



Idaho Cleanup Project Integrated Waste Treatment Unit

Joel Case

Assistant Manager
INTEC Programs

October 21, 2021



EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

Idaho Cleanup Project

IWTU Mission

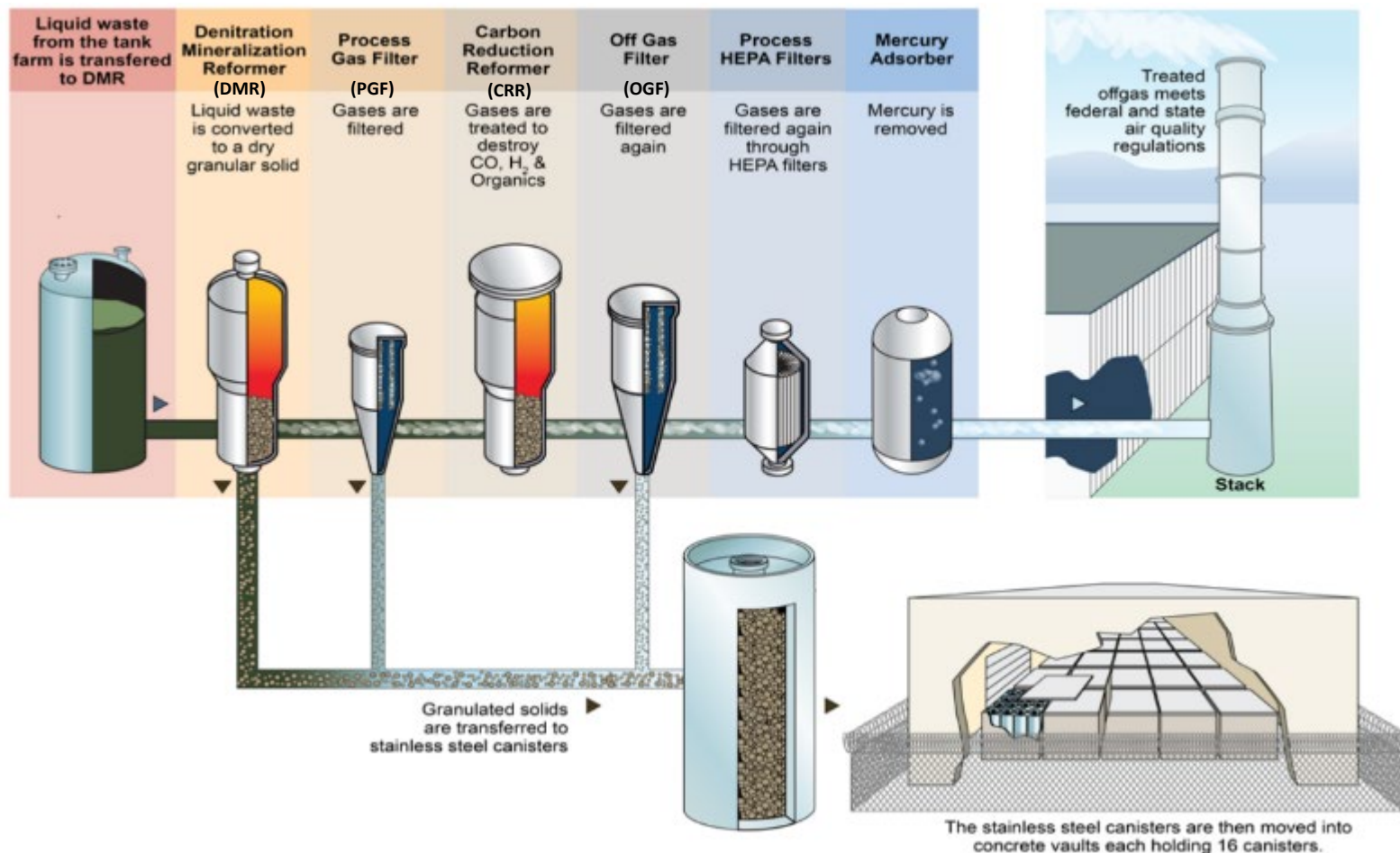
- IWTU is a Hazard Category 2 nuclear facility designed and constructed to treat approximately 850,000 gallons of highly radioactive liquid tank waste (sodium bearing waste – SBW) using the fluidized bed steam reforming process
 - General waste description:
 - Approximately 850,000-900,000 gallons of acidic waste
 - Waste is contained in 3 stainless steel tanks within concrete vaults (WM-187, -188, -189)
 - Tank 187 includes majority of solids (36-inch heel)
- The process will convert liquid SBW into a solid, granular, carbonate product for on-site storage pending final disposition



