



# Idaho Cleanup Project Update

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Idaho Cleanup Project

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*Leadership In Nuclear Energy Commission*



**EM** Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

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# COVID-19 Impacts to Cleanup Efforts

## Impacts

- Diminished operational efficiency due to social distancing, barriers and quarantines

## Accomplishments

- Continued spent nuclear fuel transfers as scheduled
- Continued to meet the shipping schedule to WIPP
- Maximizing telework and implementing additional safety measures for ongoing operations
- Maintaining operations in accordance with current requirements and conditions



# Progress in Cleanup: Transuranic Waste

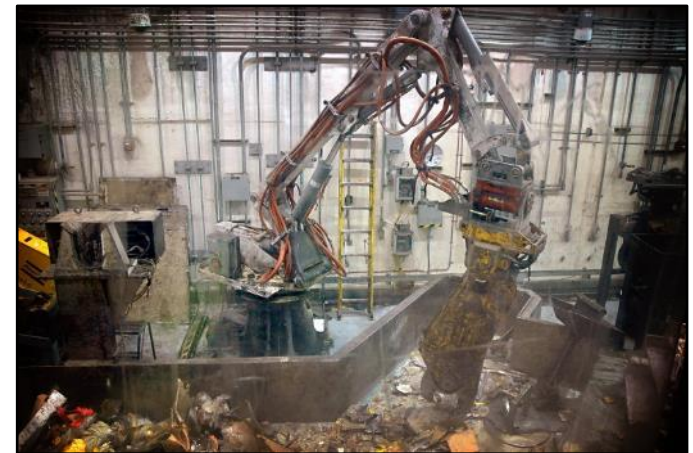
- Completed 6,408 total shipments from Idaho to WIPP; 60% for FY20
- Continue to ship mixed low-level waste offsite for disposal
- Closure underway for Transuranic Storage Area Retrieval Enclosure
- Sludge waste processing at ARP VII and Treatment Facility Box Lines
- Status of remaining 5800 m3 from original 65,000 m3:
  - 700 m3 to treat
  - 3800 m3 to certify
  - 1300 m3 ready to ship



Sludge waste drums pending treatment



Sludge waste in ARP VII sorting table awaiting treatment



Boxline treating sludge waste

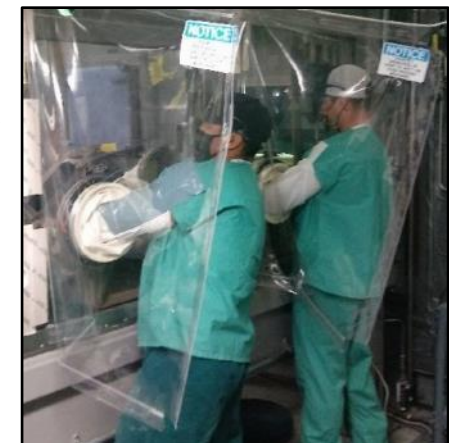
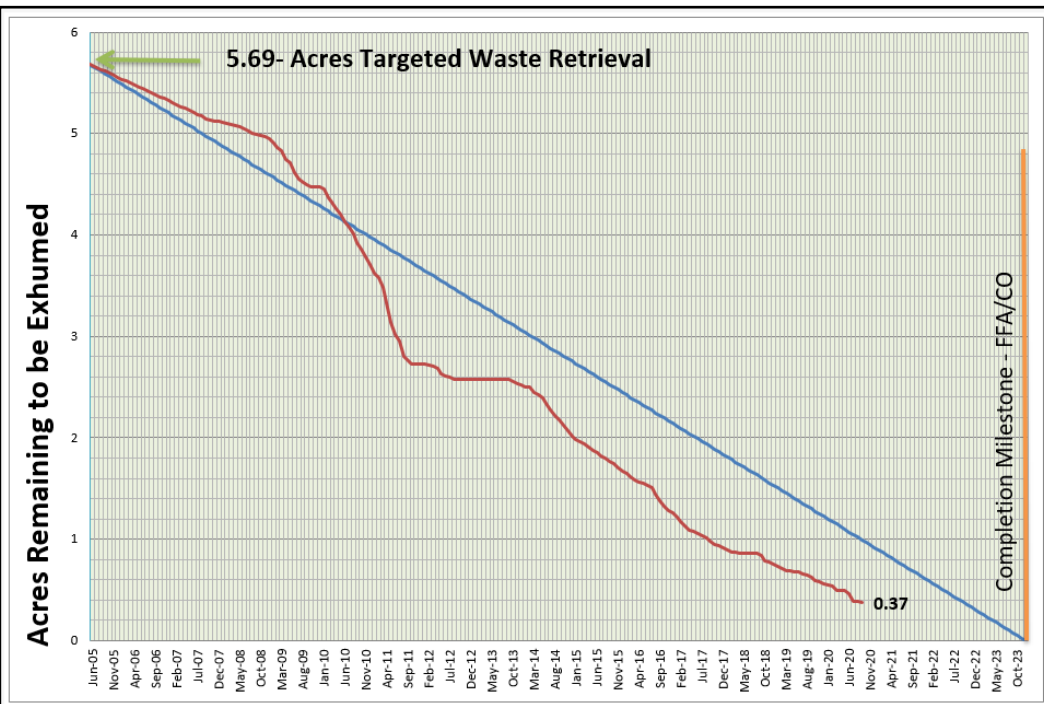


