



# THE HANFORD SITE

## Hanford Cleanup: Past, Present, Future

National Cleanup Workshop  
Brian Vance, Hanford Site Manager

# National Defense: Hanford Plutonium Production

World War II thru the Cold War Era (1944-1991)



## *Hanford Reactors:*

- B Reactor 1944-1968
- D Reactor 1944-1967
- F Reactor 1945-1965
- H Reactor 1949-1965
- DR Reactor 1950-1964
- C Reactor 1952-1969
- KW Reactor 1955-1970
- KE Reactor 1955-1971
- N Reactor 1963 -1987

**Total: 74 tons plutonium**

- **Atomic Energy Act of 1954**
- **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**
  - Three active National Priority List (NPL) sites at Hanford – 100, 200 and 300 Areas; 1100 Area removed from list in 1996
  - Facility cleanout, demolition and waste site cleanup
- **Resource Conservation and Recovery Act (RCRA)**
  - State of Washington delegated authority by EPA
  - Safe storage, treatment and disposal of hazardous waste
- **Tri-Party Agreement** (Hanford Federal Facility Agreement and Consent Order, signed in 1989)
  - Agreement between DOE, State of Washington and EPA
  - A living document that provides framework to implement and comply with regulations



# F Reactor Area: A First

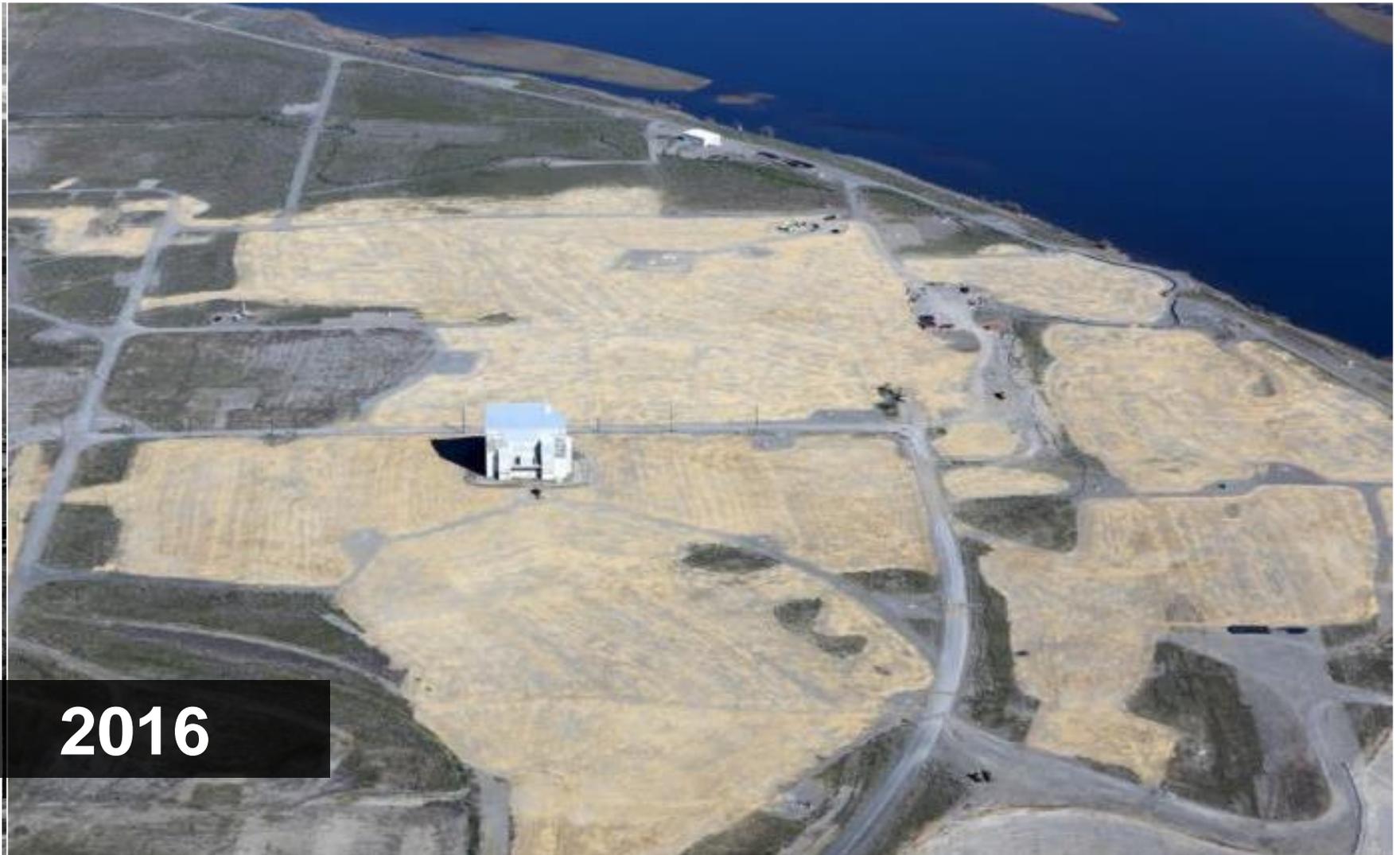


2012

# D and DR Reactor Areas



2016



2016



2015

2012



2015





# THE HANFORD SITE

Ty Blackford

CH2M HILL Plateau Remediation Company

## 100-H Hexavalent Chromium Remedy Progress



2017

## 100-K Hexavalent Chromium Remedy Progress

2017



## *100-K Footprint Reduction*

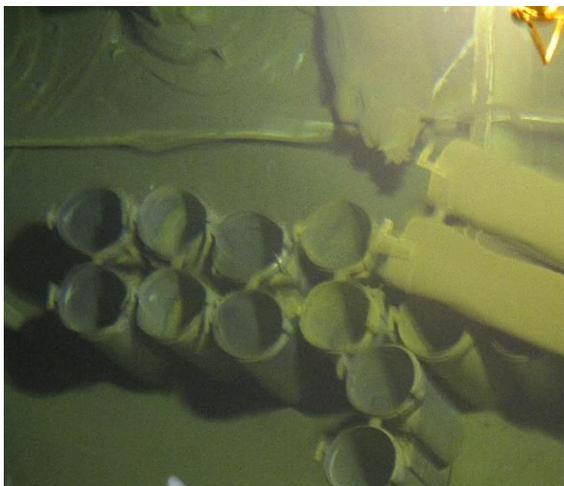


**2019**

## *Significant Steps Toward Closure*



Last Container of Sludge Shipped on September 9



Legacy Debris Removal Planning



Planning for Safe Storage

## *Waste Site Along Public Highway Cleaned Up*

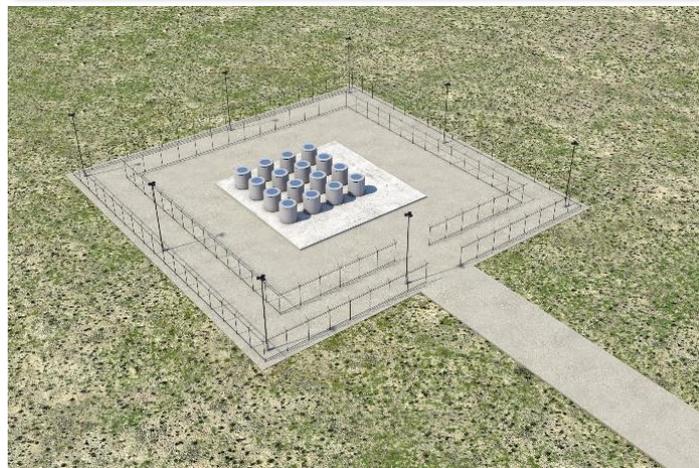
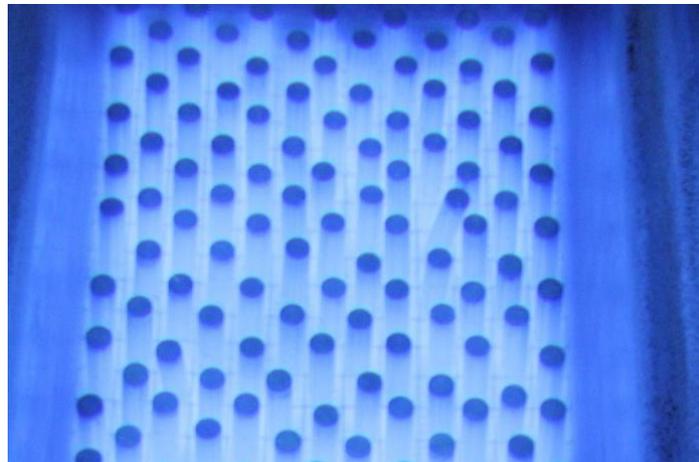
**2018**



