



OFFICE OF
RIVER PROTECTION
United States Department of Energy



washington river
protection solutions

Tank Vapor Assessment Team (TVAT) Follow-up

February 2015



Background

Committed to further reducing worker exposure to chemical vapors

- Following spring/summer vapor events
 - Increased controls
 - Reinstated Chemical Vapors Solutions Team (CVST)
 - Commissioned TVAT external assessment





TVAT conclusions and recommendations

Conclusions

- Potential bolus exposures
- Need for enhanced exposure measurements
- Industrial hygiene parity with radiological controls
- Ongoing leadership commitment

10 Overarching recommendations

1. Management commitment
2. Parity with RadCon program
3. Vapors characterization
4. Vapor exposure standards
5. Medical evaluation process
6. Personal protective technologies
7. Detection and control technologies
8. Enhanced IH staffing
9. Stakeholder communications
10. Research and development

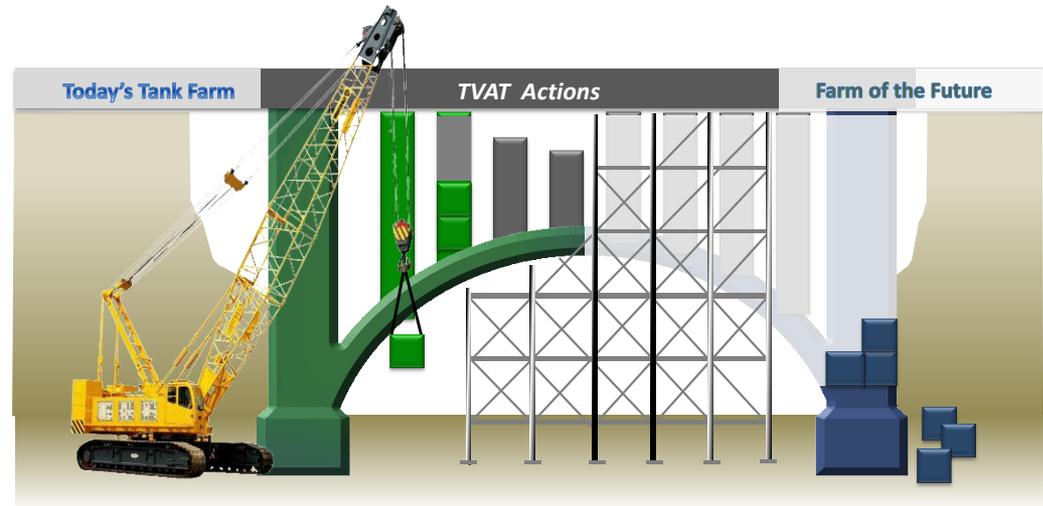
6 Technical assessment areas

1. Site characterization
2. Exposure assessment
3. Dose response
4. Risk characterization
5. Risk management
6. Risk communication

47 TVAT individual
recommendations
(30 in Phase 1)

Implementation plan

- Addresses the TVAT recommendations in a phased approach
- Incorporates input from Chemical Vapor Solution Team, TVAT, DOE Office of River Protection (ORP)
- Outlines multi-year effort
- DOE-managed expert panel will also monitor progress, act as technical resource, and support transparent communications (internal and external)





Phase 1 - Near-term actions (FY 15-16)

- Improving personal protective equipment
- Hiring additional IH staff
- Developing functions and requirements for new field monitoring and alarming equipment
 - Vapor technology vendor day
- Evaluating and procuring new personal monitoring and alarming instruments
- Sampling and characterizing tank head space gases
- Developing new training programs
- Enhancing communications
- Evaluating On-Site Occupational Medical Processes
- Conduct Review of data to assess adequacy of new technical basis for exposure control; refine Phase 2 planning





Phase 2 - Long-term Potential Actions (FY 17-19)