# Progress in Cleanup: Buried Waste

ARP IX



Waste Exhumation in ARP IX



Drum Packaging Station (DPS)

Since exhumation started in ARP IX on April 25, 2019, 0.32 of 0.69 acres (46%) have been exhumed, as of September 10, 2020.



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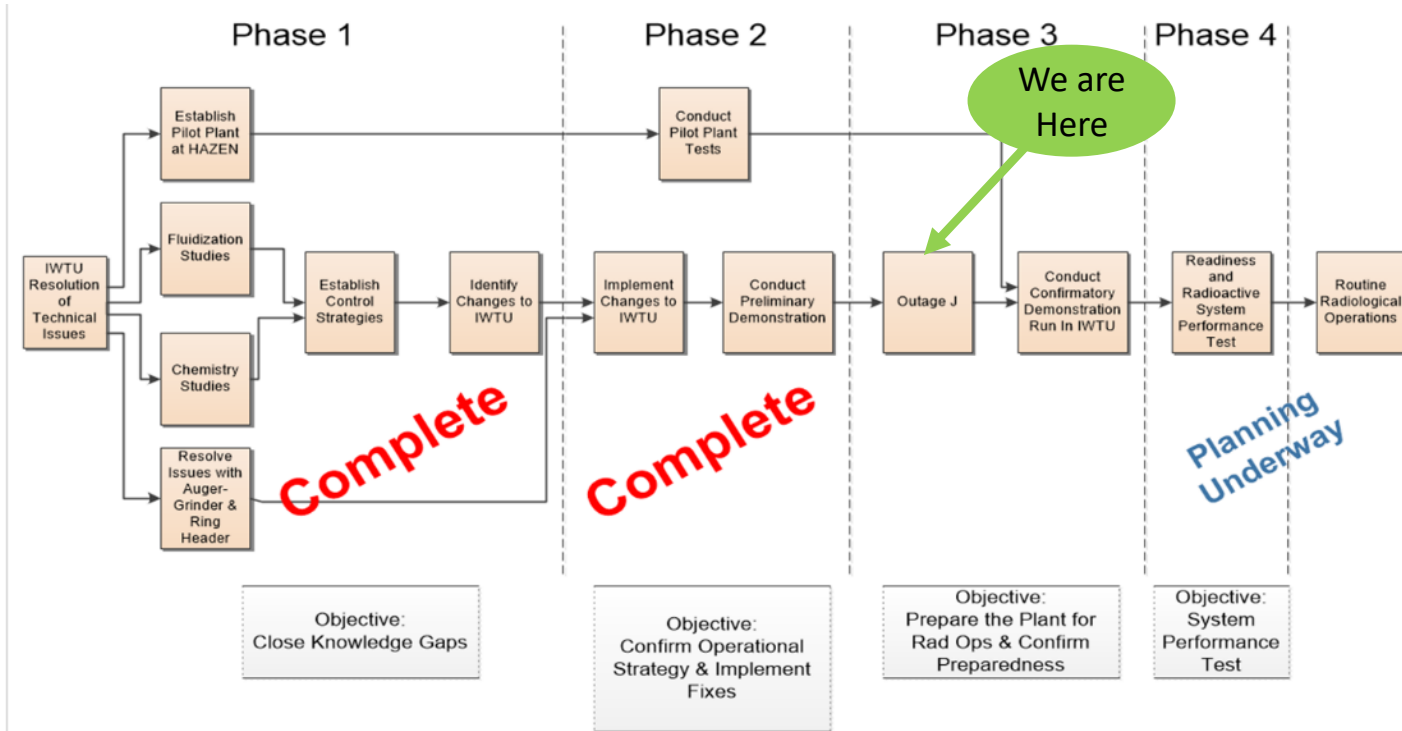
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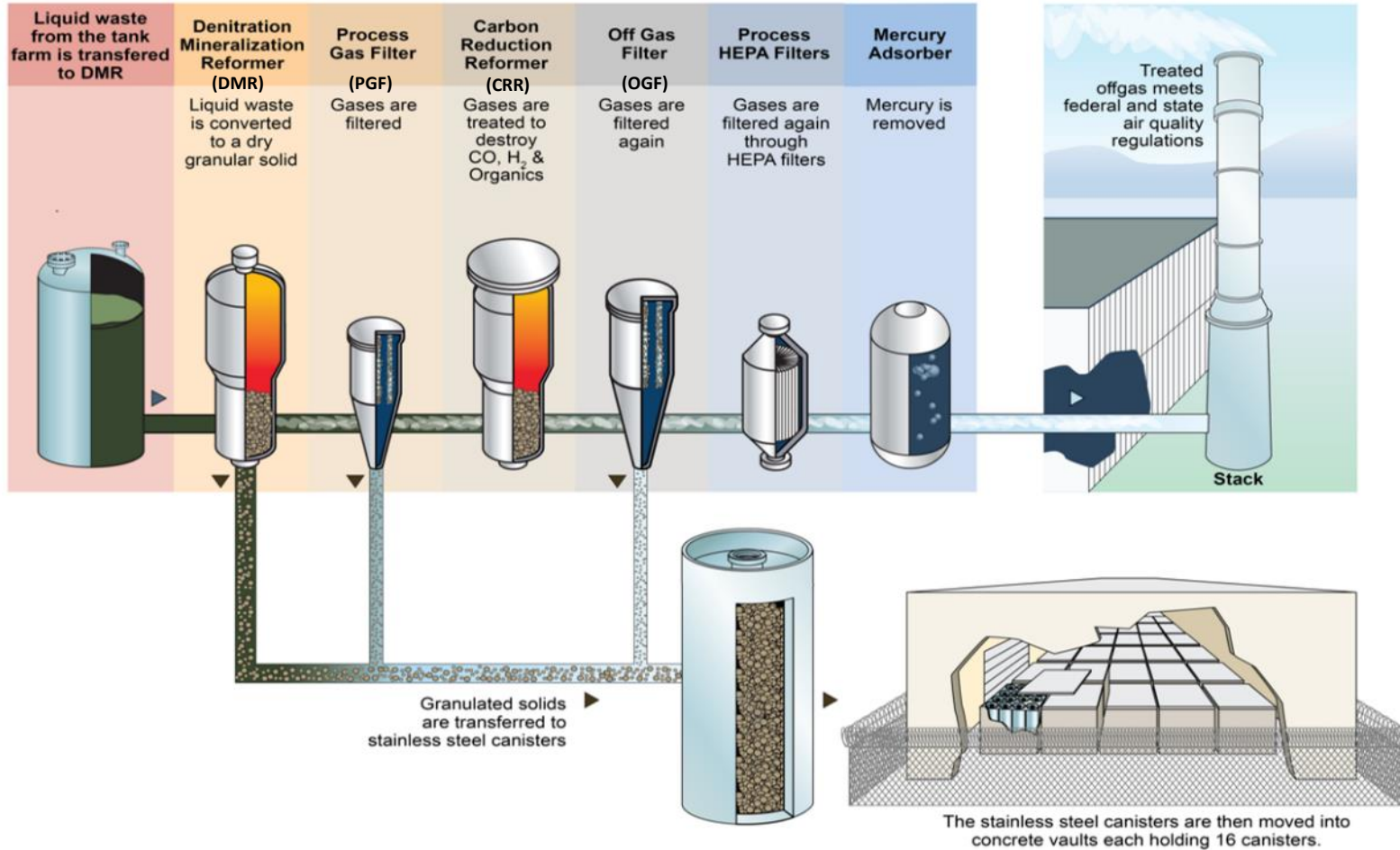
# Progress in Cleanup: Sodium Bearing Waste