## *Risk Reduction in the 300 Area*



## *Radioactive Capsules to Dry Storage*



# Plutonium Finishing Plant

2019



# Risk Reduction to Support 24/7 Ops

## Highest-Hazard Building Demolished



Plutonium Finishing Plant: August 2010



Plutonium Finishing Plant: 2020

## Risks Ranked for Mitigation, Ensuring Continuity of Operations



Z-9 Crib...



Waste Tunnels...

## Risks Ranked for Mitigation, Ensuring Continuity of Operations



... Near Site Laboratory

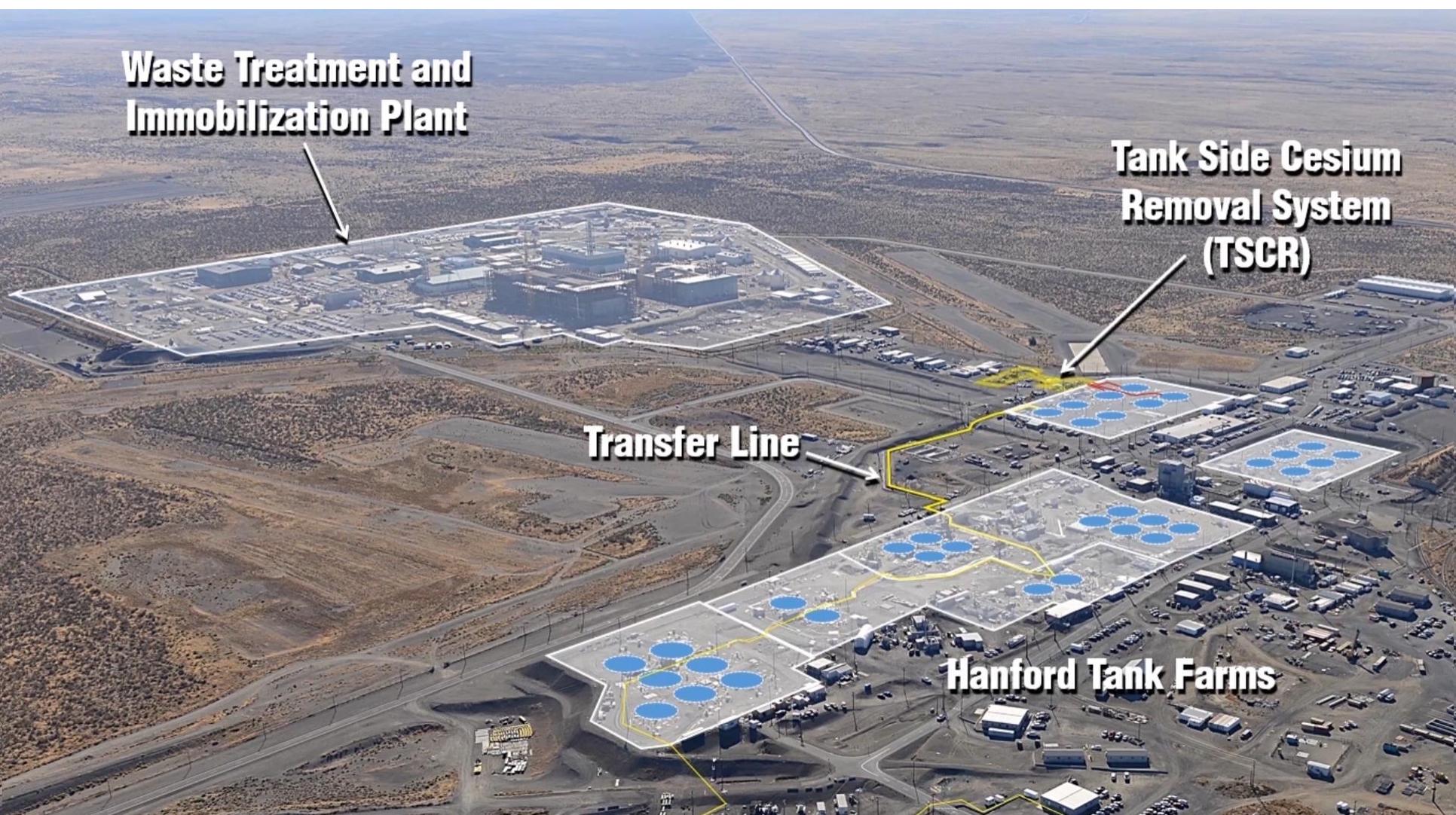


... Near Disposal Facility for Vitrified Waste



# THE HANFORD SITE

John Eschenberg  
Washington River Protection Solutions



**Waste Treatment and Immobilization Plant**

**Tank Side Cesium Removal System (TSCR)**

**Transfer Line**

**Hanford Tank Farms**

## Risk Reduction



## Infrastructure