



UNITED STATES DEPARTMENT OF ENERGY

# OFFICE OF RIVER PROTECTION

## Provision of a Tank Waste Characterization and Staging Capability at Hanford Presentation: March 12, 2014

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# Mission Need: Bridging the Capability Gap

Provision of the needed connectivity between the Hanford Tank Farms (TF) and the Waste Treatment and Immobilization Plant (WTP) to bridge known performance gaps in the waste feed delivery and certification system that meets the WTP Waste Acceptance Criteria (WAC) and supports effective WTP throughput





## What a Tank Waste Characterization and Staging (TWCS) Capability Means for Hanford Tank Farms:

- ✓ TF will have the capability to adequately mix, sample, and blend tank waste feeds to support WTP start up and operations
- ✓ TF will have the capability to manage potential problematic wastes and meet the WTP WAC
- ✓ TF risks associated with upgrading aging waste tanks will be reduced and certain costs avoided





## What a TWCS Means to the Waste Treatment Plant:

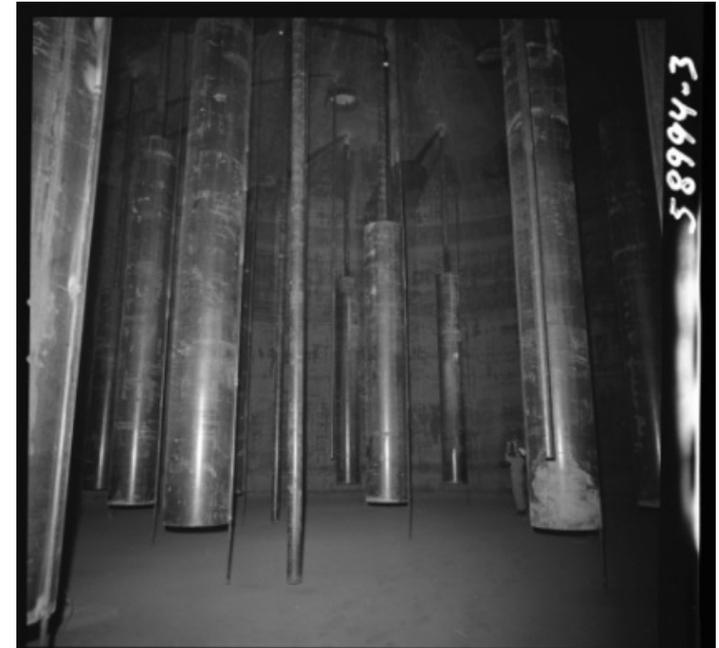
1. WTP Project will be able to finalize the WAC and potentially reduce the requirement for and costs of long term Pretreatment (PT) Facility Full Scale Vessel Testing
2. WTP Project will be able to finalize the design and facility construction
3. WTP Operations will have the flexibility to start up and operate the High Level Waste (HLW) Facility even when the PT Facility is off-line (if HLW Facility modified to accommodate Direct Feed HLW)





## CONCEPTUAL SCOPE DESCRIPTION – KEY FUNCTIONS:

- Receive, stage, mix and blend tank waste
- Sample and characterize HLW feed
- Export HLW feed to WTP facilities
- Store problematic wastes, as necessary
- Potential pre-condition option to address problematic wastes
- Provide consistent HLW feed to WTP





## SUMMARY:

- Address Known Capability Gap within TF – Mission Shift from Receipt and Storage to Waste Transfer and Treatment
- Provide Connectivity Between TF and WTP in Order to Meet the WTP WAC
- Early Phase of Justification of Mission need
- Pending Approval by DOE-HQ

