



DEPARTMENT OF ENERGY

Office of River Protection

HANFORD SITE

SEPTEMBER 8, 2011

Agency Update to Hanford Advisory Board

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Manager



Agenda

- Organization
- Mission and Priorities
- HAB Advice
- FY11 Accomplishments
- Tank Farm Status
- WTP Status
- ARRA
- Budget
- Planned Actions for FY12
- Challenges



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Mission & Priorities





HAB Advice

Budget

- #244, Cleanup Budget Priorities for Fiscal Years 2012, 2013 and Ensuing Years

Public Involvement

- #239, Incorporating Public Involvement Strategic Planning into the Community Relations Plan
- #240, U.S. DOE's Open Government Plan and the Hanford Communities Relation Plan

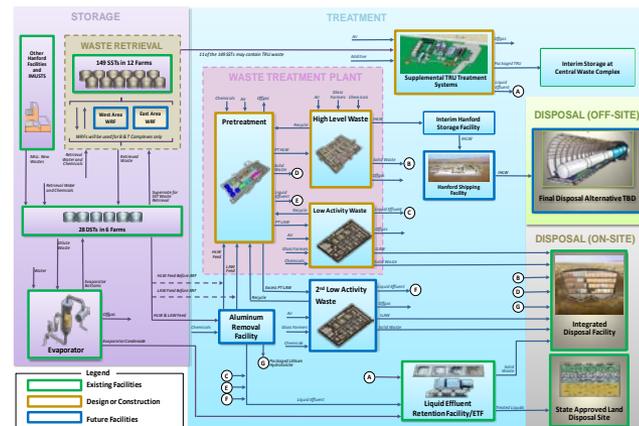


In May, the Leadership Tri-Cities class and Hanford Communities group toured Hanford's Tank Farms and Waste Treatment Plant.

Mutual benefit from good discussions during committee and issue manager meetings

System Plan

- #238, ORP System Planning Process
- #245, ORP System Plan Revision 6





FY11 Accomplishments

Tank Farms Project

- Tank Retrievals
- Vapor Monitoring
- Mobile Arm Retrieval System (MARS)
- Supplemental Treatment
- Supplemental Immobilization
- Infrastructure and facility upgrades – ARRA work
- Tank Leak Loss and Structural Integrity

Integration

- 2020 Vision

Waste Treatment Plant Project

- More than 60% complete (was 52% this time last year)
- Civil, structural and architectural design for the High-Level Waste Facility complete
- Construction continues to advance
- LAW Melters on site; HLW melters arriving this Fall
- First large piping module installed
- Large Scale Integrated Testing underway



MARS

Workers align the mast of the Mobile Arm Retrieval System (MARS) in single-shell tank C-107.



Vapor Monitoring

Two hand-held monitors used to detect organic chemicals, flammable gases and ammonia.



