



THE HANFORD SITE

Waste Treatment and Immobilization Plant System Startup and Commissioning

Mat Irwin

Office of River Protection

WTP Deputy Assistant Manager

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Teamwork and mutual respect

- Open communications and teamwork are the normal situation
- Individuals engage in crucial conversations to ensure meaning, intent and viewpoints are understood, and that differing points of view are acknowledged
- Issue discussions focus on problem solving rather than on individuals
- Good news and bad news are both valued and shared

WTP startup and commissioning overview

Related HAB work plan topic: Waste Treatment and Immobilization Plant and Tank Farm DFLAW (excluding Effluent Treatment Facility) facilities transition to commissioning



Picture taken June 2020

Objective of the briefing: Provide an educational update on the WTP system startup and commissioning.

- What is being briefed?
 - The process of WTP system startup and commissioning
 - Key elements of the WTP commissioning sequence
 - Update on the status of WTP system startup and commissioning

What do we want the HAB to do with this information? Continue policy-level discussions regarding the status of the WTP project.



WTP Startup Testing



WTP systems go through a series of specific tests to ensure that individual systems and components perform the way they should

WTP Glass Former Storage Facility

WTP Startup Testing



- Complex systems sometimes require the support of several other systems and facilities to complete startup testing
- Systems and facilities throughout the WTP site must complete startup testing in preparation for supporting WTP commissioning

WTP Steam Plant

Complex systems with key design features go through an additional series of tests that require the coordination of multiple facilities



WTP Control Room



The commissioning process starts gradually by testing specific capabilities, and then culminates in a test of all WTP systems working in unison to operate the plant

WTP Electrical Switchgear

- Loss-of-power testing
- Low-Activity Waste Facility and Effluent Management Facility water runs
- Heat up and testing of Melter 1
- Glass product quality verification
- Activation and testing of Melter 2
- Cold commissioning performance and capacity testing

- An Independent DOE team will conduct an Operational Readiness Review
- Following a successful review, the Office of River Protection will authorize the introduction of radioactive materials to WTP



Tank-Side Cesium Removal System

Startup and Commissioning Considerations

Aging equipment —

Inspections and maintenance are performed on WTP facilities and equipment installed over a decade ago



WTP Electrical Distribution Facility

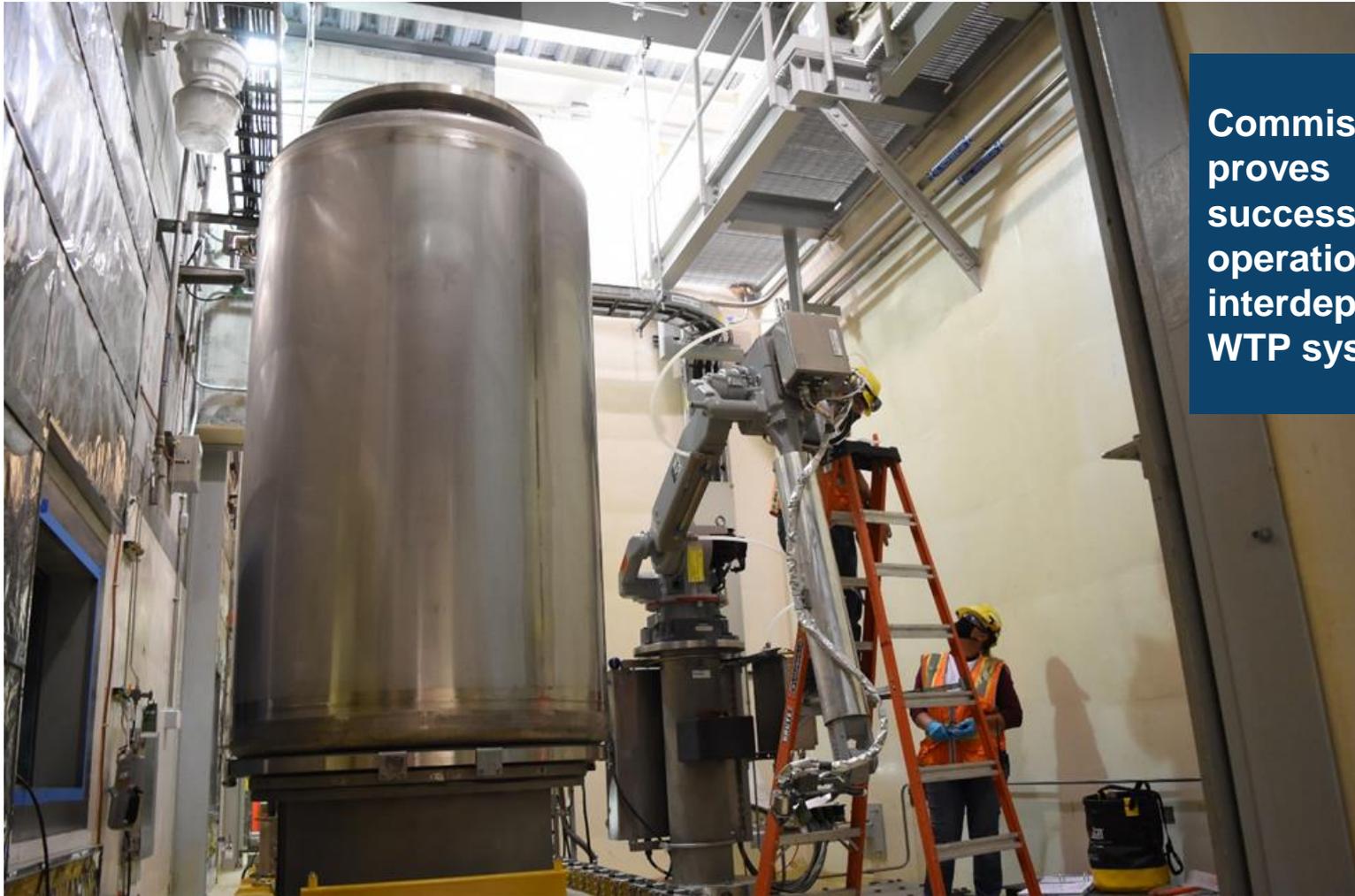
Startup and Commissioning Considerations (cont.)



Large, complex project —
WTP is a large site with multiple operation and support facilities

WTP Aerial Photo 2020

Startup and Commissioning Considerations (cont.)



Commissioning proves successful operation of interdependent WTP systems

Low-Activity Waste Canister on the Decontamination and Finishing Line

WTP is making excellent progress towards commissioning and operations. In 2020, WTP workers completed the following:

- Construction of the Low-Activity Waste Facility
- Construction of the Effluent Management Facility
- Startup testing of the Balance of Facilities
- Startup testing of the Analytical Laboratory (LAB)
- Commissioning of the LAB high-purity gas systems
- Operational readiness assessment of the LAB

- WTP is making excellent progress towards commissioning and operations
- DOE and the WTP contractor are proactively evaluating the commissioning process and addressing risks as they are identified

Questions?

