

# *Citizens Advisory Board Presentation*

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## *Integrated Waste Treatment Unit*

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# Facility Description

- **New Hazard Category 2 Nuclear Facility:**
  - First of its kind, full scale steam reforming process; reformer vessels use superheated steam and nitrogen gas, along with coal and coke, to convert acidic radioactive liquid waste to solid carbonate particles
- **Mission:**
  - To treat ~900,000 gallons of radioactive liquid waste stored in the Idaho Tank Farm Facility into a stable form suitable for disposal outside of Idaho.
- **Over Pressurization Event:**
  - After the event of June 16<sup>th</sup> 2012, facility modifications have been completed along with additional recovery actions.



# Contractor Readiness Review Actions

- ✓ Completed Contractor Management Self Assessment - January 2014
- ✓ Initiated Test Instruction (TI) – 102, IWTU Integrated System Test
- ✓ Completed Contractor Readiness Assessment on March 7<sup>th</sup>
- ✓ Issued Contractor Readiness Assessment Final Report on March 9<sup>th</sup>
  - ✓ Identified six findings and 19 opportunities for improvement
  - ✓ Corrective Action Plans approved for all findings
  - ✓ All the corrective actions are completed for the six findings

✓ = Completed Activity

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# DOE Readiness Review Actions

- ✓ Completed DOE Line Management Review of Contractor Readiness Assessment and Pre-requisite activities for start of DOE Readiness Assessment
- ✓ DOE-ID authorized DOE Readiness Assessment Team to proceed
- ✓ DOE Readiness Assessment started on March 11th
- ✓ DOE Readiness Assessment Team issued final report on March 28<sup>th</sup>
  - ✓ Three Pre-Start Findings to continue past Hold Point 2 and introduce steam and waste simulant to the process and continue TI-102 Testing
  - Two Pre-Start Findings prior to starting TI-103 testing which introduces radioactive waste feed
  - Ten Post-Start Findings need to have corrective action plans approved
  - Eleven observations and one strength were also identified

✓ = Completed Activity

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# DOE Readiness Assessment Pre-Start Findings

- TI-102 Pre-Start Findings
  - Procedure non-compliances and operating without work instruction/procedures noted during IWTU operations.
  - Inconsistency between IWTU access training response to a low oxygen monitor condition and EAR-285-Emergency Response
  - IWTU response to Safety Instrumented Function-3, CO analyzer on-line validation check failure alarm
- TI-103 Pre-Start Findings
  - IWTU radiological decontamination capabilities warrant improvement
  - Inadequate integrated radiological control planning for bell crane repair preparations



# Next Steps

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- ✓ Close three Pre-Start Findings for Test Instruction (TI) -102, *IWTU Integrated System Test*, from the DOE Readiness Assessment Final Report
- ✓ Issue authorization to introduce steam and waste simulant by the DOE Startup Authorization Authority (Jim Cooper)
  - Complete TI-102 using steam and waste simulant
  - Complete facility outage, maintenance, and inspection activities
  - Close two Pre-Start Findings for TI-103, *System Performance Test*, from the DOE Readiness Assessment Final Report
  - Obtain temporary authorization from DEQ to proceed with TI-103
  - Issue authorization to introduce radioactive waste by the DOE Startup Authorization Authority (Jim Cooper)
  - Start radioactive waste processing under TI-103

