



Idaho Cleanup Project Overview

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Manager

Idaho Cleanup Project

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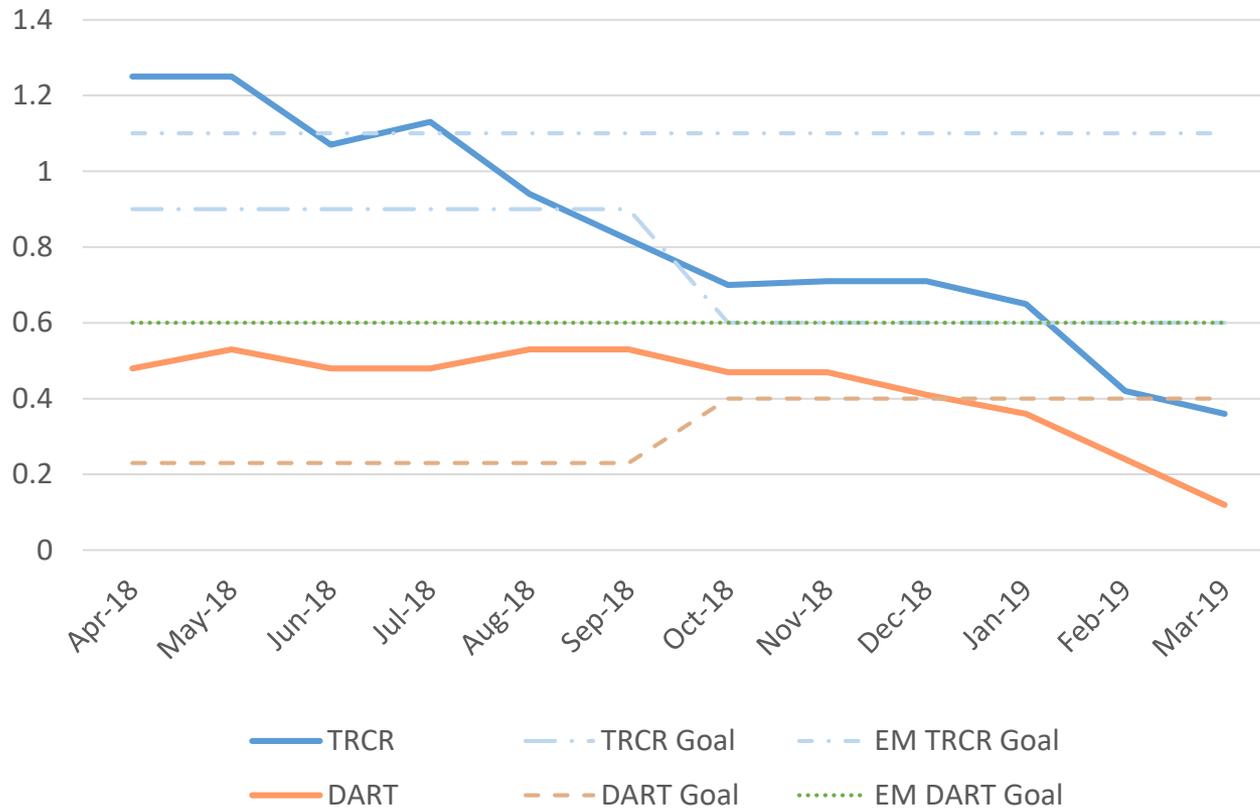
EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

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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

January 2019

- Two First Aid Cases, no Recordable Injury, and no Restricted cases
- 3 ORPS Reportable Event

February 2019

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

March 2019

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



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:

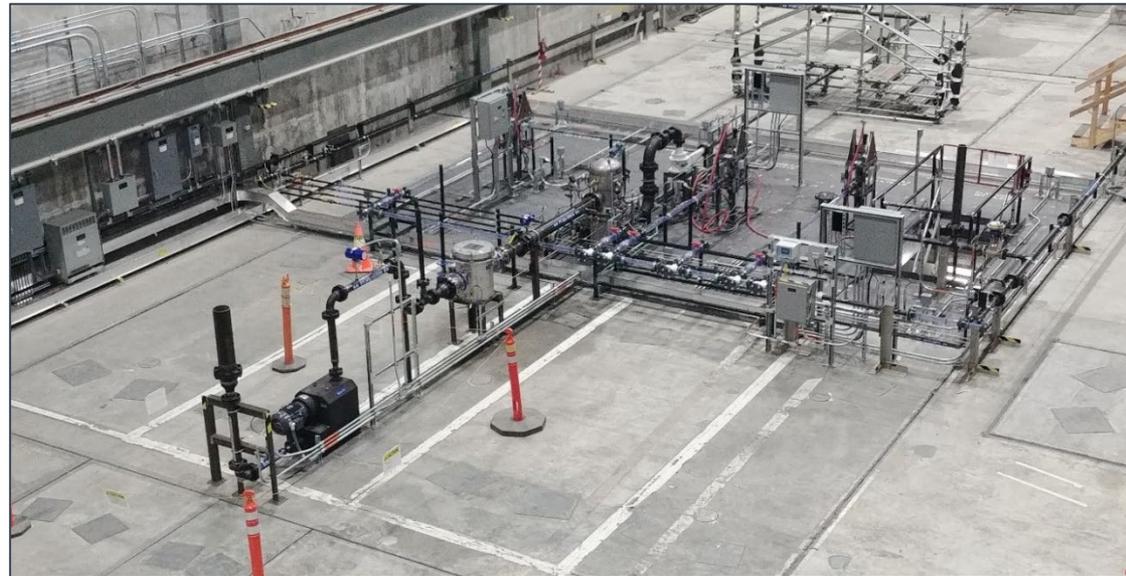
- Completed construction of the full scale retrieval system mockup.
- Began testing full scale calcine retrieval system mock-up.
- Continued work on the Performance Assessment and other regulatory closure documentation.

