



# Idaho Cleanup Project Overview

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Idaho Cleanup Project

June 20, 2019



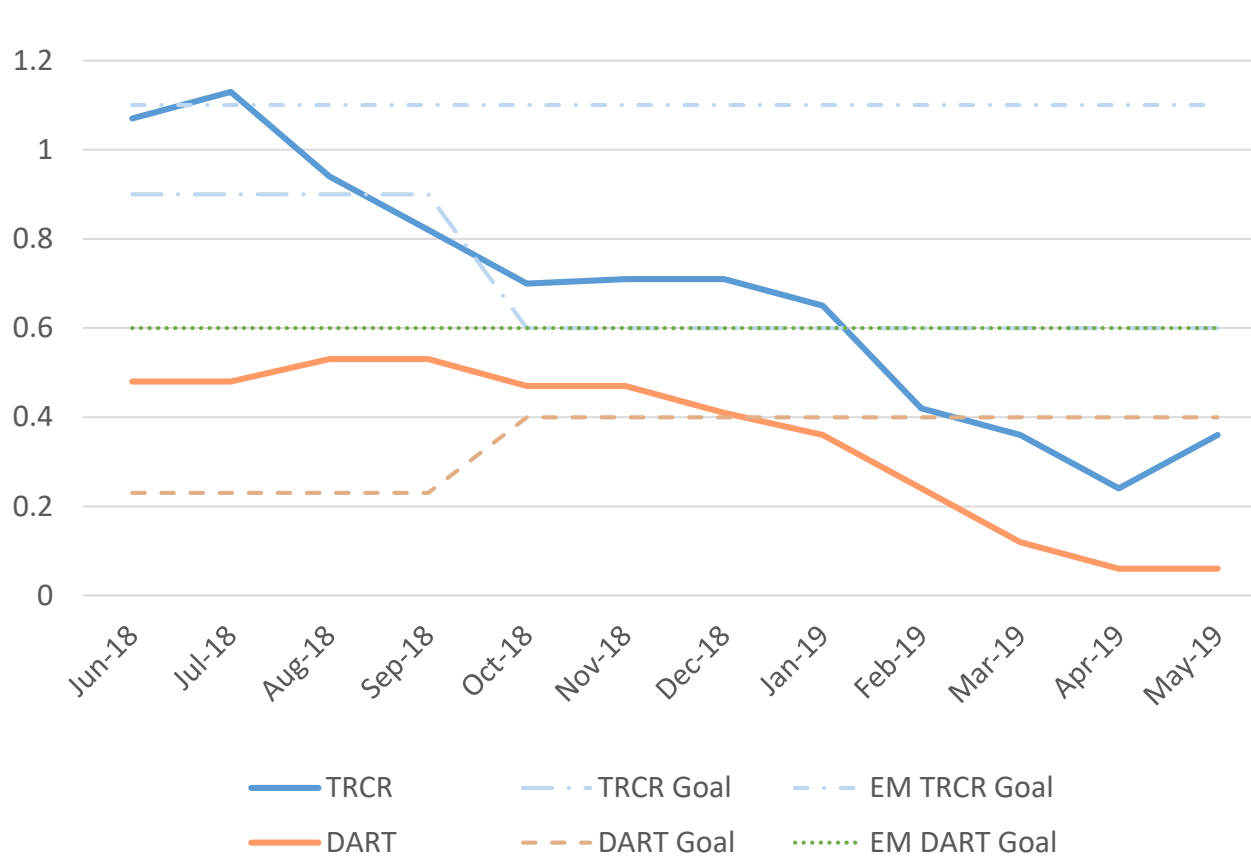
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# Fluor Safety Performance

ICP Core Injury Rates



## Company Injury Goals Changed in December 2018

- DART Goal increased to 0.40;
- TRCR Goal decreased to 0.60

## March 2019

- Six First Aid Cases, One Recordable Injury, and no Restricted cases
- 1 ORPS Reportable Event

## April 2019

- Two First Aid Cases, no Recordable Injuries, and no Restricted cases
- 1 ORPS Reportable Events

## May 2019

- Five First Aid Cases, two Recordable Injuries, and no Restricted cases
- No ORPS Reportable Events



