



OFFICE OF
RIVER PROTECTION
United States Department of Energy

Technical Issue Status and Path Forward

Waste Management Symposium 2017

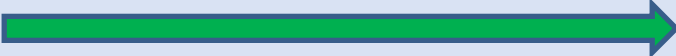

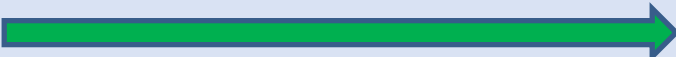





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Project Director, Waste Treatment and Immobilization Plant**

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Technical Issues Resolution: In Progress

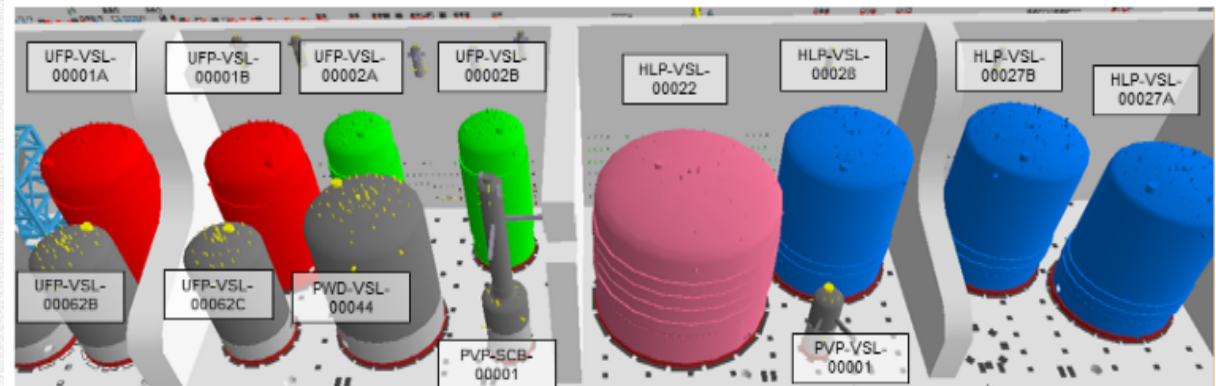
Technical Issue	Status of Resolution
T-1 Hydrogen Gas in Vessels	 Resolved (2016)
T-2 Inadvertent Criticality	 Resolved (2016)
T-3 Hydrogen in Piping and Ancillary Vessels	 Resolved (2016)
T-4 Pulse-Jet Mixing and Control	 3Q 2017
T-5 Erosion/Corrosion in Piping and Vessels	 4Q 2018
T-6 Design Redundancy/In-Service Inspection	 2Q 2018
T-7 Vessel Structural Integrity	 4Q 2017
T-8 Facility Ventilation	 2Q 2018



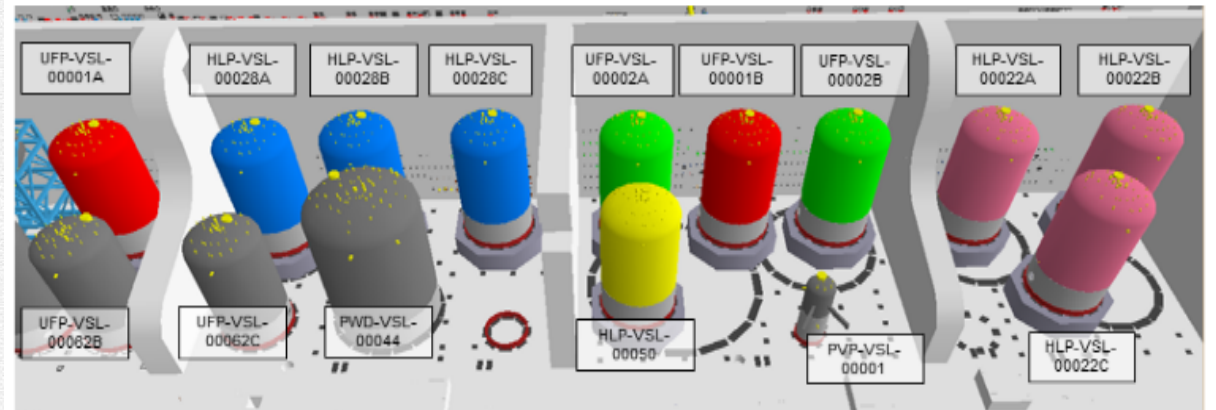


- Continued priority on resolution of the remaining technical issues
- ORP provide authorization to proceed with PT Facility production engineering following technical issue resolution
- Complete facility design and safety basis documentation
- Evaluate potential direct-feed high-level waste (DFHLW) vitrification approach

CURRENT BLACK CELL LAYOUT FOR HIGH SOLIDS VESSELS



DESIGN CONCEPT LAYOUT FOR BLACK CELL SHSVD



Vessel color coding depicts common functionality between current design configuration (top) and proposed design configuration with SHSV (bottom).





High-Level Waste and Pretreatment Baseline Change Plans

DOE will update the WTP Performance Baseline in three phases:

- **Phase 1: Direct-feed low-activity waste (DFLAW) (completed)**
- **Phase 2: HLW Facility**
 - Production engineering ongoing
 - Completing design engineering studies and safety basis update
 - DFHLW evaluation and decision
 - Facility Completion Plan will outline path to full production and rebaseline
 - Utilize rebaseline and contract modification process used for DFLAW
- **Phase 3: PT Facility**
 - Complete technical issue resolution
 - Complete conceptual design with SHSV
 - Complete design engineering studies and safety basis update
 - Assess mission changes (if any) resulting from DFHLW
 - Utilize rebaseline and contract modification process used for DFLAW

Note: Phase 2 and Phase 3 may be combined.





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**With strong technical
justification...**

**Working on resolution plans for
all remaining technical issues**

The Hanford Reach
White Bluffs Overlooking the Columbia River