Status:

- Continuing testing of calcine retrieval system.

Issues:

- Calcine disposition currently requires a HLW repository.



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 Colorado Agreement

Accomplishments:

Transferred/Planned	SNF Type	From	To
3/9	EBR-II	CPP-666	FCF/MFC
0/5	EBR-II	CPP-666	RSWF/MFC
20/28	ATR	CPP-666	CPP-603
2/2	NR	CPP-666	NRF

Receipts Planned	SNF Type	From	To
2/15	ATR	ATRC	CPP-603

Status:

- On target to meet 2023 Settlement Agreement milestone to move all stored fuel from wet to dry.

Issues:

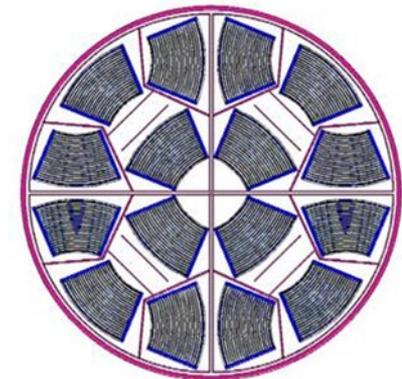
- Water found in select 1st Generation vaults of CPP-749.

Path Forward:

- Addressing CPP-749 Issue
 - Phase 1 activities (venting, sampling) completed.
 - Phase 2 mitigation activities (relocate to Gen II vaults) await funding.



New four bucket storage design for placement of 16 ATR SNF elements into the CPP-603 storage canister – top view



Using creative geometry within a defined space



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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	6,077	44,958	WIPP Licensed off-site disposal site	Idaho Settlement Agreement, Site Treatment Plan
		765	14,126		

Accomplishments:

- Completed Ultra High FGE container treatment in treatment facility
- Completed treatment of 97 of the 102 Navy cans

Status:

- Debris Waste treatment is scheduled to complete June 2019, sludge repackaging scheduled to restart in ARP VII in May 2019
- ARP V sludge waste cleanout began April 2019
- Navy 102 can treatment scheduled to complete by June 2019



Overpacking CH-TRU waste

Issues:

- Difficult waste streams
- Waste certification challenges



A transuranic waste package headed to WIPP

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"> • 3,090 m³ awaiting shipment • 800 m³ left to exhume 	5,955 cubic meters	Waste Isolation Pilot Plant	FFA/CO (CERCLA), Agreement to Implement

Accomplishments:

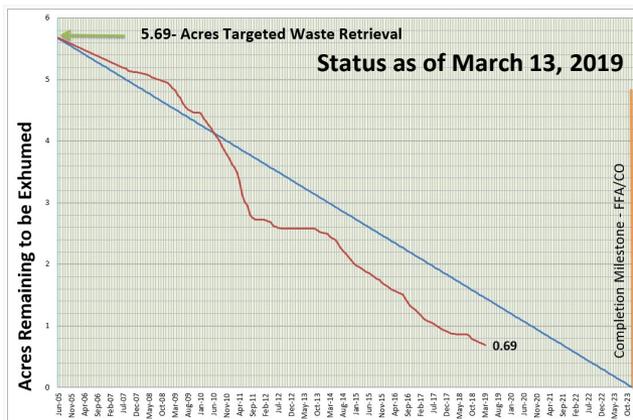
- Completed ARP VIII exhumation on 3/13/2019.
- Since 1996, 255,738 lbs. organic vapors removed.
- Regulatory review of 90% design of cap completed.

Status:

- ARP IX exhumation began April 2019.
- Cap design being finalized.
- Organic vapor vacuum extraction continues .



Exhuming targeted buried waste at ARP VIII



Path Forward:

- Anticipate finalizing SDA cap design by September.
- ARP IX exhumation continues.

Issues:

- Fluor Idaho needs to improve exhumation progress to meet contractual milestones.



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Balance of CERCLA Cleanup Activities

Accomplishments:

- WAG 1 – TAN Groundwater
 - Completed an In Situ Bioremediation (ISB) Injection March 18 to treat residual TCE source.
 - Treated 3.5 M gallons of TCE contaminated water through NPTF.
- ICDF (Idaho CERCLA Disposal Facility)
 - Implementation of Data Collection System (DCS) upgrade.



Idaho CERCLA Disposal Facility



ICDF DCS Upgrade

Status:

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

Path Forward:

- WAG 10
 - Preparing to begin field season activities:
 - Complete Westbay Well rehabilitation.
 - Field Sampling for New Sites at MFC and one site remediation at INTEC.



TAN ISB Injection

Issues:

- Nothing at this time.



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