C-107 Core Removal

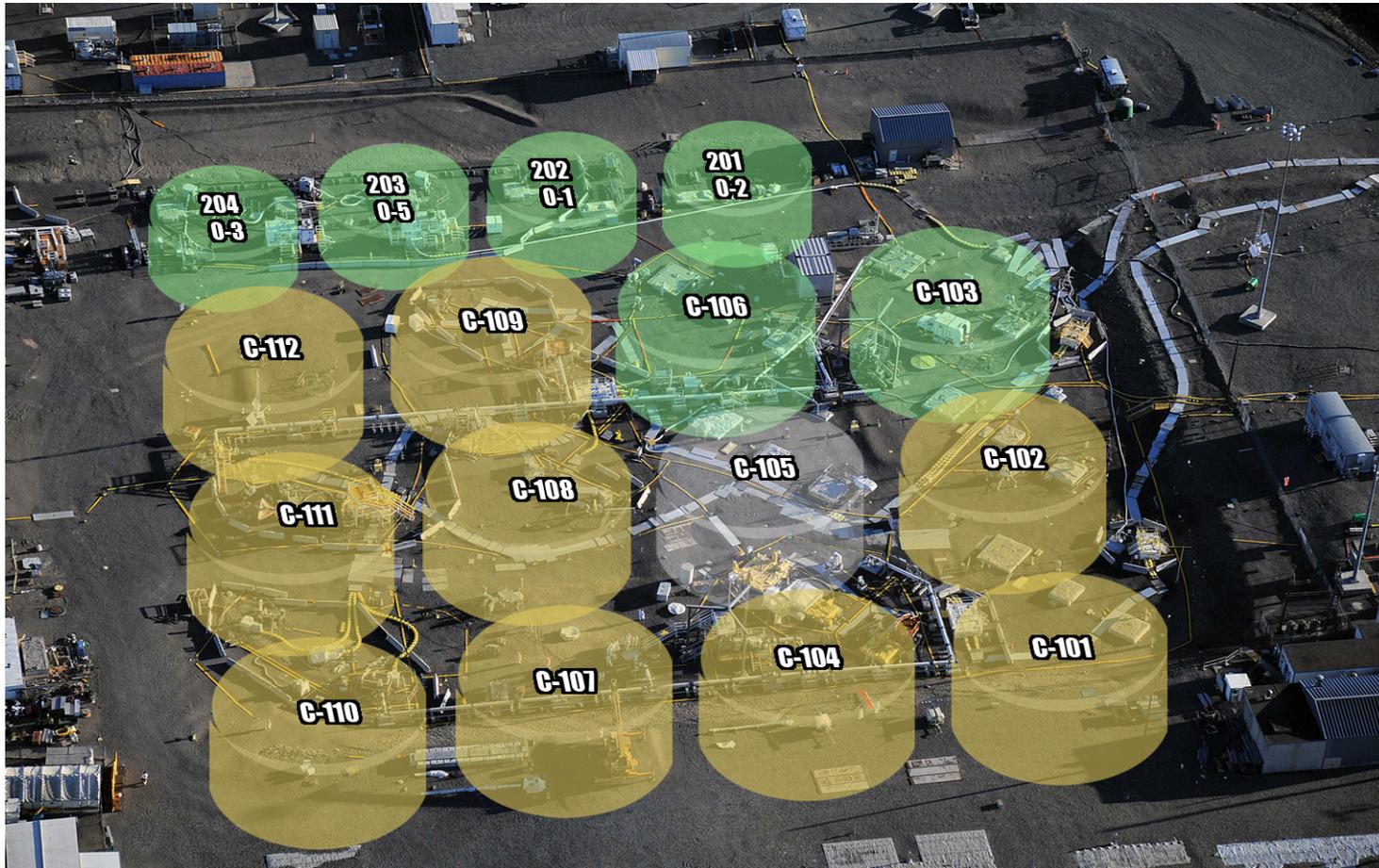
In preparation for MARS installation in tank C-107, workers remove the core from a 55-inch diameter hole.

Major Tank Farm Projects

<u>Projects</u>	<u>Date Required</u>	<u>Status</u>
Waste Feed Delivery Projects	Various	Various
Immobilized Hanford Storage Facility	8/2018	CD-0
Secondary Liquid Waste	8/2018	CD-0
Supplemental Treatment	9/2022	CD-0



