



OFFICE OF
RIVER PROTECTION
United States Department of Energy

Agency Update

Hanford Advisory Board

Presented by: Ben Harp, Deputy Manager

June 6, 2018



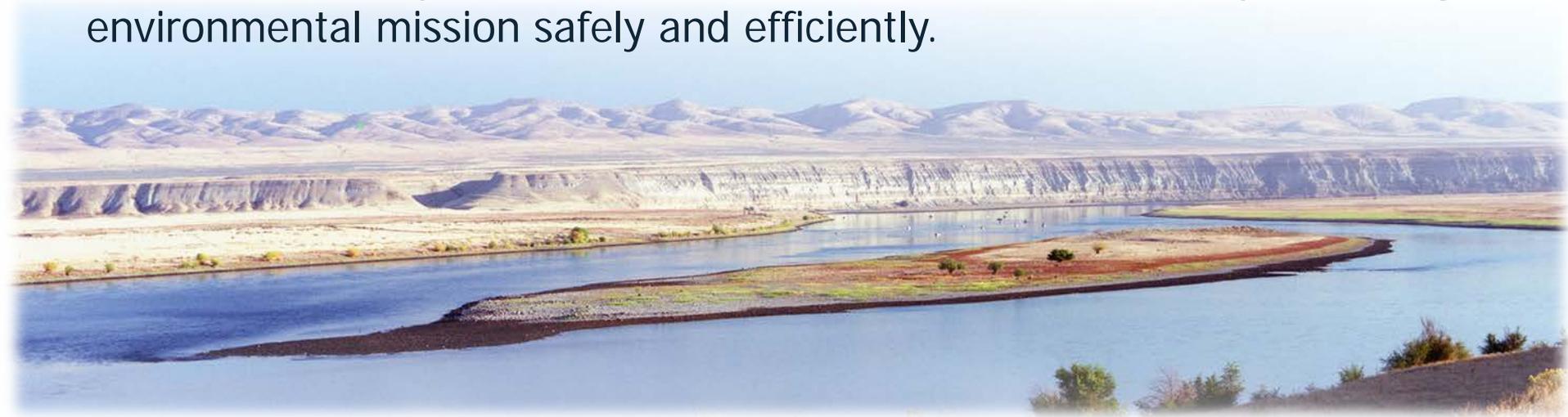


Mission

To safely manage the waste in Hanford's underground tanks while delivering the waste treatment capability needed for waste immobilization and final disposition.

Vision

To be a high-performing and innovative organization that is safety conscious, employee-focused, and committed to successfully achieving our environmental mission safely and efficiently.