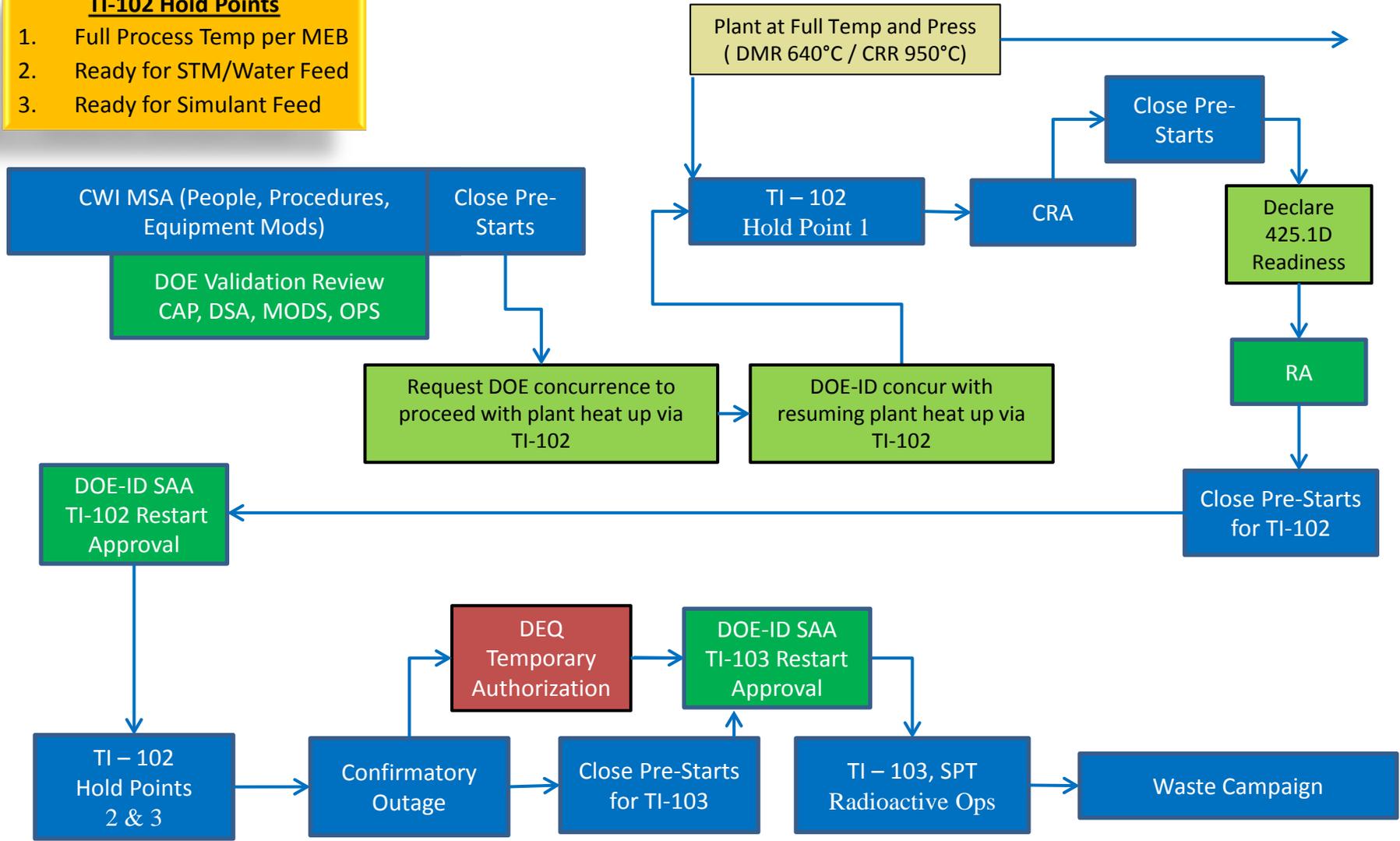
✓ = Completed Activity

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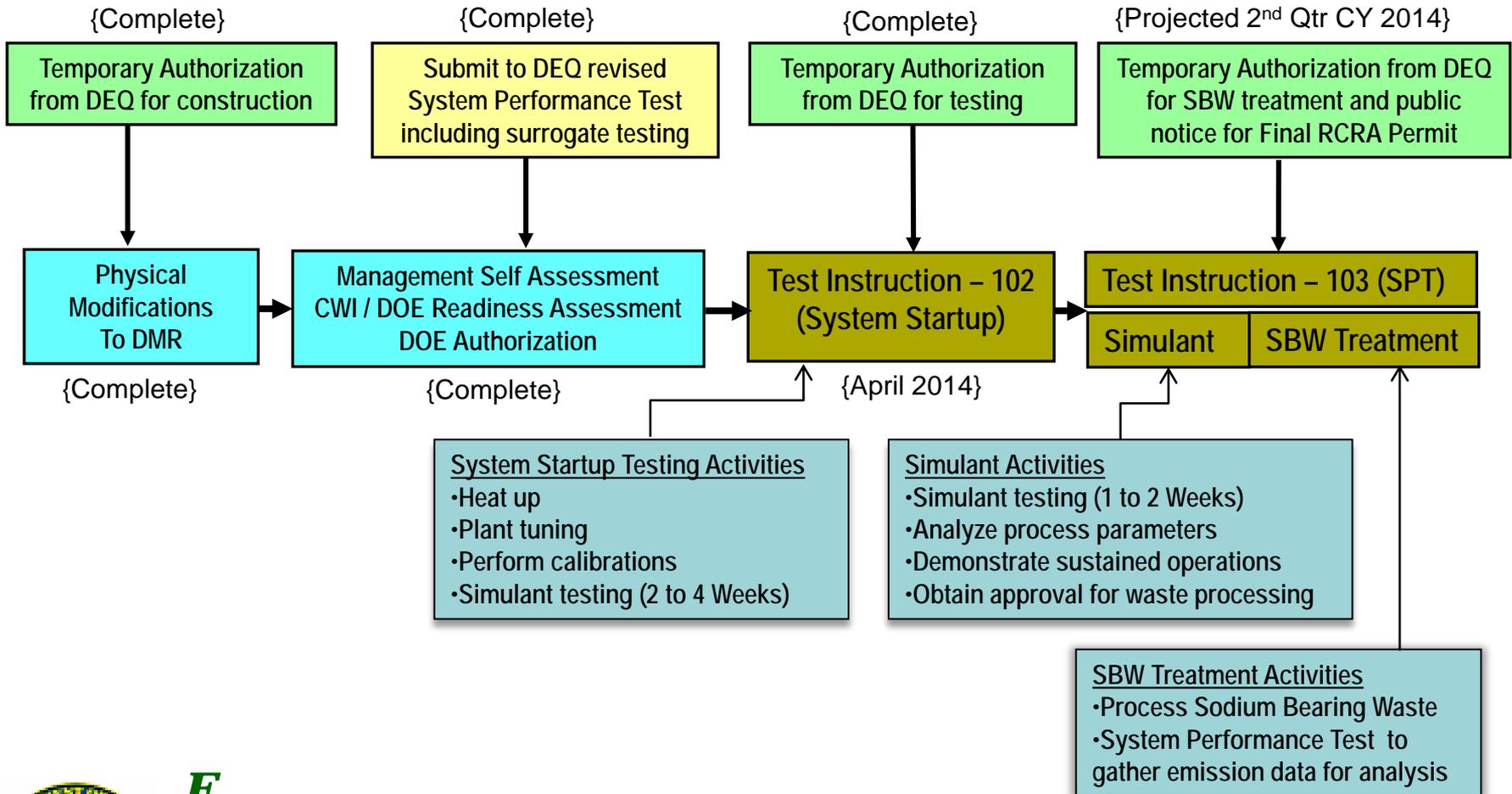


# IWTU Restart Logic and Process

- TI-102 Hold Points**
1. Full Process Temp per MEB
  2. Ready for STM/Water Feed
  3. Ready for Simulant Feed



# Permitting and Startup Strategy



# Dashboard Summary for IWTU Project

Key Questions	Dashboard Indicator	Comments
Impact on budget for activity or cleanup		Project costs have increased because of delays in startup and testing.
Impact on employment or economic development		Project has no negative affect in this area.
Affect on agreements		Settlement Agreement milestone missed. Consent Order revised to 31 Dec 2014.
Impact on safety and environment		This project will process radioactive liquid waste into a solid waste for disposal.
Impact on cleanup DOE-wide		The process used is one-of-a-kind and could have further application DOE wide when successfully proven.



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# Questions?



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# Integrated Waste Treatment Unit Process

