

Citizens Advisory Board Presentation

Integrated Waste Treatment Unit

13 March 2013

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IWTU Operations Activity
Deputy Manager



EM *Environmental Management*

Facility Description

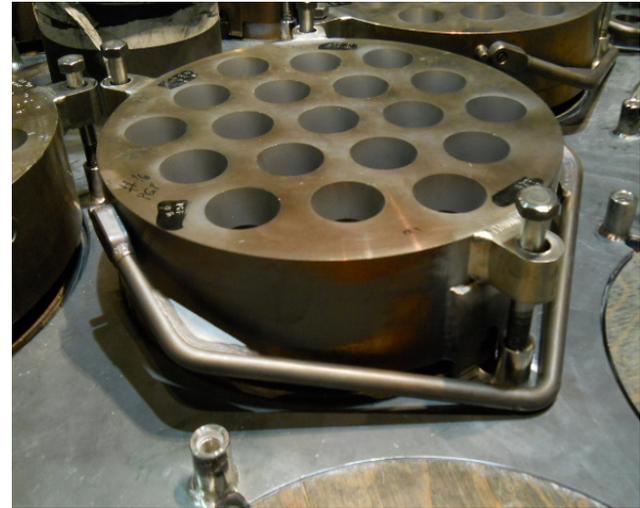
- **New Hazard Category 2 Nuclear Facility:**
 - First of its kind, full scale steam reforming process; reformer vessels use superheated steam and nitrogen gas, along with coal and coke, to convert acidic radioactive liquid waste to solid carbonate particles
- **Mission:**
 - To treat ~900,000 gallons of radioactive liquid waste stored in the Idaho Tank Farm Facility into a stable form suitable for disposal outside of Idaho.



Facility Recovery—Modifications

Facility Modifications Include:

- ✓ Process filter bundle restraints to prevent lifting, all four filter vessels
- ✓ Re-design of filter bundle gaskets
- ✓ Install pre-filter differential pressure transmitters on process off-gas High Efficiency Particulate Air (HEPA) Filters
(allows Rapid Shutdown System trip)



✓ = Completed Activity

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Facility Recovery—Modifications

Facility Modifications Include:

- ✓ Process filter bundle fuses removed from all four filters
- ✓ Product Receiver Filter and Product Handling Vacuum Filter pressure relief valves installed
- ✓ Reassembly of PRF, PHVF, and PGF vessels complete, starting on OGF
- Install oxygen inlet lower in Carbon Reduction Reformer vessel

✓ = Completed Activity

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Facility Recovery—Modifications

Facility Modifications Include:

- ✓ Evaluate and modify the Rapid Shutdown System alarm and trip strategy (evaluation completed, **modifications done, ready to be tested**)
- DMR Feed Nozzle modifications (**2 of 3 completed**)
- ✓ **CRR Rails reinstalled**
- Off Gas Blower Seal Upgrades pending



Facility Recovery—Modifications

Facility Modifications Include:

- Redesign of Fluidizing Gas Rails in DMR and PRC to prevent solids plugging



Facility Recovery—Modifications

Facility Modifications Include:

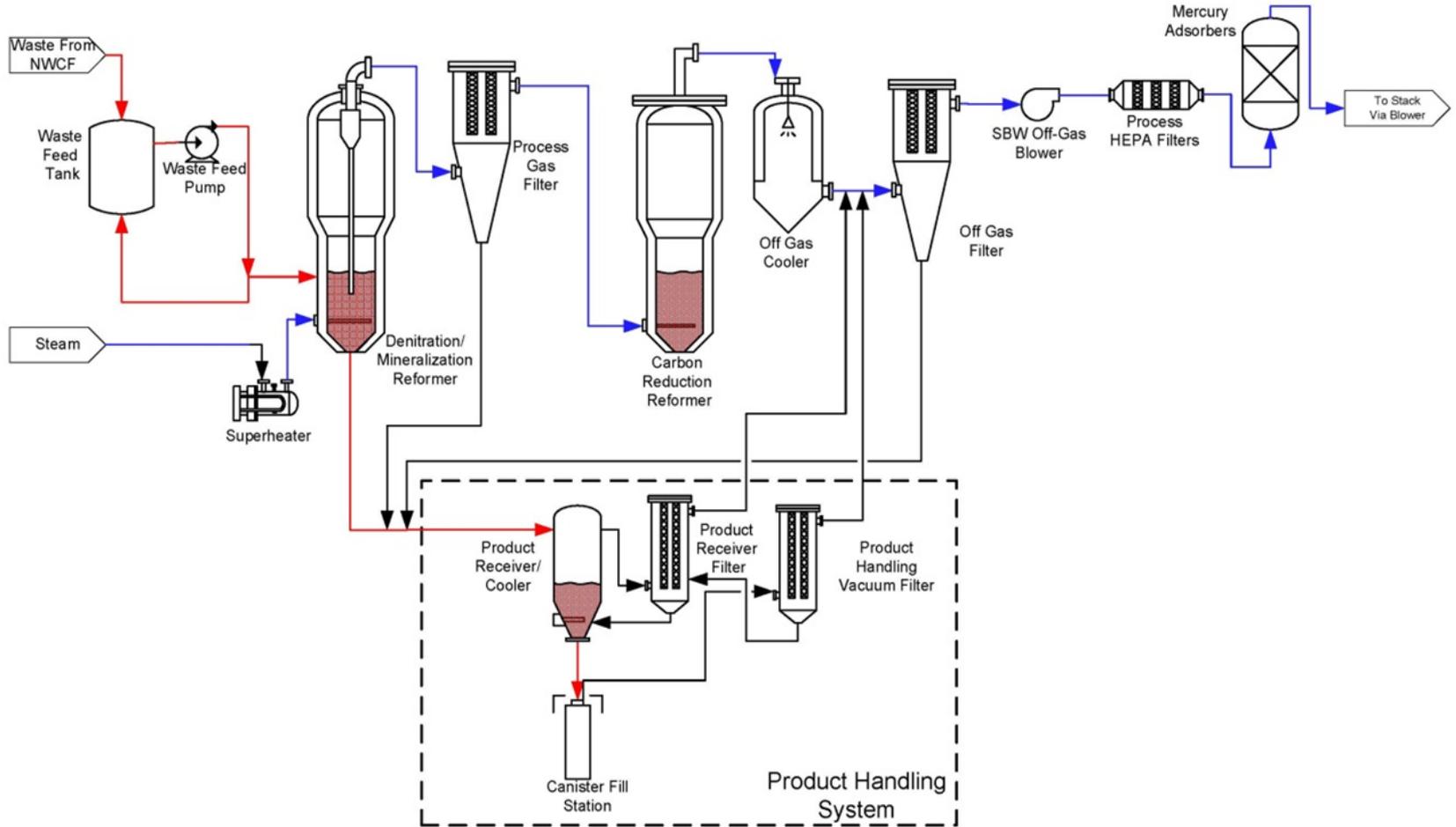
- Redesign of Fluidizing Gas Ring Header in DMR.
- The redesign must either prevent solids plugging or the header and rails must be self clearing.
- Four testing phases:
 - ✓ **Proof of concept – analyzing results**
 - Test in ASME vessel
 - Final design w/instrumentation
 - Full scale test in DMR

✓ = Completed Activity

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Integrated Waste Treatment Unit Process



Current Status

- DEQ and EPA region 10 are satisfied with our progress and helping with permit issues.
- The Consent Order date has been revised from December 31st, 2012 to December 31st, 2014.
- We have initiated an effort to identify “What Else” could impact start-up to mitigate as early as possible.