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Waste Type	Origin	Volume Remaining	Amount Shipped	Ultimate Destination	Applicable Agreements
High-Level Waste 	Reprocessing of spent nuclear fuel	4,400 cubic meters	None	Geologic repository	Idaho Settlement Agreement, Site Treatment Plan

## Accomplishments:

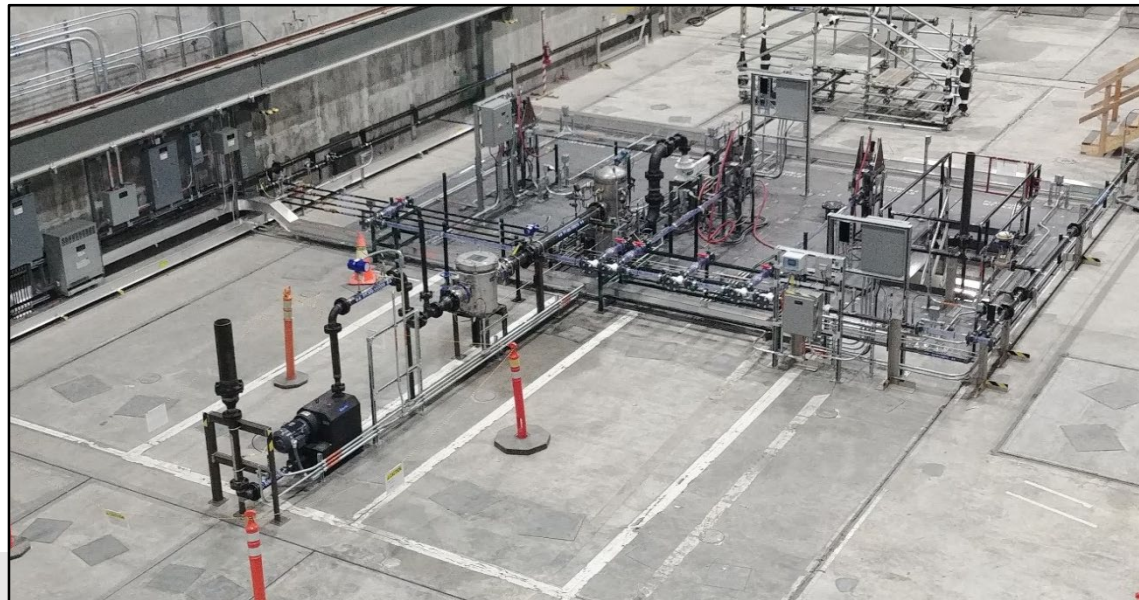
- Completed construction of the full scale retrieval system mockup.
- Began testing full scale calcine retrieval system mock-up.
- Continued work on the Performance Assessment and other regulatory closure documentation.

## Status:

- Continuing testing of calcine retrieval system.

## Issues:

- Calcine disposition currently requires a HLW repository.
- HLW interpretation may allow for other disposition options.




Full-scale retrieval mock-up

## Path Forward:

- Continue testing and developing calcine retrieval and transfer system.



Waste Type	Origin	Mass Remaining	Amount Shipped	Ultimate Destination	Applicable Agreements
Spent Nuclear Fuel 	DOE, research and commercial reactors	243.57 Metric Tons Heavy Metal (EM-only)	153 TRIGA elements 0.03 MTHM (for reuse)	Geologic repository	Idaho Settlement Agreement

## Accomplishments:

Transferred/Planned	SNF Type	From	To
3/9	EBR-II	CPP-666	FCF/MFC
0/5	EBR-II	CPP-666	RSWF/MFC
24/28	ATR	CPP-666	CPP-603
2/2	NR	CPP-666	NRF
Receipts Planned	SNF Type	From	To
6/15	ATR	ATRC	CPP-603

## Status:

- DOE on target to meet 2023 Idaho Settlement Agreement milestone move all spent fuel to dry storage.
- For the reporting period (Apr), the project is on schedule.