Improvement



## Accelerated Operations



## Advanced Tech & Digital Transformation



# THE HANFORD SITE

Valerie McCain  
Bechtel

# Vit Plant Jobsite Evolution

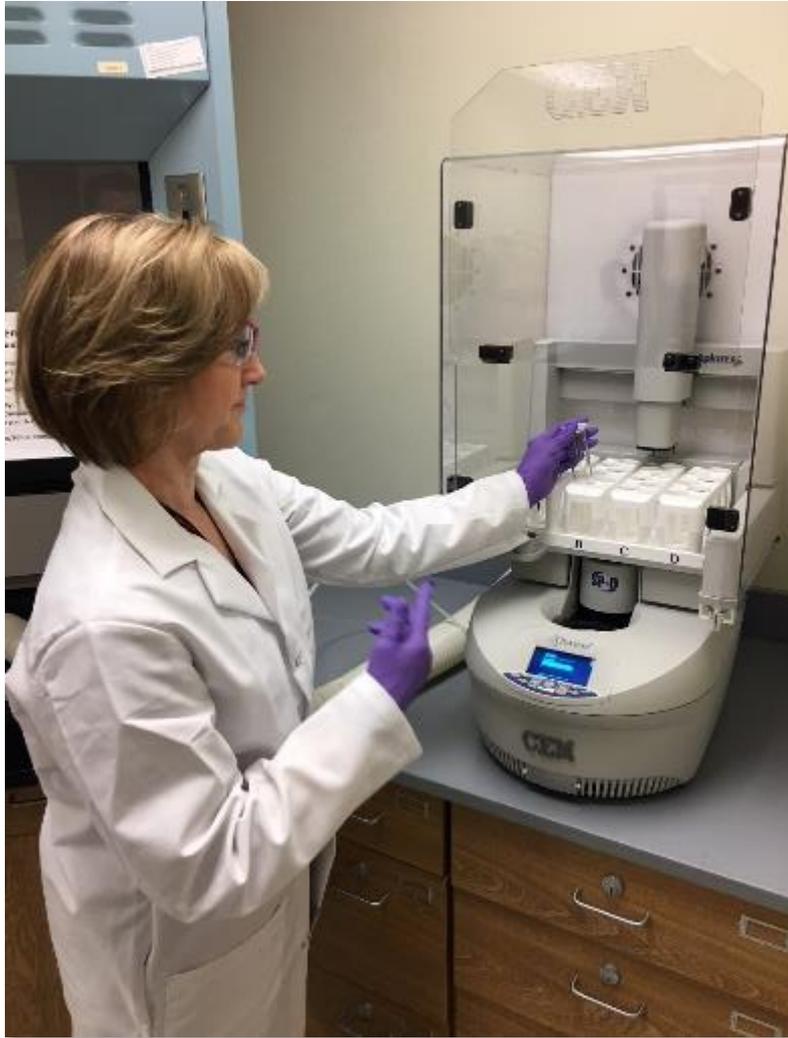
2019



# Progress in Startup, Testing



# Preparing for Commissioning, Operations





# THE HANFORD SITE

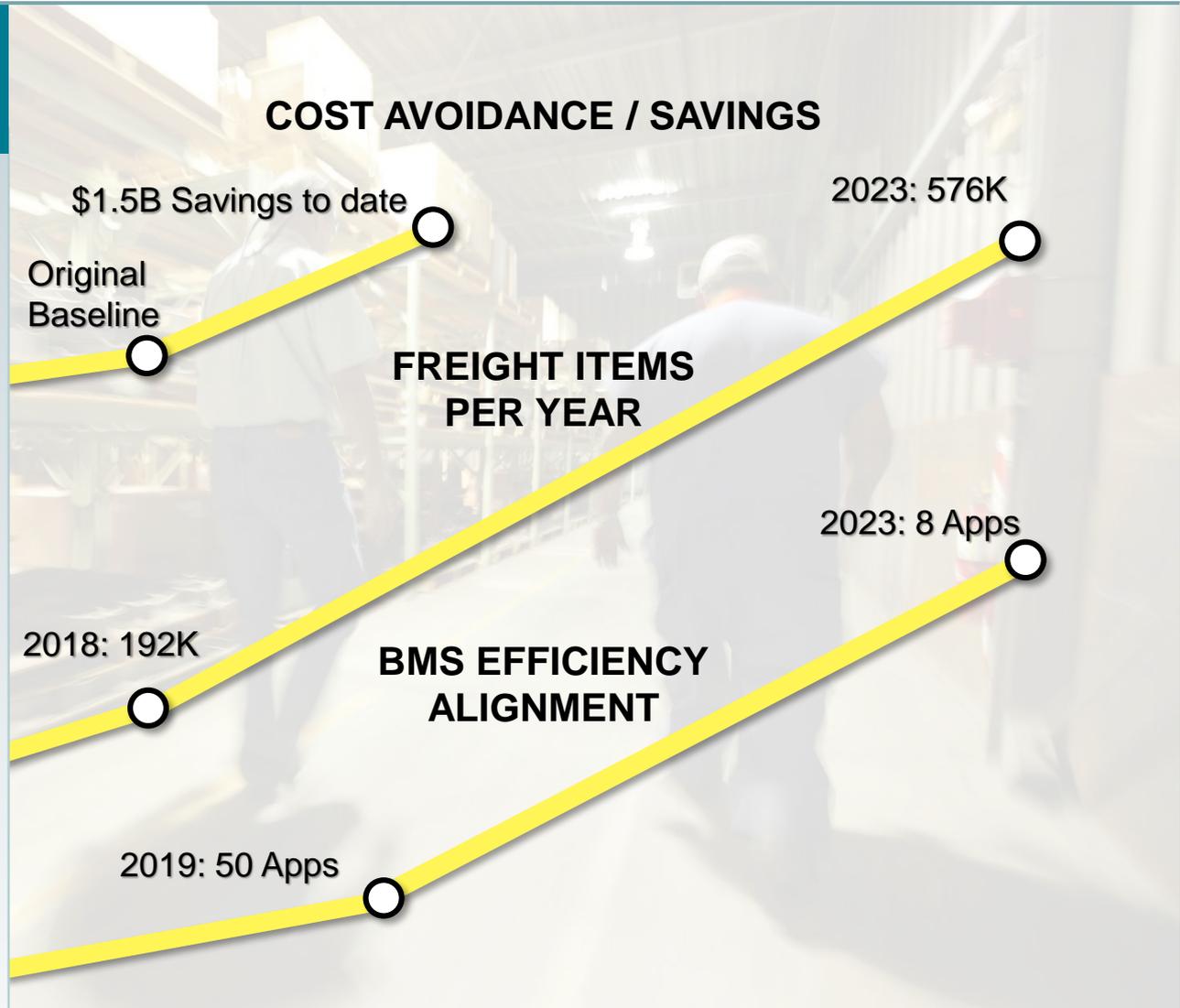
Bob Wilkinson  
Mission Support Alliance