C Farm Waste Retrieval Progress



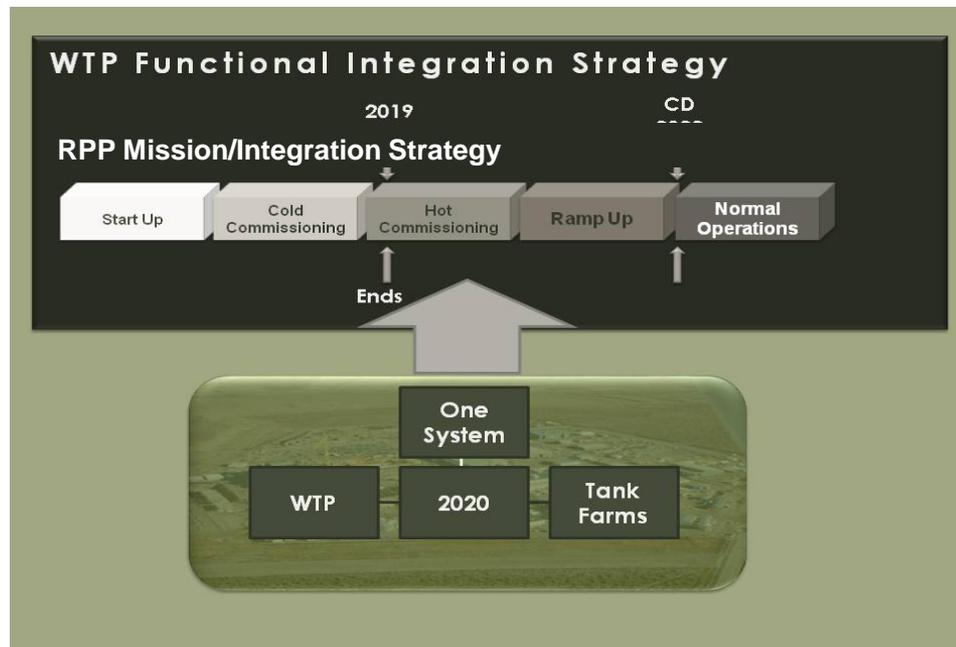


2020 Vision

- Integrated project schedules
- Maintenance of Interface Control Documents
- Interface meetings between ORP and its contractors
- Requirements Management Interface Matrix
- Operational infrastructure and logistics analysis



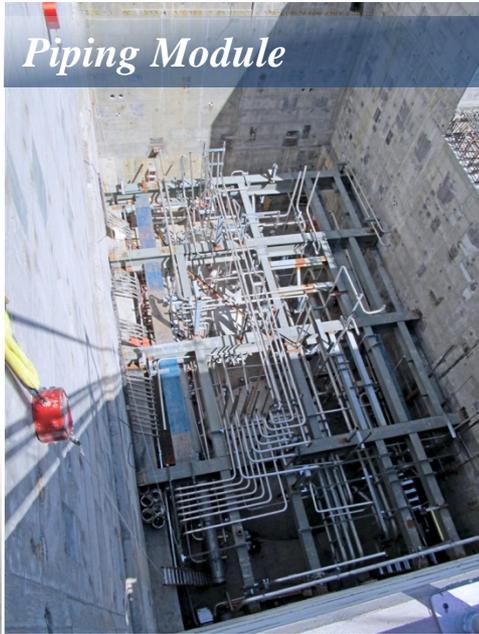
Mixing Demonstration





WTP

Crews at the Waste Treatment Plant placed a 19-ton piping module inside the Pretreatment Facility (PT). It is the first and smallest of 13 such modules. The remaining 12 will be placed in the next few years.



Piping Module



LAW Melters

The second and final Low-Activity Waste (LAW) melter arrived in November 2010. Once operational, the melters will heat the waste and glass-forming materials to 2,100 degrees Fahrenheit.