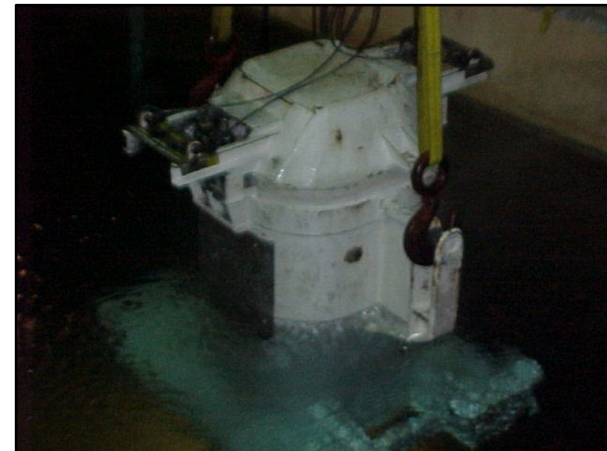
## Issues:

- Water found in select 1<sup>st</sup> Generation vaults of CPP-749.

## Path Forward: Addressing CPP-749 Issue

- Phase 1 activities (venting, sampling) completed.
- Phase 2 mitigation activities (relocate to Gen II vaults) await funding.

Emptying CPP-603 Basins, 04/28/2000



Retrieval of final cask, High-Load Charger, from basin



Transfer of final cask in straddle carrier to CPP-666



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Waste Type	Origin	Volume Remaining	Amount Shipped	Ultimate Destination	Applicable Agreements
Transuranic and Mixed Low-Level Waste 	Site operations, Rocky Flats Plant, other DOE facilities	5,849* 694*	45,022 14,257	WIPP Licensed off-site disposal site	Idaho Settlement Agreement, Site Treatment Plan

## Accomplishments:

- Completed Mound Box pre-treatment/sizing in ARP VII
- Completed treatment of all 102 cans of Navy Pieces, Parts, and Fines
- ARP V sludge waste cleanout complete June 2019

## Status:

- ISA Debris Waste treatment is scheduled to complete June 2019
- Sludge repackaging scheduled to restart in ARP VII August 2019



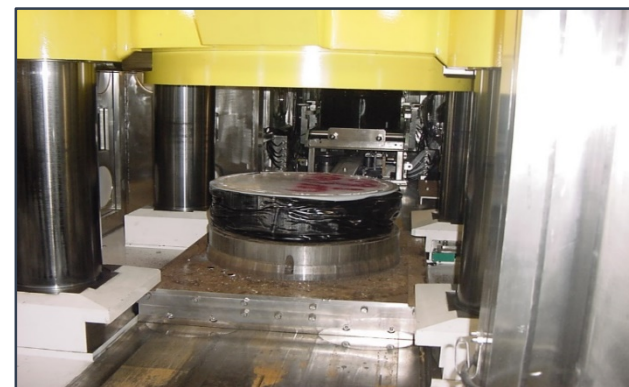
Transuranic waste packages headed to WIPP



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Super-compactor will complete its mission this year

## Issues:

- Difficult waste streams
- Waste certification challenges

## Path Forward:

- Developing a RCRA Closure Plan for the treatment facility
- Establishing an alternative transport and disposal package for RH-TRU

Waste Type	Origin	Volume Remaining	Amount Shipped	Ultimate Destination	Applicable Agreements
Buried Waste 	Site operations, Rocky Flats Plant, other DOE facilities	<ul style="list-style-type: none"> <li>3,079 m<sup>3</sup> awaiting shipment</li> <li>Estimated 800 m<sup>3</sup> left to exhume</li> </ul>	6,028 cubic meters	Waste Isolation Pilot Plant	FFA/CO (CERCLA), Agreement to Implement

## Accomplishments:

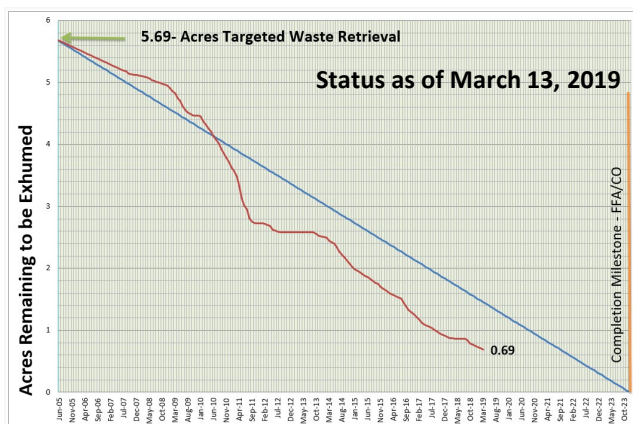
- ARP IX exhumation began April 25, 2019
- Since 1996, 255,978 lbs. organic vapors removed

## Status:

- ARP IX exhumation ongoing
- Cap design being finalized
- Organic vapor vacuum extraction continues



Exhuming targeted buried waste at ARP IX



## Path Forward:

- Anticipate finalizing SDA cap design by September
- ARP IX exhumation will continue

## Issues:

- Degraded drums as well as encountering concrete and steel remnants of previous ARPs are challenging the efficiency of ARP IX exhumation. See photos on following slide.