Treated SBW simulant product

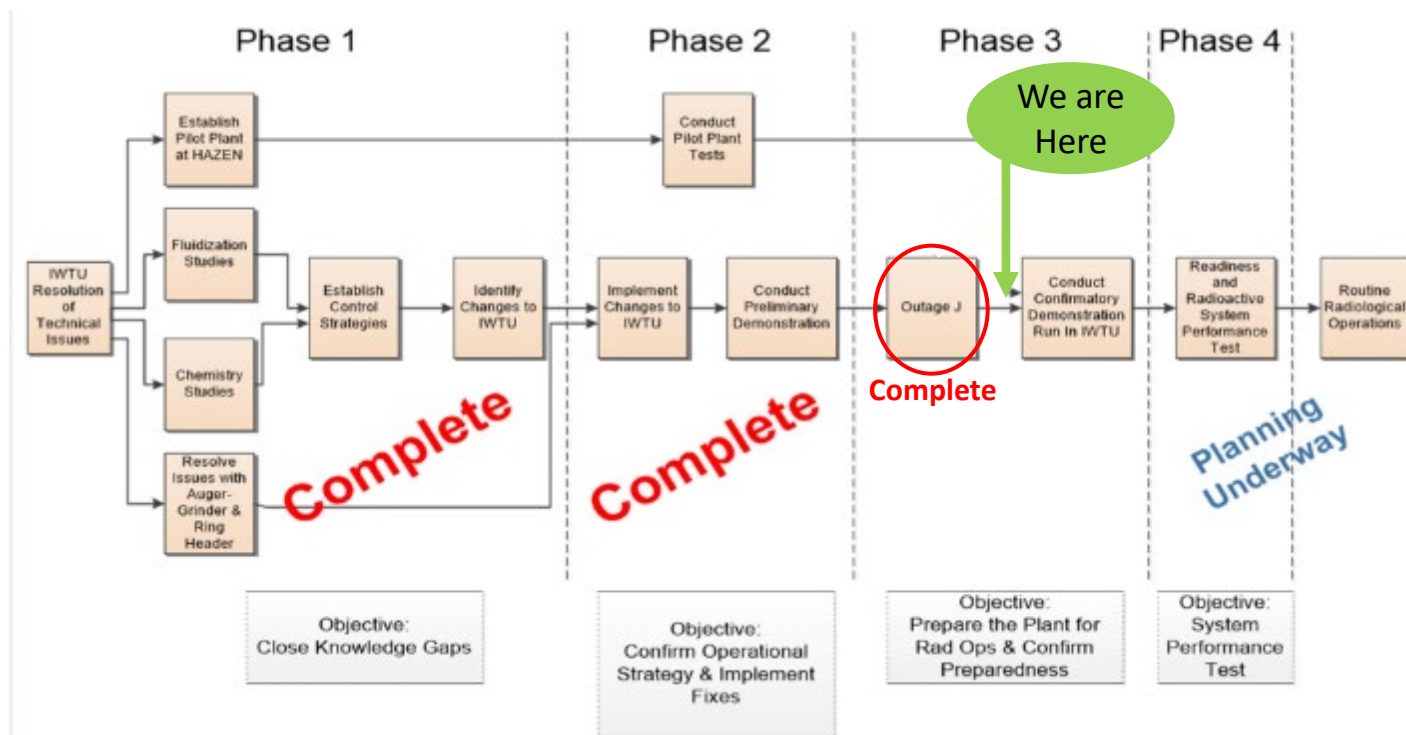


IWTU Process Flow



IWTU Phased Approach

- A four phased approach to achieve radiological operations
- Each phase scope of work negotiated separately due to the discrete nature of the work and builds upon previous phase results



Readiness Assessment Phase

- Contractor Management Self Assessment completed in August
- Contractor Readiness Assessment completed in September
- DOE Readiness Assessment completed in September
- Currently addressing pre-start (confirmatory run) findings and DOE verification of corrective actions
- IWTU heat up targeted for week of October 25
- Readiness assessments conducted during the 50-day confirmatory run will ensure facility and personnel are ready for radioactive waste processing



Project Path Forward Summary

- Conduct confirmatory run
 - Verify effectiveness of Outage J modifications
 - Conduct CRA & DRA to verify readiness for radioactive waste operations under simulated radiological conditions
- Conduct PGF outage
 - Conduct integrated test of dry decon system
 - Perform required PGF vessel & other required inspections
- Conduct system performance test
 - Simulant start up, bed turnover & sample off-gas collection dry-run
 - Initiate test with blended (simulant & SBW) feed to verify rad conditions
 - Establish final permit conditions using 100% SBW tank waste & collect required samples
 - Transition to routine radioactive waste processing

