup & Readiness
- Initiate SY 102 Feed Delivery System including Design and Procurement
- WTP Integration Activities

FY 2012 Planned Accomplishments
Waste Treatment Plant

Low-Activity Waste Facility

- Design will be completed
- Piping installation will be 90% completed
- HVAC system duct work (932,000 lbs) will be completed

Analytical Laboratory

- Construction substantially completed

Balance of Facilities

- Complete construction of the Chiller Compressor Plant and the Anhydrous Ammonia Facility
- Complete Title II Civil/Structural design

An overhead crane is installed in the Pretreatment Facility.

FY 2012 Planned Accomplishments
Waste Treatment Plant (continued)

High-Level Waste Facility

- Install Acid Waste and Plant Wash Vessels in the Wet Process Cell
- Install Thermal Catalytic Oxidizers
- Install Offgas Carbon Adsorber
- Complete the installation of all ventilation and secondary offgas components in the Filter Cave
- Complete pipe and hanger installations for PA06

Pretreatment Facility

- Receive Cesium Nitric Acid Recovery boiler and heat exchanger
- Receive 480-volt Motor control center
- Complete fabrication of 4 B cell vessels for Ultrafiltration system
- Receive 5 major hot cell jumpers
- Place 3,500 cubic yards of concrete, 89 percent complete
- Install 825 tons of structural steel, 44 percent complete
- Install 80,000 linear feet of piping, 38 percent complete
- Install 75,000 pounds of HVAC ducting, 19 percent complete

The second and final 125-ton melter assembly for the Low-Activity Waste (LAW) facility arrived at the Waste Treatment Plant on November 28, 2010.

Summary

- Continue good progress in tank retrievals
- Prepare for waste feed to WTP
- WTP facilities start of turnover in 2012
- Hanford is the largest environmental liability in the EM Cleanup
- Committed to absolute worker and public safety
- Protecting the Columbia River is vital, urgent and our obligation to the people of the Pacific Northwest
- Overall alignment with Regulators on Hanford Cleanup vision and strategy, general support from Tribal Nations, and stakeholders
- Every taxpayer dollar invested in this project is precious, and provides significant economic benefit to the region with an emphasis on small business
- We are performing well