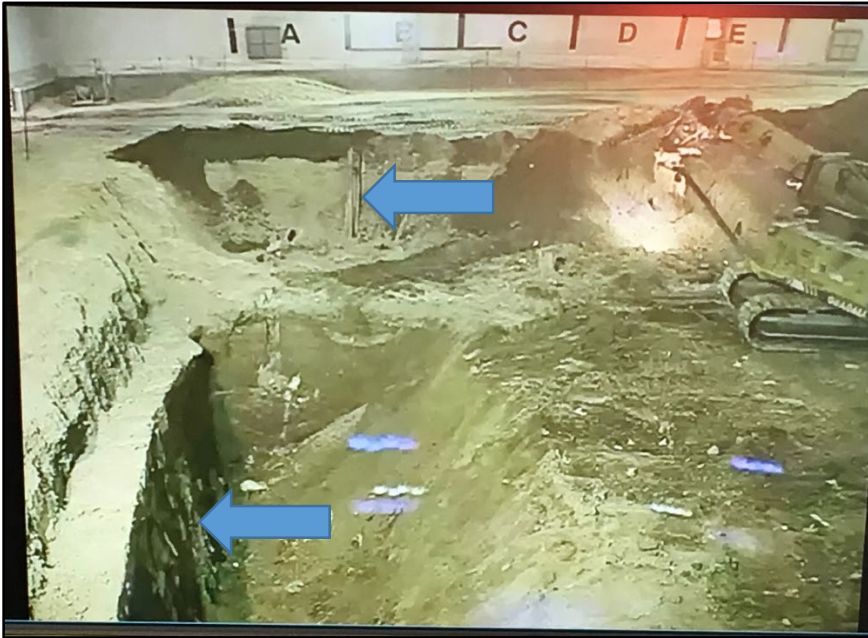


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# ARP IX Exhumation Challenges



Looking north along west end of ARP IX.  
Arrows point to concrete duct bank and H-pile.



Looking south along west end of ARP IX.  
Arrows point to exhuming waste from under concrete  
duct bank and to capped H-pile.



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# Balance of CERCLA Cleanup Activities

## Accomplishments:

- WAG 1 – TAN Groundwater
  - Next In Situ Bioremediation (ISB) Injection planned for August, 2019 to treat residual TCE source.
  - Treated approx. 750 M gallons of TCE contaminated water through NPTF (Oct 2018 - Apr 2019).



Receipt of NRF Stack Section at ICDF



Processing NRF Stack Section at ICDF Landfill

## Status:

- WAG 1 – TAN Groundwater
  - ISB, NPTF treatment continues on track to meet Remedial Action Objectives by 2095.
- ICDF
  - Continue to receive CERCLA waste from D&D projects including NRF, MFC and AMWTP.
- WAG 10 – Site-wide Activities
  - Working with Tribes to assist them in establishing a Groundwater Monitoring Program.
  - Continue routine groundwater monitoring, Institutional Controls and Operations and Maintenance.

## Path Forward:

- WAG 10
  - Scheduled summer field activities include:
    - Complete WestBay Well rehabilitation.
    - Field Sampling for New Sites at TAN and MFC.
    - Remediation of CPP-142 (a shallow injection well at INTEC) .
    - Work to re-seal portions of the Tank Farm Recharge Control Zone. This is to repair portions of the seal-coat that peeled up after application in 2017 and is a required component of the CERCLA remedy.





Waste Type	Origin	Volume Remaining	Amount Shipped	Ultimate Destination	Applicable Agreements
Sodium-Bearing waste	De-Con of reprocessing facilities	900,000 gallons	None	Geologic repository	Idaho Settlement Agreement, Site Treatment Plan, Notice of Non-Compliance/Consent Order



**Integrated Waste Treatment Unit**

**See Separate IWTU Presentation**



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