✓ = Completed Activity

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Path Forward

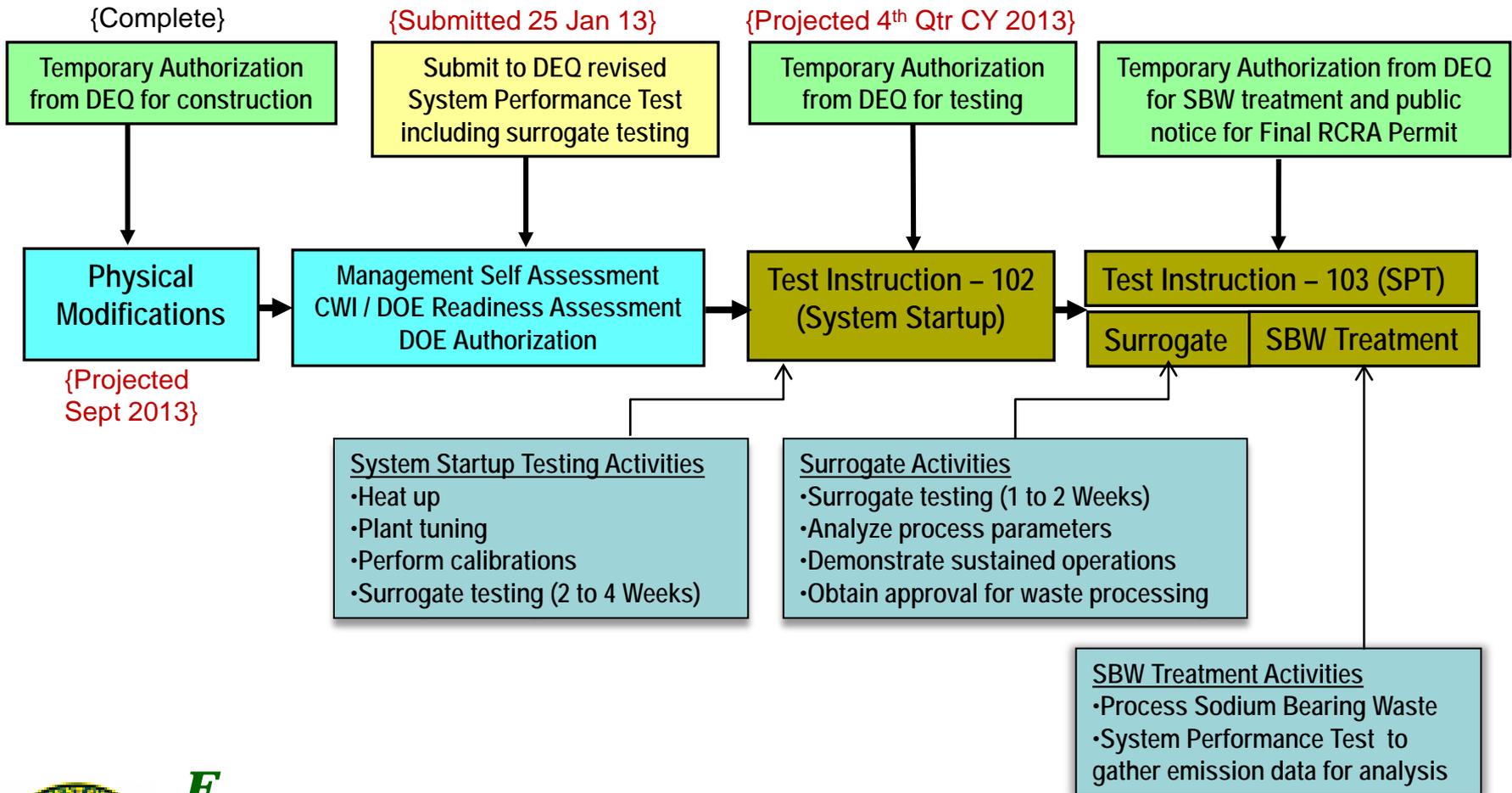
- ✓ CWI Submits Corrective Action Plan (CAP) to DOE
- ✓ DOE Idaho approves CAP after review with DEQ and DNFSB
- ✓ Submit Proposed Permit Modifications to DEQ
- ✓ Receive Temporary Authorization from DEQ for modifications
 - ✓ Idaho DEQ and EPA Region 10 site visit on 18-19 Dec 2012
 - ✓ DNFSB site visit on 19-20 Feb 2013
- Complete Process System Modifications – **projected April 30th**
- Revise Safety Basis Documents – **projected May 30th**
- Complete Revisions to Operating Procedures - **Submitted to DEQ**
- ✓ **Revise Training Classes from Lessons Learned and Retrain**

✓ = Completed Activity

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Permitting and Startup Strategy



Questions?



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