# Hanford Essential Services



## Integrated Services

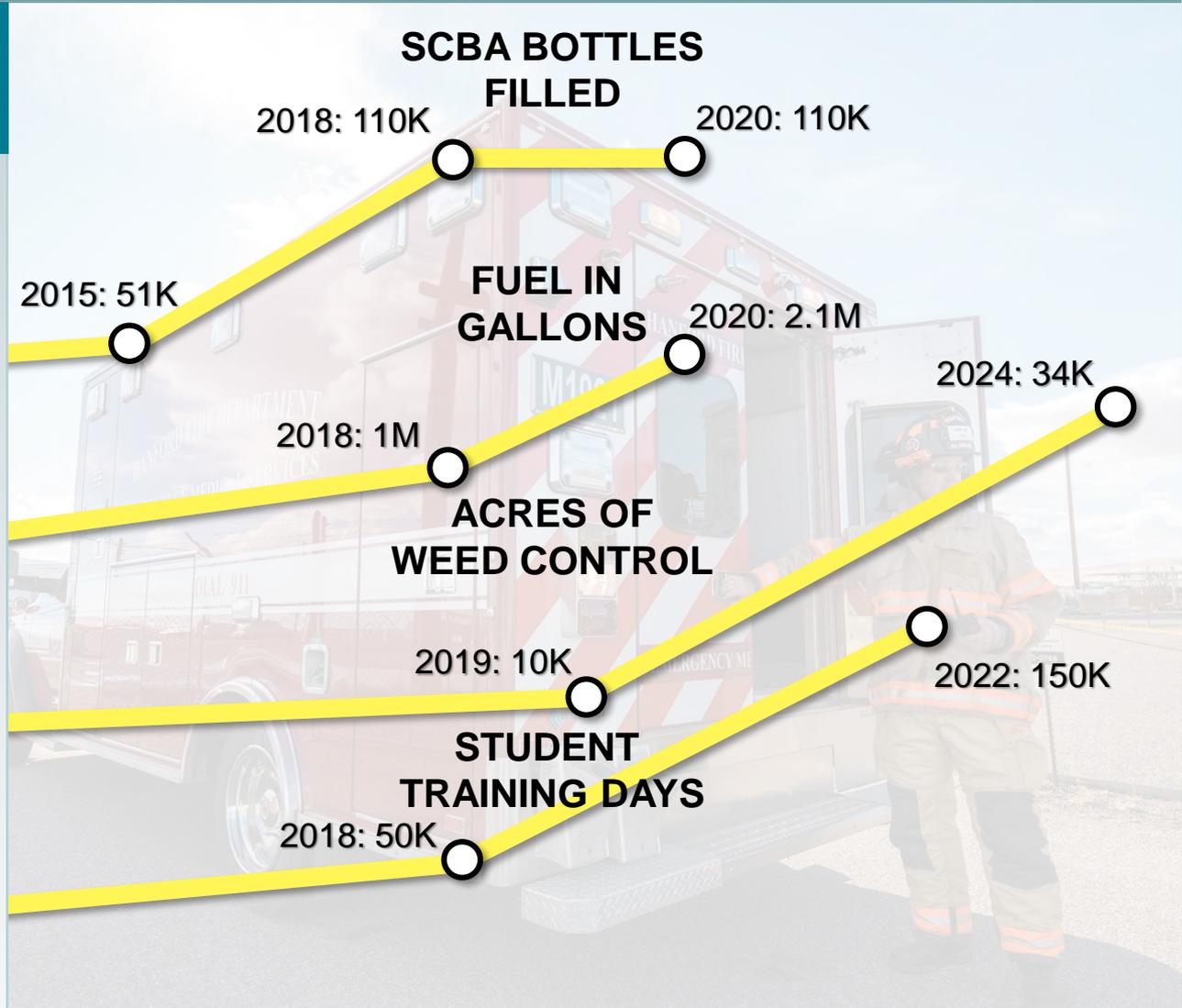
- Payroll, Pensions, Small Business Utilization
- Portfolio Management
- Supply Chain & Warehouse
- Business Management System
- Integration and Interface



