



# THE HANFORD SITE

## Oregon Hanford Cleanup Board

Deputy Manager, Ben Harp

Office of River Protection

*March 11, 2019*

- Budget Update
- Direct-Feed Low-Activity Waste (DFLAW)
- Tank Farms
- High-Level Waste Facility (HLW)
- Test Bed Initiative (TBI)
- 2019 Life-Cycle Report
- System Plan Tri-Party Agreement (TPA) Negotiations

**ORP Mission:** Safely, efficiently, and effectively treat tank waste and close Hanford tanks

**ORP Vision:** Unified, prepared, and empowered high-performing team driven to achieve effective tank waste treatment operations



# Office of River Protection Budget Profile

(\$ in Thousands)

PBS	Project Baseline Summary (PBS) Title	FY 2018 Omnibus	FY 2019 Minibus
ORP-0014	Radioactive Liquid Tank Waste Stabilization and Disposition	\$719,000	\$771,947
ORP-0014	15-D-409, Low Activity Waste Pretreatment System	\$93,000	\$56,053
<b>Subtotal</b>	<b>Radioactive Liquid Tank Waste Stabilization and Disposition</b>	<b>\$812,000</b>	<b>\$828,000</b>
ORP-0060	WTP-LBL	\$630,000	\$655,000
ORP-0060	High Level Waste Facility	\$75,000	\$60,000
ORP-0060	WTP – Subproject E	\$35,000	\$15,000
<b>Subtotal</b>	<b>Major construction – Waste Treatment and Immobilization Plant (WTP)</b>	<b>\$740,000</b>	<b>\$730,000</b>
ORP-0070	WTP Commissioning	\$8,000	\$15,000
<b>Total – ORP</b>	<b>Office of River Protection Funding</b>	<b>\$1,560,000</b>	<b>\$1,573,000</b>