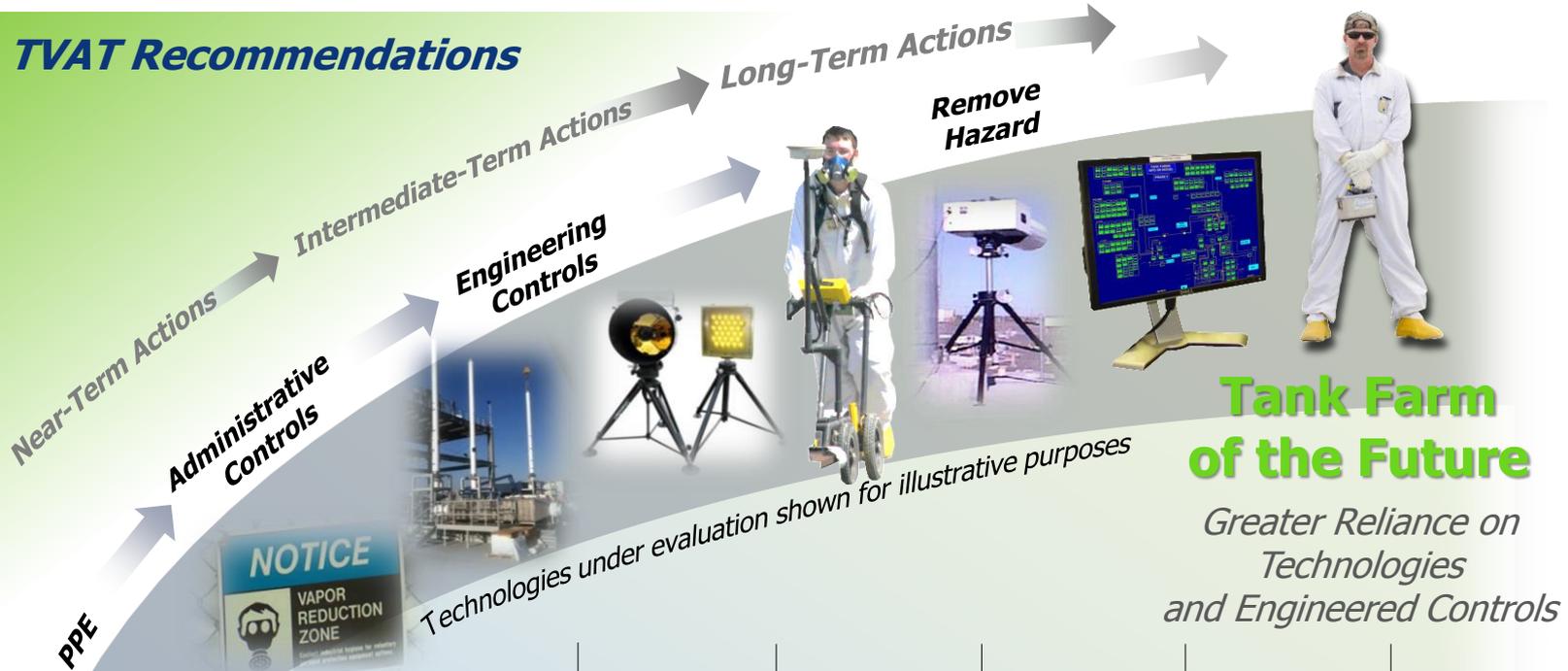
Based on the data collected during Phase 1, we will determine what additional actions are needed in Phase 2 to institutionalize improvements and make further improvements as needed in the following areas:

- Monitoring
- Engineered vapor controls/technologies
- Research and development
- Industrial hygiene program standards and requirements



Path Forward

TVAT Recommendations

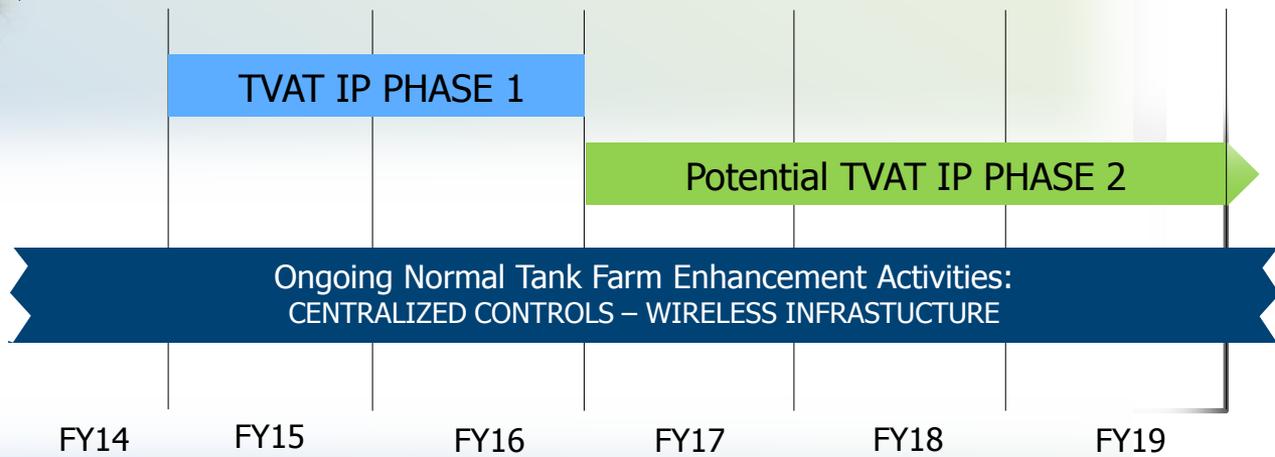


Tank Farm of the Future

Greater Reliance on Technologies and Engineered Controls

Today's Tank Farm

Greater Reliance on PPE and Administrative Controls





Increased worker engagement / communications

- Chemical Vapors Solutions Team
- Quarterly employee communication on progress
- Ongoing “Solutions”, Tailgates and Environmental Safety Health & Quality communications
- External panel reporting and support transparent communications
- Enhanced training for tank farm employees





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Safety Always Comes First!