# Hanford Essential Services

## Support Services

- Emergency Response
- Site Security
- Sitewide Craft Services
- Environmental Services
- Sitewide Training
- Fleet
- Crane and Rigging
- Meteorology
- Fire System Maintenance
- Project/Construction Services





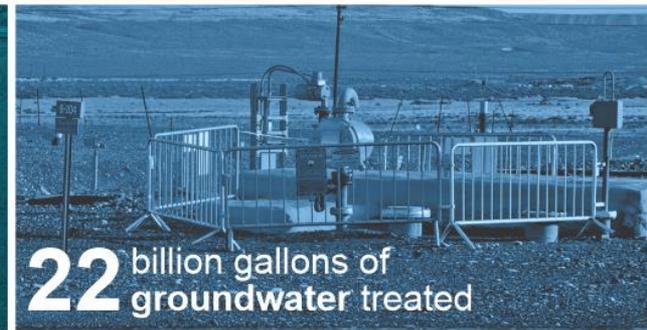
# Hanford Cleanup Progress



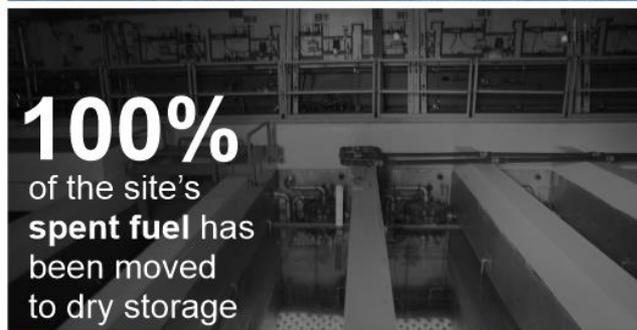
**NINE** reactors | **SIX** cocooned | **ONE** preserved