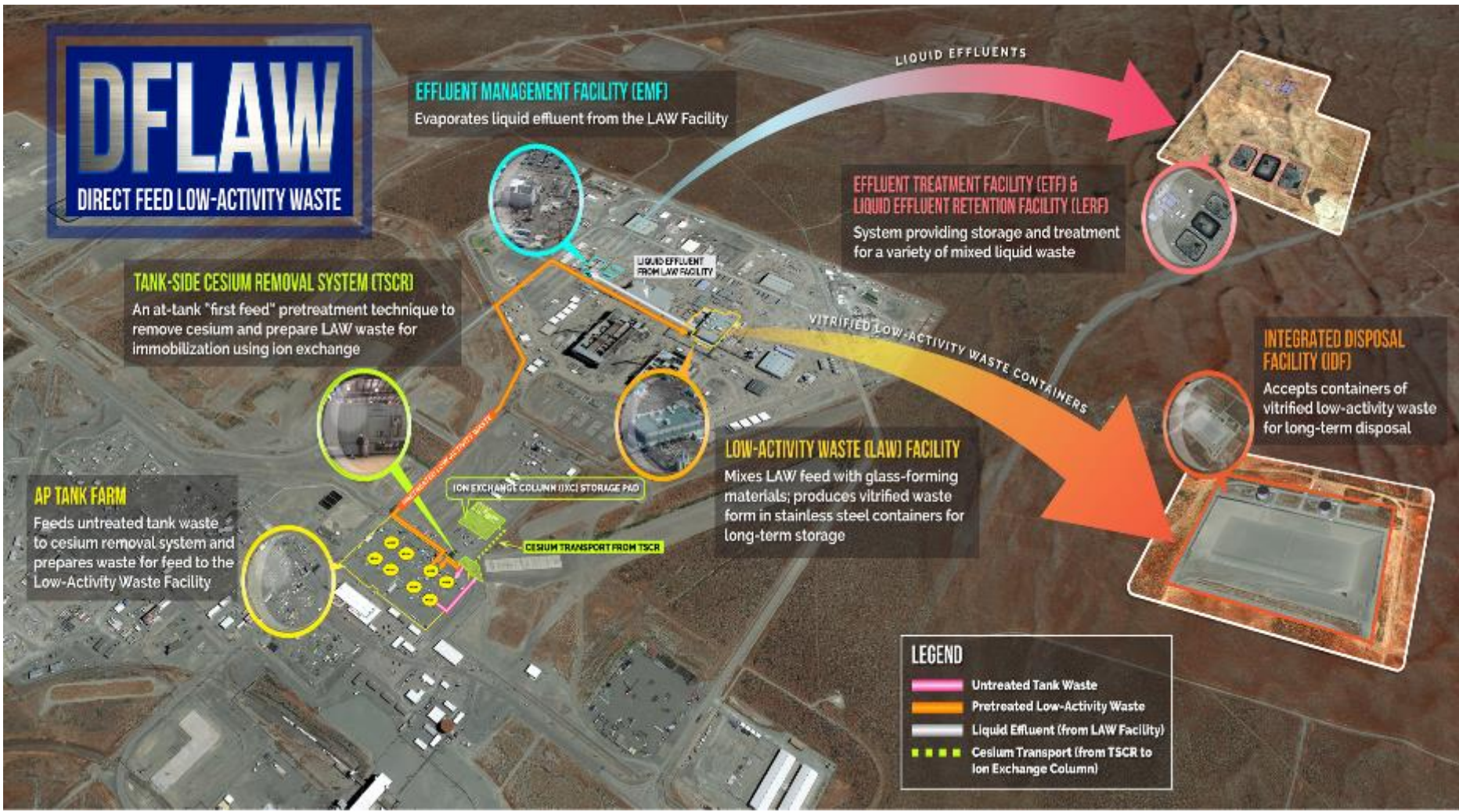


## Culture shift for the Hanford Site





# Direct Feed Low-Activity