## Integrated Waste Treatment Unit (IWTU)

- 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



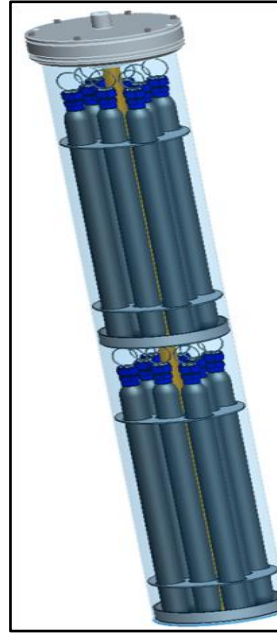
# IWTU Process



# Progress in Cleanup: Spent Nuclear Fuel



CPP-666 fuel basin



EBR-II Fuel

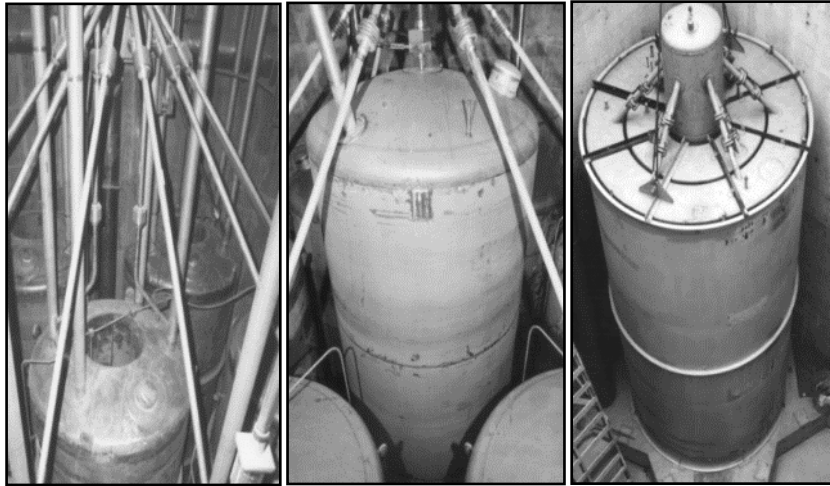


HFEF-14 Fuel Transfer Cask

- Advanced Test Reactor and Experimental Breeder Reactor-II Transfers to dry storage on track for 2023 commitment
- Engineering and planning are ongoing for fuel transfers between Gen-1 to Gen-2 storage vaults at CPP-749
- Supporting DOE-ID Spent Nuclear Fuel Packaging Demonstration Project
- NR Core Cartridge Fuel Assembly – proceeding with engineering work



# Progress in Cleanup: High Level Waste (Calcine)



Bin Set Configurations



Retrieval Demo Infrastructure

- Testing various canister fill mechanisms
- Testing of robotic arm for use as a residual cleanout tool
- Updating Analysis of Alternative for path forward



Bin Set 1 mockup



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# Summary

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- DOE committed to safe and sustainable IWTU operations
- Transuranic waste continues steady progress
- Buried waste exhumation ahead of regulatory milestone
- Strong engagement between DOE and the State of Idaho supports significant cleanup progress