The Tank Farms

A 200 Area Aerial Overview

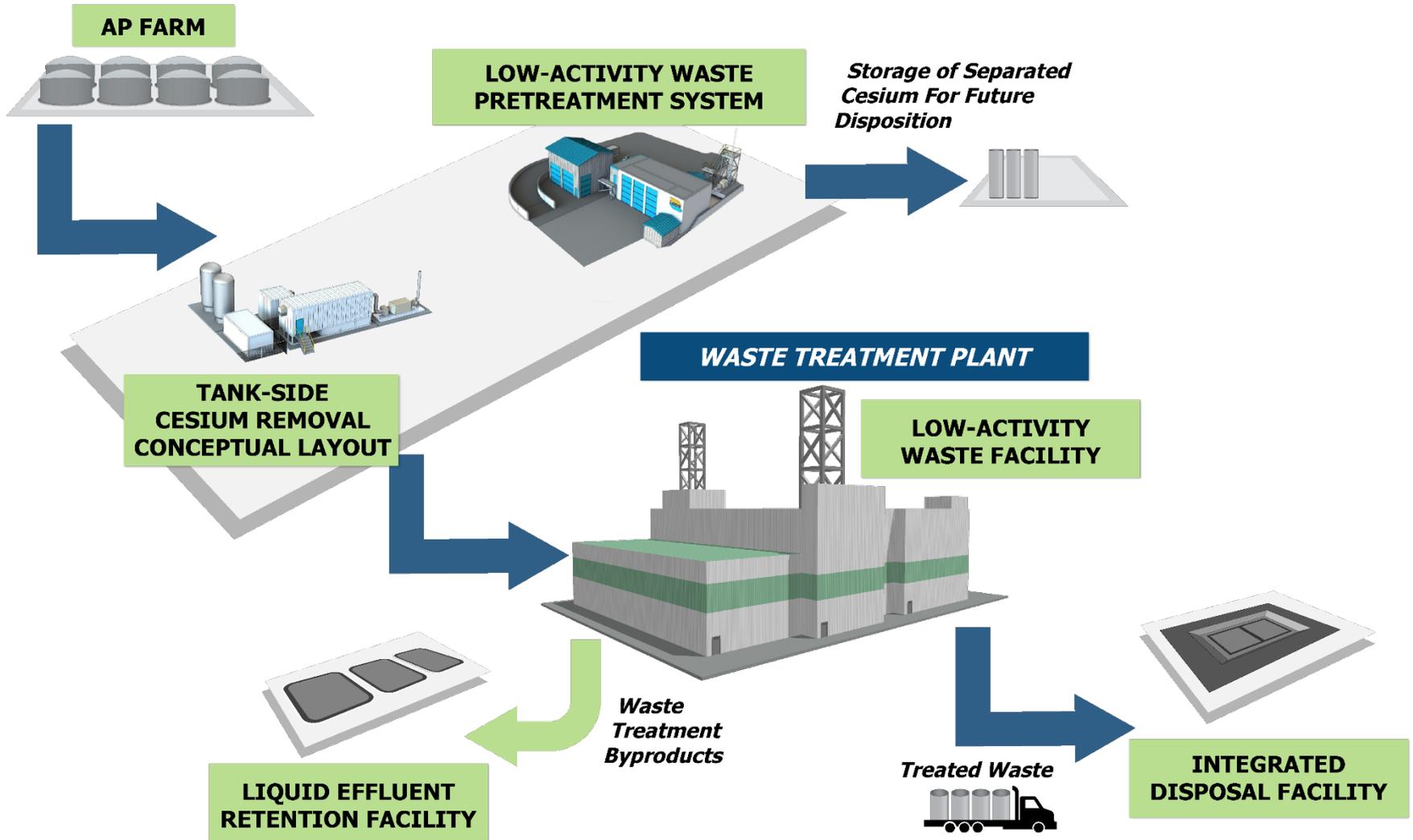
200 West Area

200 East Area

Waste Treatment and
Immobilization Plant

- Single-Shell Tank Farm
- Double-Shell Tank Farm





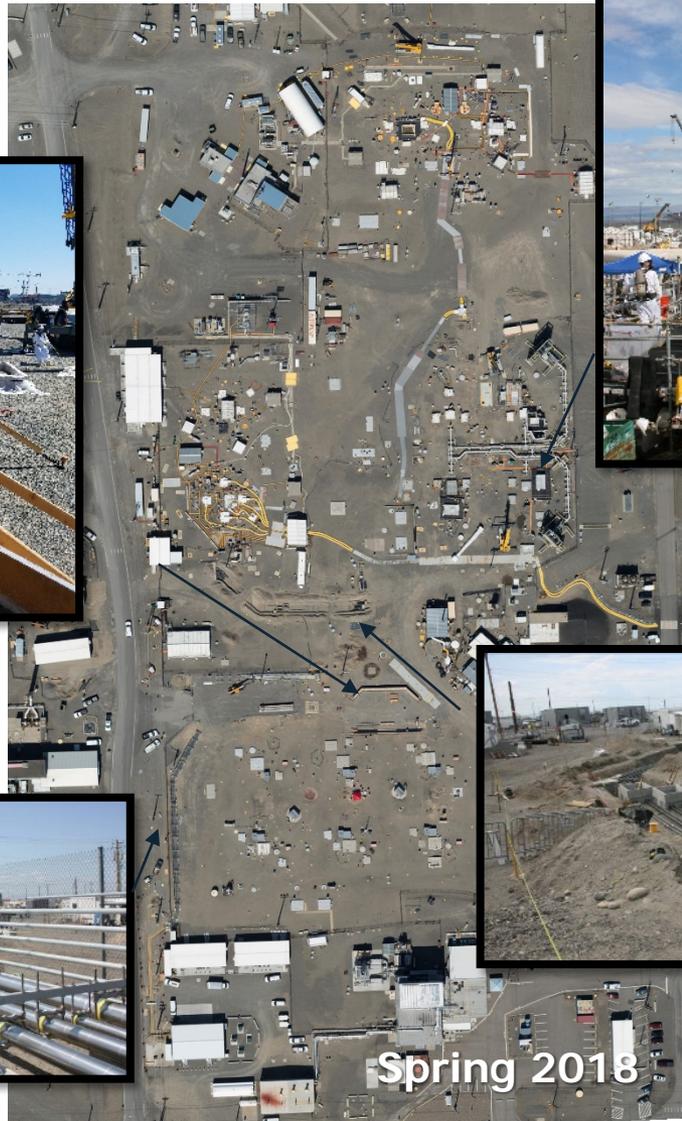


Tank Farms Update





Exhauster Retaining Wall



Pump removal from AX-102



Caustic/Water Line Install



Electrical Infrastructure

Spring 2018



- First of two 242-A Evaporator campaigns of year created about 166,000 gallons of double-shell tank space
- Second campaign scheduled for June