Rebar Curtain

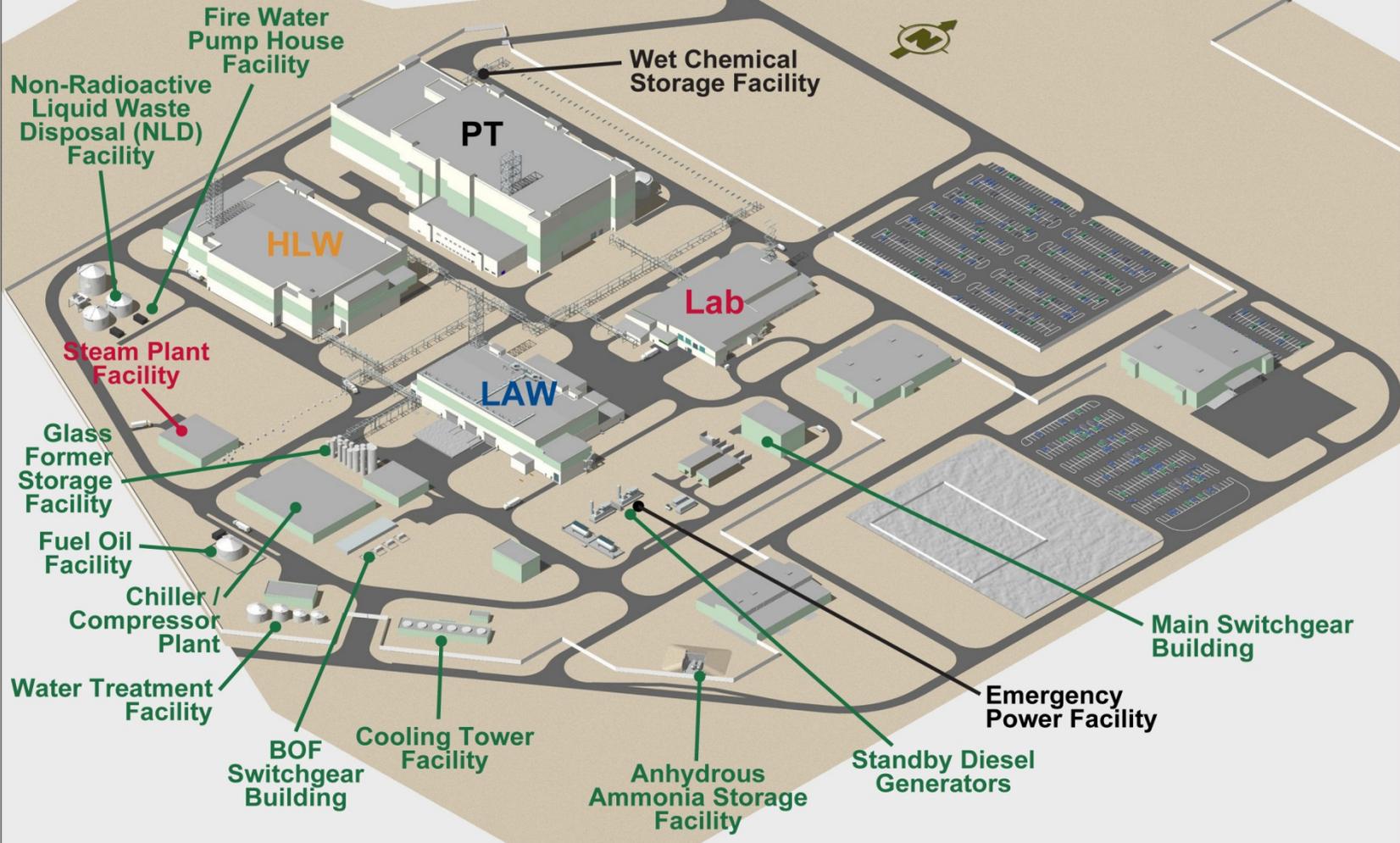
Each wall in the Pretreatment Facility (PT) includes a complex rebar grid composed on nearly one-and-a-half-inch thick rebar.

WTP Reaches 60% Complete Milestone

WTP recently issued the final design for the concrete walls of the Pretreatment Facility (PT) and celebrated reaching 60% complete.



WTP Turnover to Commissioning



Turnover to Commissioning in: **2013** **2014** **2015** **2016** **2017**



ARRA

222-S Laboratory

- Roof/HVAC/Room Upgrades
- Steam to Electrical Conversion
- Significant Instrument Upgrades
- Building Replacements (office space and conditioned storage)



More than \$15 million in Recovery Act funds went to upgrades at the 222-S Laboratory. All upgrades were designed to be more “green” and energy-efficient.



Drawing Reconstitution

A worker inspects equipment to see if the installed systems match what is shown on drawings of the double-shell tank farms.



2705-S Building

The 2705-S modular office building upgrades included energy-saving light switches, low-flow faucets and toilets, and energy-efficient lights and appliances.