Waste Overview



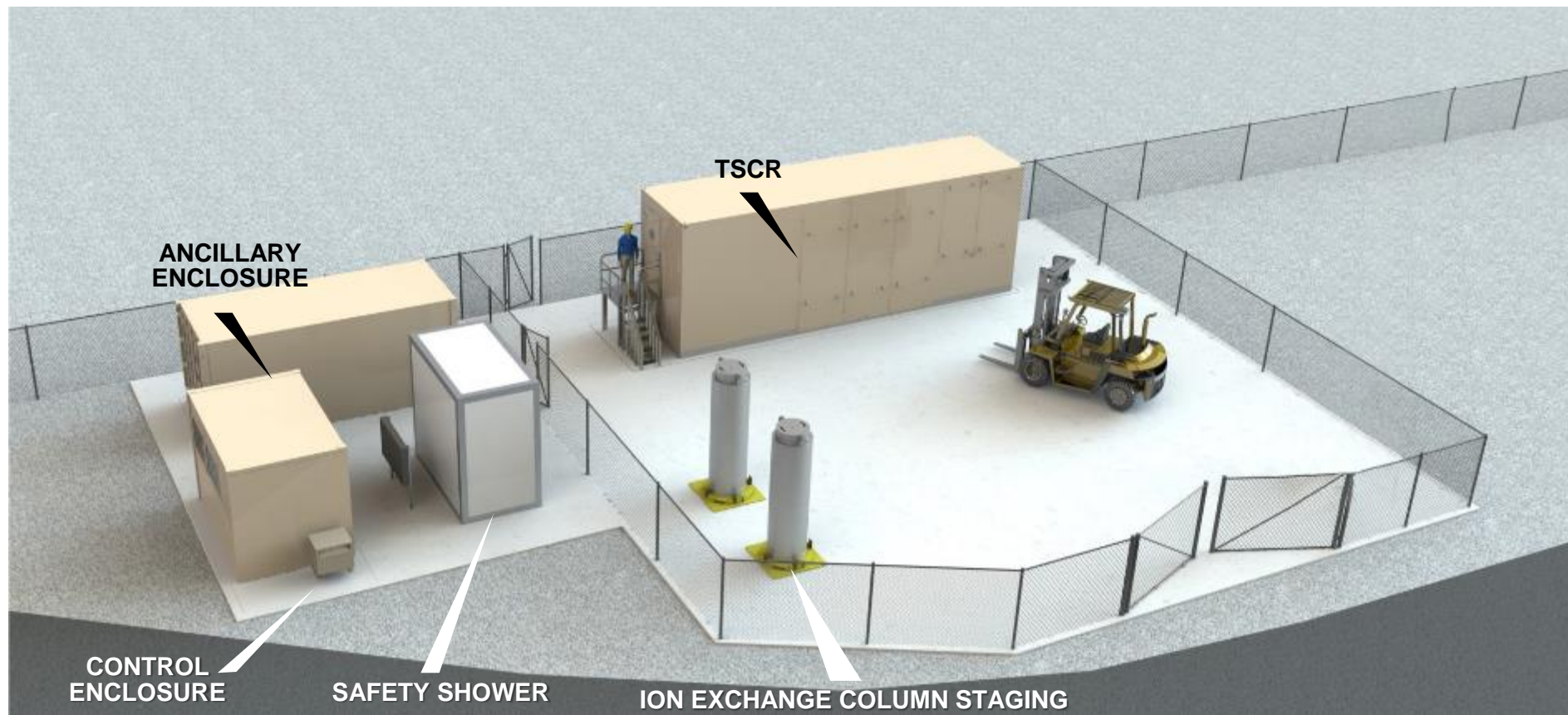
# Direct Feed Low-Activity Waste Successes