- Met a Consent Decree milestone with delivery of new spare reboiler for 242-A Evaporator



New spare reboiler for 242-A Evaporator

May 2018

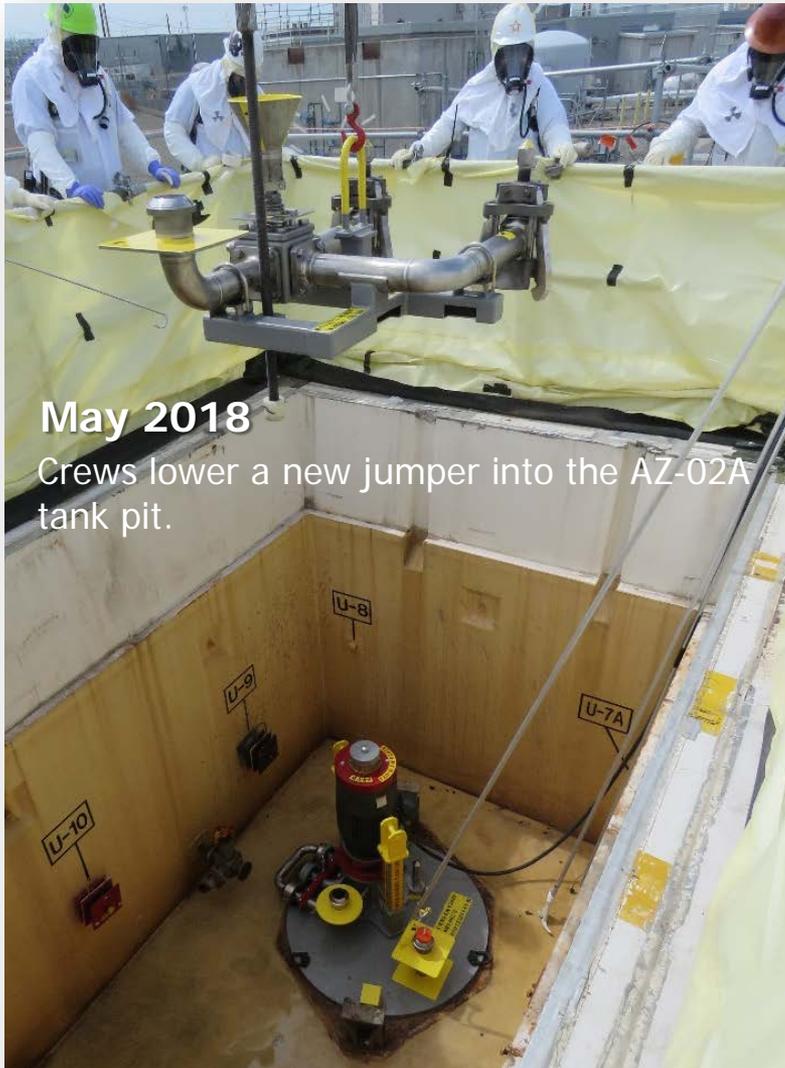
- Testing additional engineered controls
 - Nucon thermal oxidation
 - Strobic Air® technologies
- Full-face air-purifying respirators approved in SY and AP farms for non-waste-disturbing work
- Working with HAMTC and third-party experts to expand use of air-purifying respirators in other double-shell tank farms
- Planned stack extension for AW Farm



