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Hanford Tank Farm Vapors Presentation to Hanford Advisory Board

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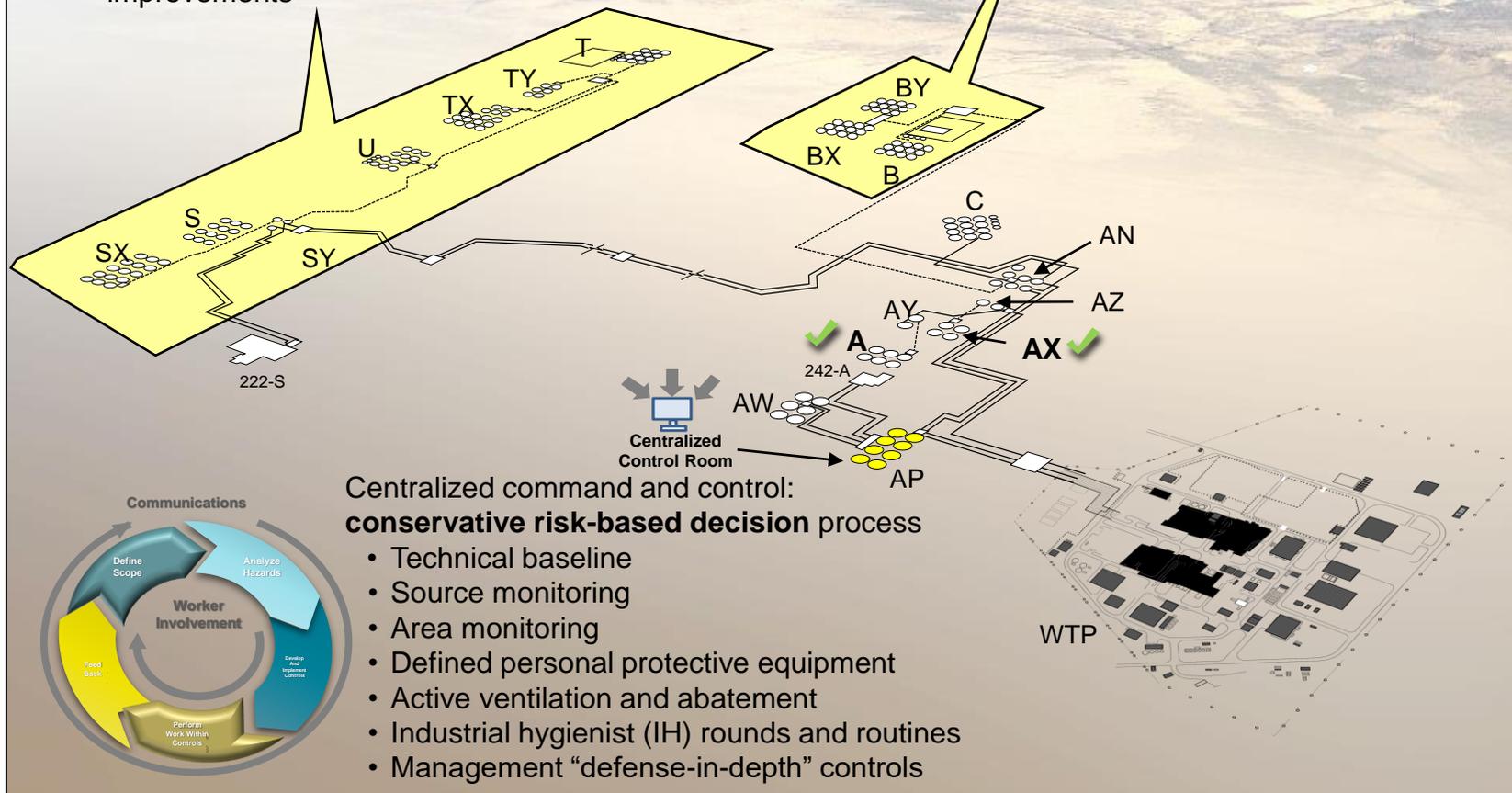
- Key Takeaways
- Actions taken
- A-Farm Exhauster
- NUCON Thermal Oxidation System
- Contractor / labor relationships
- Information sharing

- Actively ventilated Farms are now on APRs
- Personal ammonia monitor field tests were successful and implemented across Farms
- Comprehensive Vapor Action Plan improvements institutionalized
- Conducting effectiveness review to ensure that improvements are continuing to address concerns

Limited access to nine single-shell tank farms

- Reduce entries to non-active farms
- Risk-based respiratory controls
- Future mission work scope priorities will dictate engineering controls and infrastructure improvements