- DFLAW
  - Maturing DFLAW technical and organizational integration
  - Culture transition progressing towards operations
  - Executed ORP organization transition
- Waste Treatment and Immobilization Plant (WTP):
  - Completed LAW Design Safety Analysis (DSA)
  - Completed turnover of 132/178 DFLAW systems from construction to startup (SU) & handover of 37 systems from SU to plant management
  - Completed major structural concrete placements for Effluent Management Facility (EMF)
- Tank Farms
  - Reshaped LAWPS Project, awarded TSCR contract
  - Started Tank Farm upgrade designs
  - Completed TSCR 60% design review
  - Developed integrated site-wide DFLAW schedule





# Conceptual Tank Side Cesium Removal Layout



**On track to stage feed for DFLAW Operations as soon as 2022**

# Direct Feed Low-Activity Waste Immobilization Facilities



LAW Facility



EMF

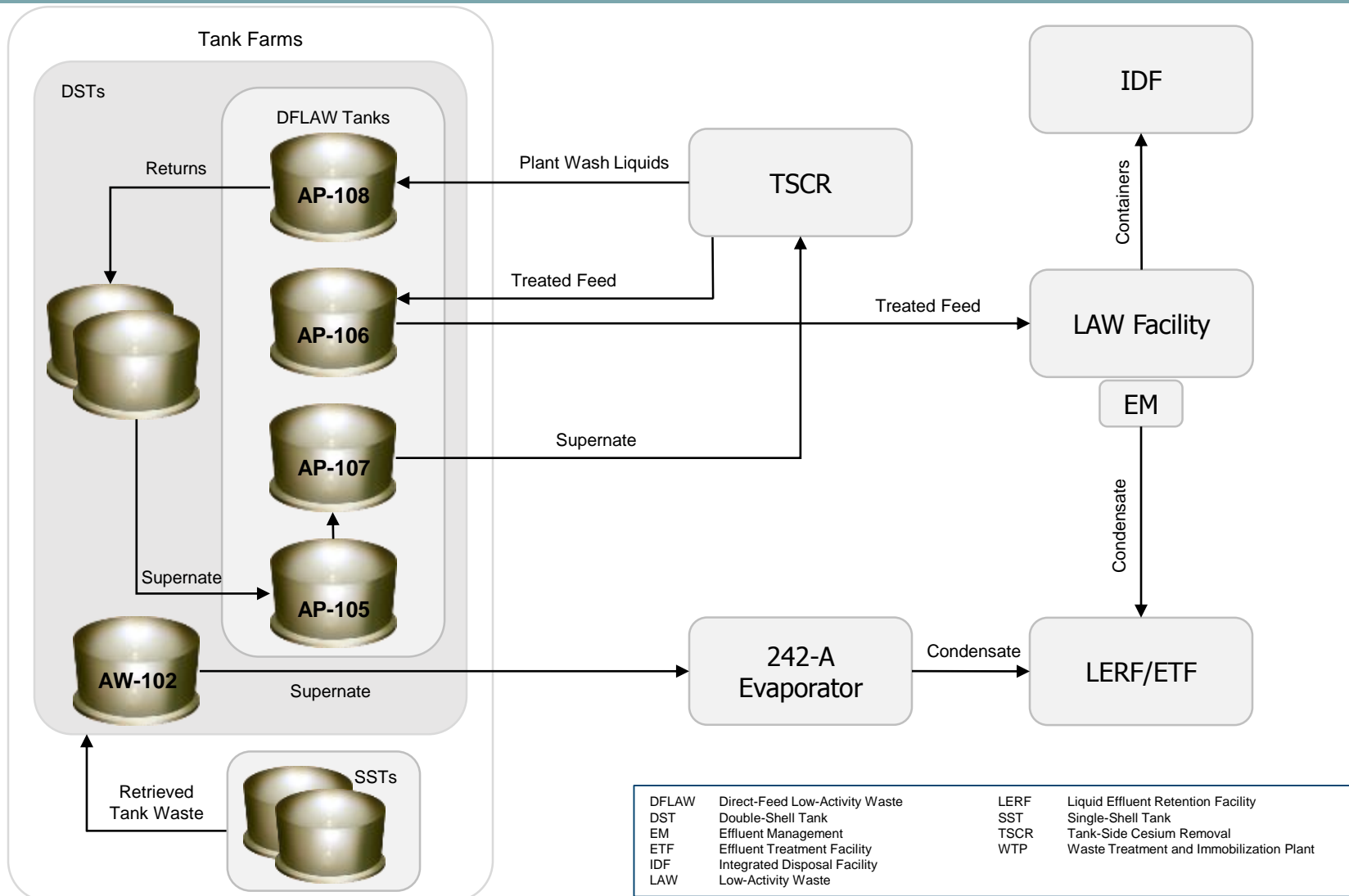


Startup and Commissioning



Balance of Facilities

# Direct Feed Low-Activity Waste - Flow Diagram









# Tank Farms Update

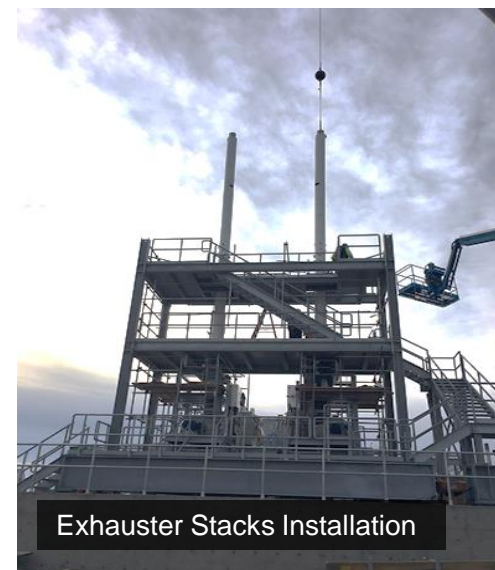


An aerial photo shows the new interim surface barriers at SX Farm. At left is the evapotranspiration basin.