- Draft Waste Incidental to Reprocessing Evaluation for Closure of Waste Management Area C (Draft WIR) public comment period June 4 – September 7
- WIR Determination is one step in the closure process for C Farm
- Informational public meeting Monday, June 18, Richland Public Library
- Follow-on discussions with Tank Waste Committee June 19
- For more information, visit www.hanford.gov/page.cfm/WasteManagementAreaCClosure



The Draft WIR Evaluation is an important step toward closure of the 16 single-shell tanks at Hanford's C Tank Farm.



May 2018

Crews lower a new jumper into the AZ-02A tank pit.

- Installed new 44.5-foot pump and jumpers in double-shell tank AZ-102
- Team safely removed old, highly contaminated pump to install new equipment
- Innovative tools were used during pump replacement process
- New equipment allows tank to support future 242-A Evaporator campaigns and AX Farm retrieval operations



SX Farm evapotranspiration basin was finished in April. It will collect evaporator water drained from new interim surface barriers to be installed later this spring over SX Tank Farm.

TANK FARMS | SX FARM

**First Phase of Work Finished
on Interim Barrier Project**

SX Farm evapotranspiration basin, left, is roughly the size of two-and-a-half football fields.





Waste Treatment Plant Update





Lab Demonstration Successfully Vitrifies Three Gallons of Hanford Tank Waste

Scientists melt radioactive waste into glass in a test platform at the Pacific Northwest National Laboratory designed to mimic the Direct Feed Low-Activity Waste system being constructed at Hanford.



Concrete walls are complete for the Effluent Management Facility.



April 2018

March 2018



An electrical switchgear control panel for LAW permanent power is safely activated.

- Completed concrete walls for the Effluent Management Facility
- Startup of permanent plant power to the Low-Activity Waste (LAW) Facility
- Working to complete LBL Physical Plant Complete construction

Non-radioactive Liquid Disposal system was the first building handed over from Startup to Commissioning.



August 2017

- Handover of first building to Commissioning
- 227 total DFLAW plant systems and areas
 - 88 turned over to Startup
 - 22 handed over to Commissioning



Safety Basis Approved for LAW Facility

ORP and Bechtel participated in a DOE Safety Evaluation Report signing ceremony, which signified approval of the Low-Activity Waste Facility Documented Safety Analysis