ARRA

242-A Evaporator

- Instrumentation
- Life Extension
(pump replacements,
water service,
decontamination)



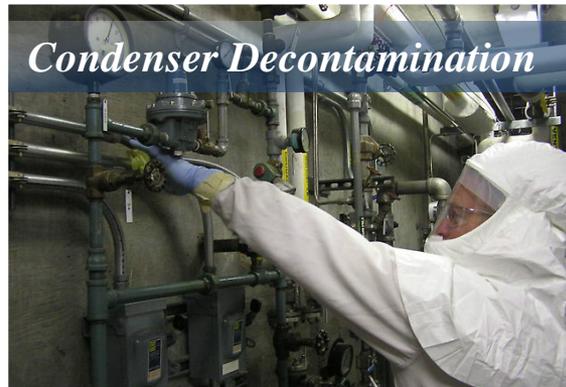
Raw Water Service Building

Workers completed a major upgrade to the 242-A Evaporator's critical Raw Water System Building.



Instrumentation

Control panels in the AI control room at the 242-A Evaporator.



Condenser Decontamination

Crews work diligently to decontaminate the condenser room at the 242-A Evaporator, wiping down five floors of walls and equipment.



ARRA

S, SY, SX Farms

- Filter Replacements
- Transfer Lines
- Electrical/Drawing Reconstruction
- Instrumentation

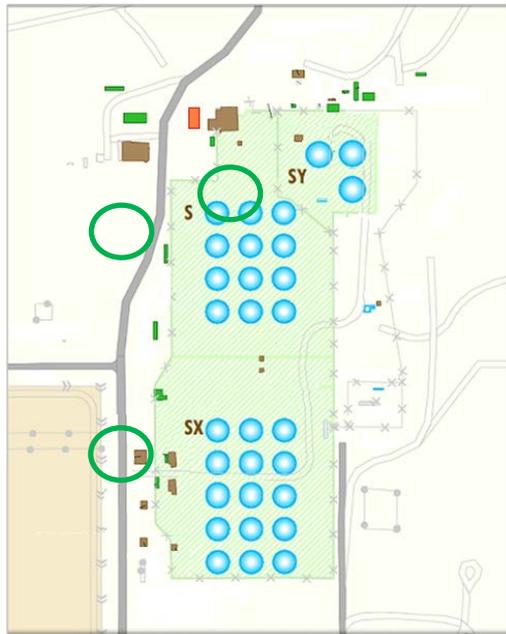
SY Farm Transfer Lines



Workers wearing water-resistant PPE and respirators use a high-pressure water lance to flush waste from an SY Farm transfer line.



Crews remove the first piece of the SN-280 transfer line from SY Farm. The Recovery-Act funded project calls for a total of eight pipe-in-pipe waste transfer lines to be removed by the end of FY11.





Budget

- Continue good progress in tank retrievals
- Prepare for waste feed to WTP
- WTP facilities start of turnover in 2012

*** \$ in 000's throughout presentation ***

PBS	PBS Title	FY2011 Actual	ARRA Dollars	FY2012 President's Budget	FY2013 Funding Profile
ORP-0014	Radioactive Liquid Tank Waste Stabilization and Disposition	\$396,600		\$521,391	\$519,100
ORP-0060	Major Construction Waste Treatment Plant	\$740,178		\$840,000	\$970,000
Total-ORP	Office Base Funding Total	\$1,136,778	326,035	\$1,361,391	\$1,489,100



FY12 Plans

Tank Farms

C-Farm

New Projects

- Hanford Storage Facility

TPA Activities

- Single-shell tank structural analyses
- Hose-in-hose transfer lines
- Barriers
- Waste feed delivery

WTP

- Complete LAW design and 90% piping installation
- Complete HLW Wet Process Cell installations, oxidizers, offgas absorbers
- Receive PT boiler, heater exchange, motor control center; place concrete, steel, piping & HVAC ducting
- Complete Lab construction sustainability
- Complete Balance of Facilities Title II Civil/Structural design
- Complete Chiller Compressor Plant and Anhydrous Ammonia Facility construction



Challenges

- Budget
- Aged Equipment and Infrastructure
- Communications
 - Surveys
 - Interviews
 - Internal



AP/SY Ventilation Upgrades



New Equipment Being Installed
in Tank C-104 for Waste Retrieval



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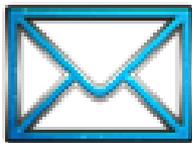
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