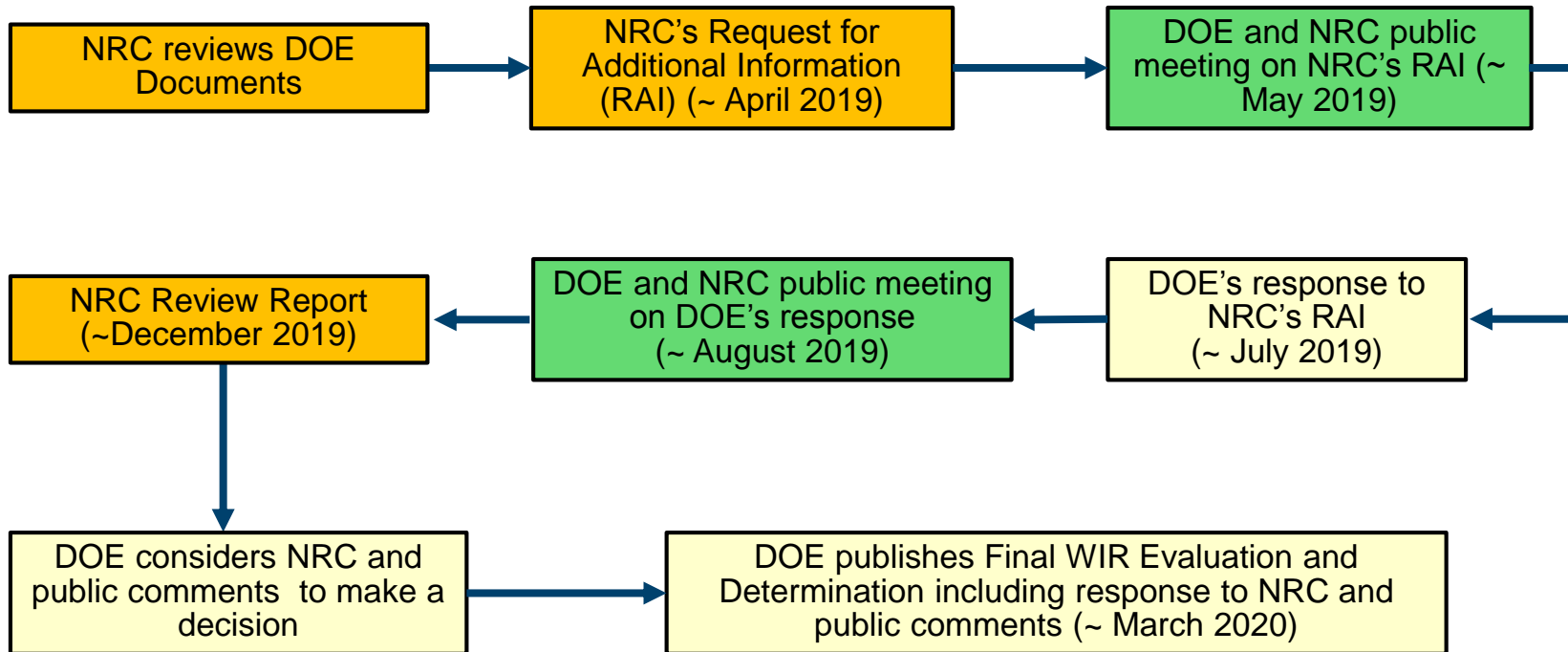
Prefabricated panels of polyethylene synthetic rubber cover were bonded together inside the massive basin. The new cover is resistant to chemicals, temperature extremes and ultraviolet light.



Liquid Effluent Retention Facility



# Waste Management Area C Waste Incidental to Reprocessing



DOE Actions
  Nuclear Regulatory Commission (NRC)
  Public

*All dates are estimates, subject to change. Public meetings are intended for DOE and NRC discussion with public invited to observe and comment at the end of meeting. DOE shares all public comments with NRC. DOE and NRC may, if mutually agreed, have technical staff to staff, non-decision conference calls to ask clarification type questions and if used, will post a public meeting summary. All NRC and DOE documents will be made public.*



- Maintain constructive Ecology relationship
- Army Corps of Engineers Report
- Project Management Assessment
- 413.3B
- Workshops
- Execute Analysis of Alternatives