**493** tons of contamination removed from groundwater



**22** billion gallons of groundwater treated



**100%** of the site's spent fuel has been moved to dry storage

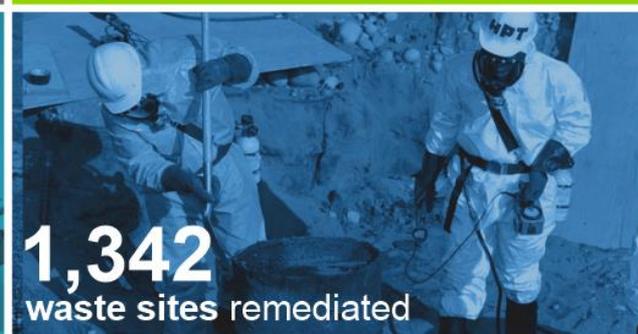
**HANFORD CLEANUP #s**  
by the NUMBERS



**18.5** million tons of soil/debris moved to engineered landfill



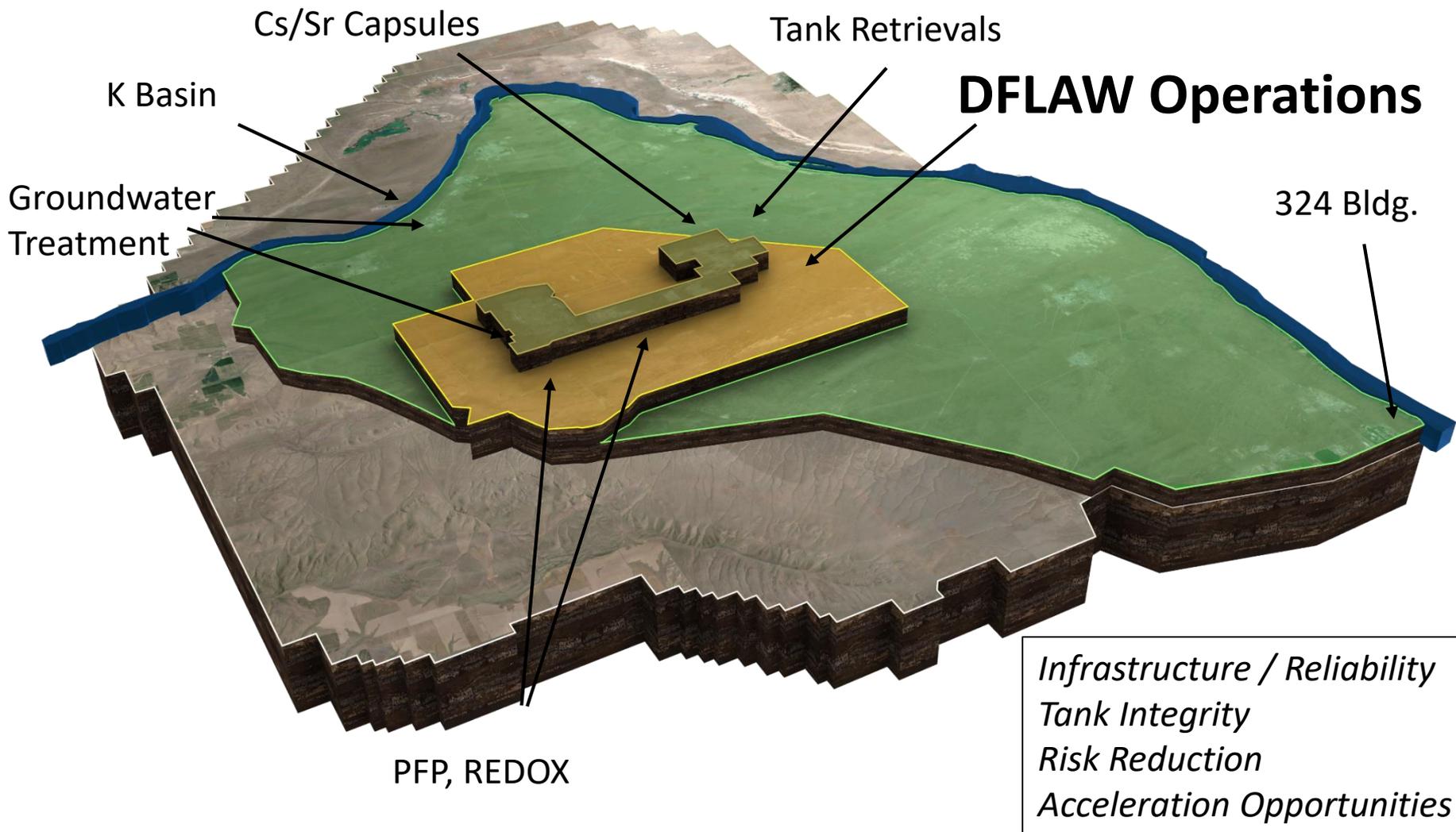
**889** facilities demolished



**1,342** waste sites remediated



**12,417** cubic meters of plutonium-contaminated waste retrieved



# Transition to 24/7 Operations



# Stakeholder Engagement



# High Performing Team