The Hanford Reach
White Bluffs Overlooking the Columbia River



Backup Slides



The Hanford Site





Hanford 200 Area Overview



Our Team

Office of River Protection (ORP)

ORP is responsible for planning, integrating, and managing the River Protection Program executed by contractors performing work under ORP overall management. ORP has 215 employees, both federal and contractor.

Washington River Protection Solutions (WRPS)

WRPS is the prime contractor responsible for safely managing and operating the Tank Farms. WRPS has 1,800 employees*.

Bechtel National, Inc. (BNI)

BNI is responsible for the engineering and construction of the Waste Treatment Plant. BNI has 2,653 employees*.

Advanced Technology and Laboratories International (ATL)

ATL is the prime contractor responsible for managing the 222-S Laboratory. ATL has 73 employees*.



*As of Nov. 30, 2014



Hanford Site History – World War II to Cleanup



1940s-1980s: Construction & Plutonium Production



1940s-1980s: Creation of Tank Waste



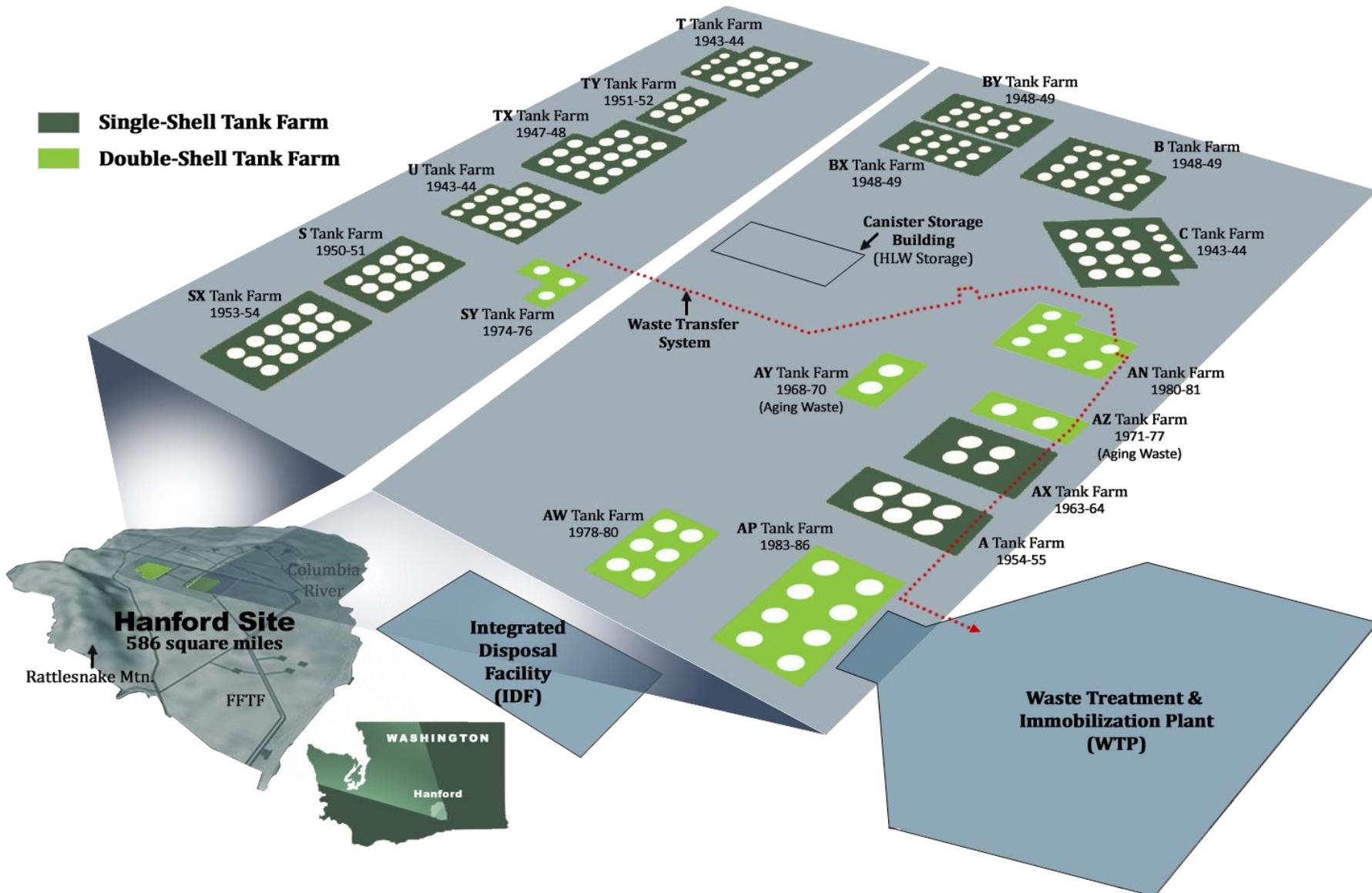
Present: Waste Treatment Plant Construction



Present: Stabilization & Safe Storage



Hanford Central Plateau





Tank Farm Operations

Tank Farms – Complex, Accessible Only from the Surface