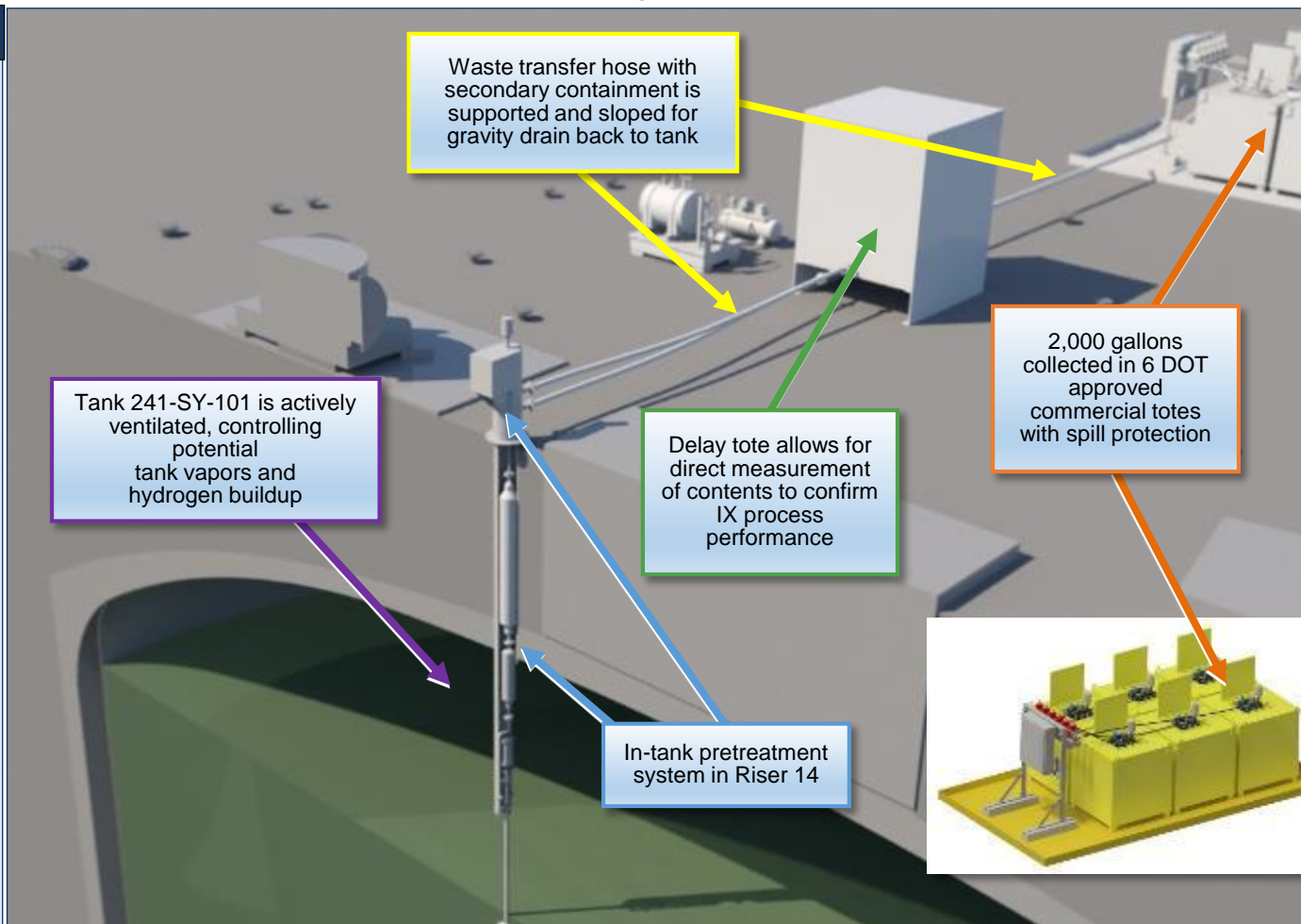


# Test Bed Initiative Phase II In-Tank Pretreatment System

## Tank 241-SY-101 Field Deployment Concept

### Key Milestones

- Test Bed Initiative (TBI) Final Design
- Receipt of Ion Exchange (IX) System and Equipment
- Installation of the TBI system
- Issue Declaration Of Readiness
- Treatment of 2,000 gallons
- Waste incidental to reprocessing (WIR) Determination
- Ship Waste for off-site stabilization
- Dispose of solid MLLW at WCS



- Increase in the cost
  - \$215-\$569 billion more than in 2016
  - “To-go cost” at \$323-\$677 billion in escalated dollars
  - 25 years of activities funded at \$400 million per year
- RL scope
  - \$83.3-\$128.6 billion in total costs
- ORP scope
  - \$239.9-\$548.4 billion in total costs
  - Figures include out-year planning range update of tank farms & WTP, plus estimated cost of DFLAW operations



- Results-driven, completion-focused to deliver safe, efficient, and effective treatment and disposal in the best interest of the tax payer.
- Key elements include:
  - A constructive, mission-aligned working relationship with state regulators & stakeholders that is biased towards progress
  - High performing DOE-contractor team driving to deliver a successful transition to WTP operations
  - World-class contractor delivery performance