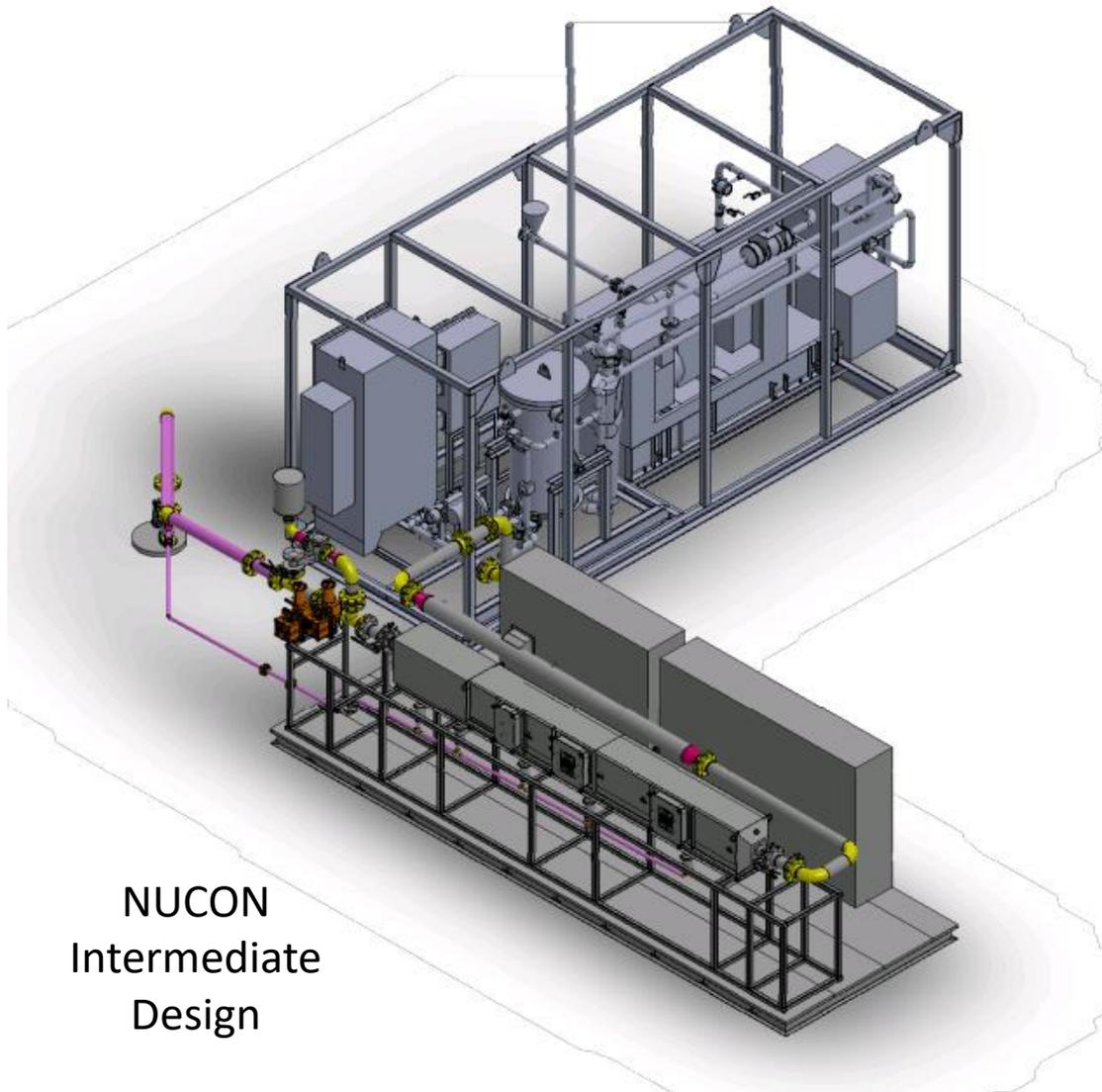
Odor management strategy
Implemented outside the fence lines



- Installation, testing, operational readiness, and turnover to operations completed
- Exhauster engineering controls in place for all tanks with near-term retrievals (A and AX Tank Farms)



A-Farm Exhauster



- Planned Phase 3 field testing: attach unit to single-shell tank. Tank BY-108 is the currently selected test tank.
- Permitting is lead item in fiscal year 2021, followed by fabrication, field installation, and testing/reporting.



Cartridge testing



Full-face air-purifying respirator



Ammonia monitoring



AP Tank Farm Exhauster



Tank headspace sampling

HAMTC and WRPS MOA signed in 2016

Supplied air required until chemical cartridges are proven effective and concurred with by STC

Interim mandatory respiratory protection required until engineering controls or other approaches are proven effective

Implement HVISMS and complete CVAP activities

Demonstrate that full-face air-purifying respirators and powered air-purifying respirators chemical cartridges are effective with tank farm mixture

Implement full-face respirators in actively ventilated farms

- Received concurrence from STC
- Cartridges implemented in SY, AN, AX, AY, and AZ Tank Farms
- Completed implementation in AP and AW Tank Farms in March 2019
- Implemented ammonia monitoring in actively ventilated farms

Work with STC to transition to risk-based controls

- Demonstrate effective implementation of the IH exposure assessment
- Establish guidelines for determining when no respiratory protection is required
- Recognize ammonia as the sentinel chemical for monitoring the source and the worker breathing zone for change conditions
- Implement and maintain vapor rounds and routines
- Timely evaluation and communication of monitoring results
- Communication and training to support risk-based decision-making

- Publicly available website here: <https://hanfordvapors.com/>
 - WRPS-1700777, *Hanford Vapor Integrated Safety Management Strategy* and WRPS-1700022, *Comprehensive Vapor Action Plan* available here: <https://hanfordvapors.com/reference-materials/document-library/>
 - Want to see settlement agreement items? https://hanfordvapors.com/wp-content/uploads/2018/08/SA-Page-4_30_webpage-items.pdf
 - Want to see the AOP-15 event investigation reports? <https://hanfordvapors.com/whats-in-the-tanks/vapors-events/aop-015-event-investigation-reports/>
- Want to see the tank farm vapors data? <https://www.tankvaporsexplorer.com/>. Also linked through the PNNL-Hanford Online Environmental Information Exchange (or PHOENIX) application at <https://phoenix.pnnl.gov/apps/gallery/index.html>
- Other past accomplishments available from the November 2019 HAB committee briefing: https://www.hanford.gov/files.cfm/Update_on_Tank_Farm_Vapors_Nov13_FINAL_REV_1_1.pdf