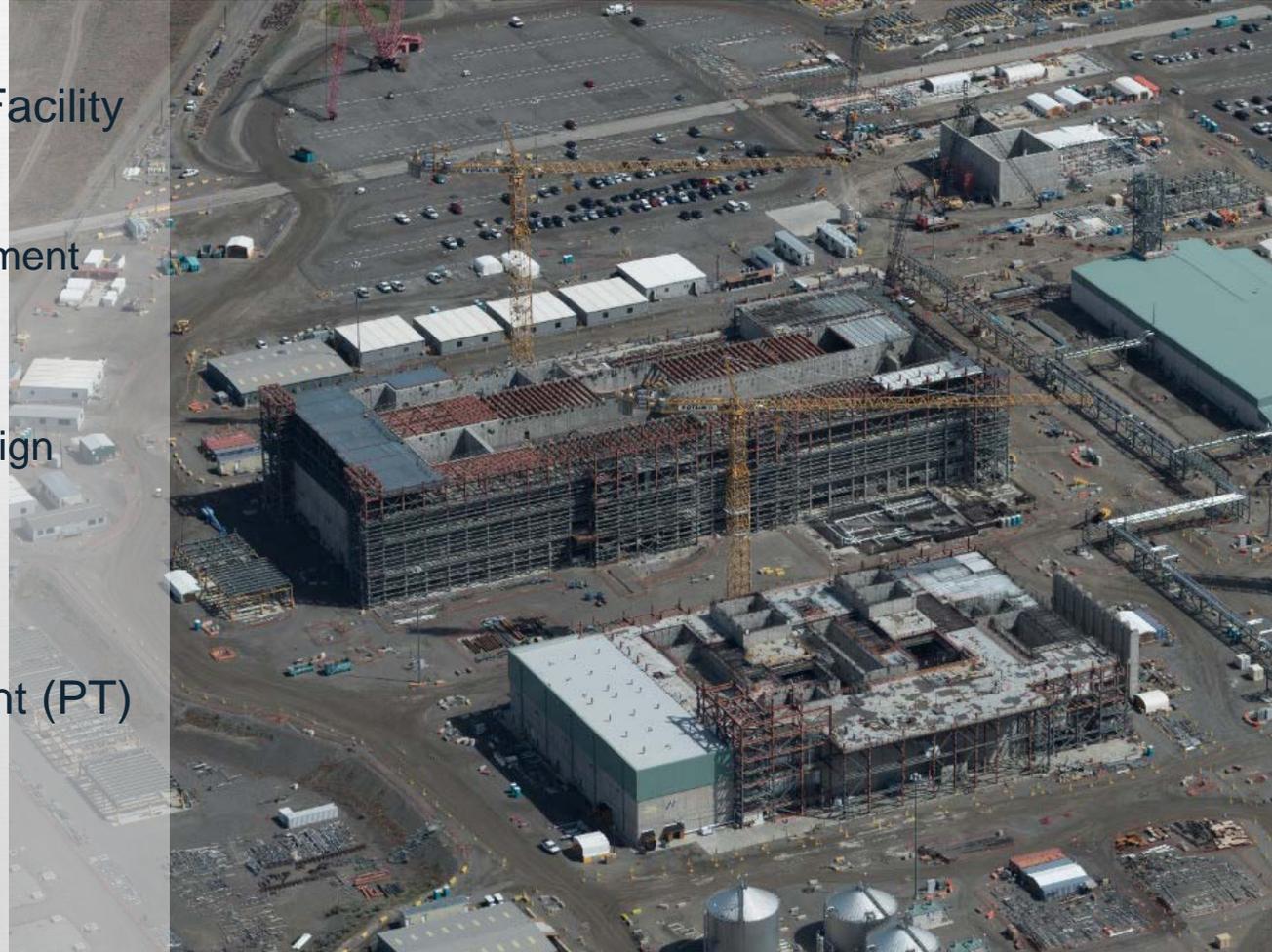


DOE approves the LAW Documented Safety Analysis





- High-Level Waste (HLW) Facility
 - Deliver active plant equipment procurements
 - Ramp up engineering design activities
- Working to complete final remaining two Pretreatment (PT) Facility technical issues



The Pretreatment Facility (above) and the High-Level Waste Facility (below).





Other topics selected for Hanford Advisory Board





DOE OFFICE OF RIVER PROTECTION
GRAND CHALLENGE



WINNING ENTRY

The winning entry in this year's Grand Challenge competition, accepted by Matthew Asmussen (left), proposes to develop a technical basis for using cementitious materials for immobilization of treated low-activity waste streams.





*“Protecting our workers,
the public, and the environment”*

The Hanford Reach
White Bluffs Overlooking the Columbia River

