



Idaho Cleanup Project Overview

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Idaho Cleanup Project

April 25, 2019



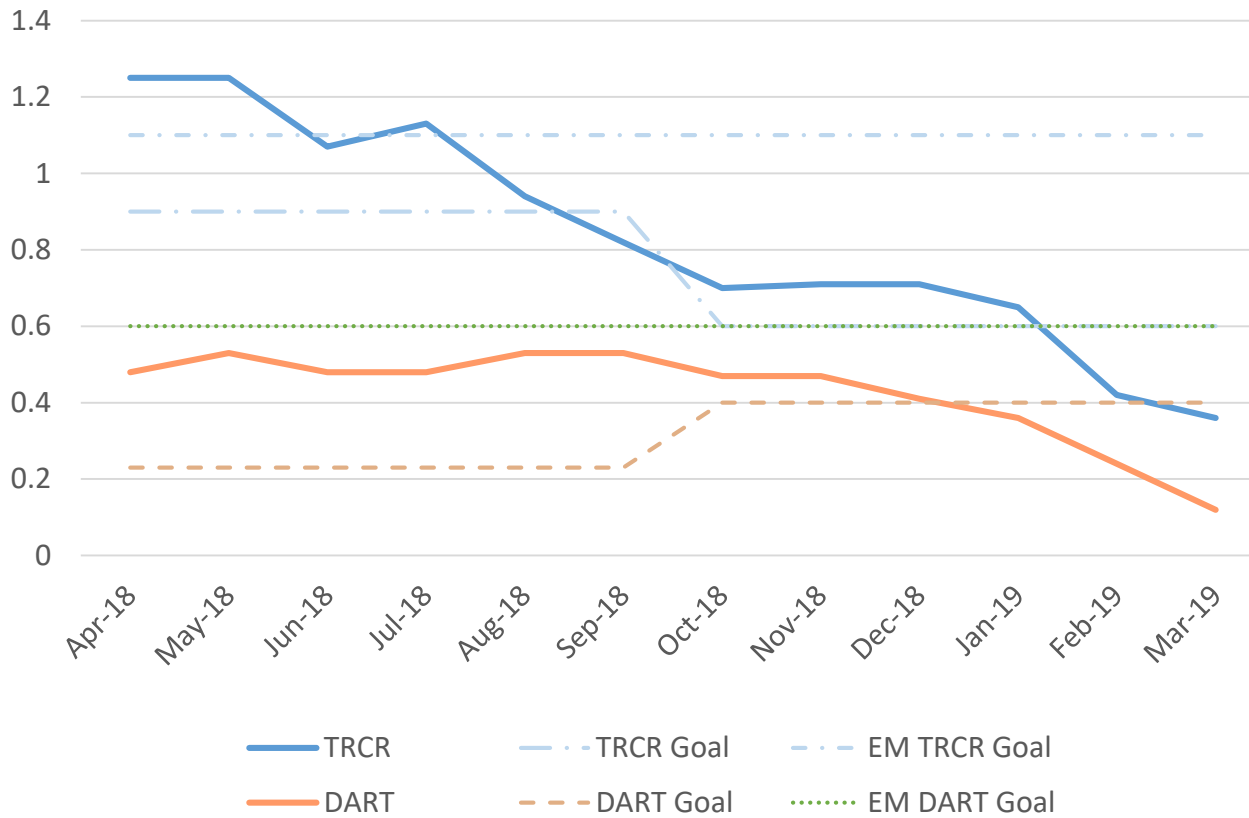
EM *Environmental Management*

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Idaho Cleanup Project

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



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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.



Full-scale retrieval mock-up

Path Forward:


- Continue testing and developing calcine retrieval and transfer system.



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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:

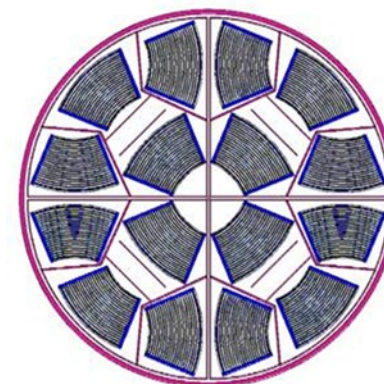
- Water found in select 1st Generation vaults of CPP-749.

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

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



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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:

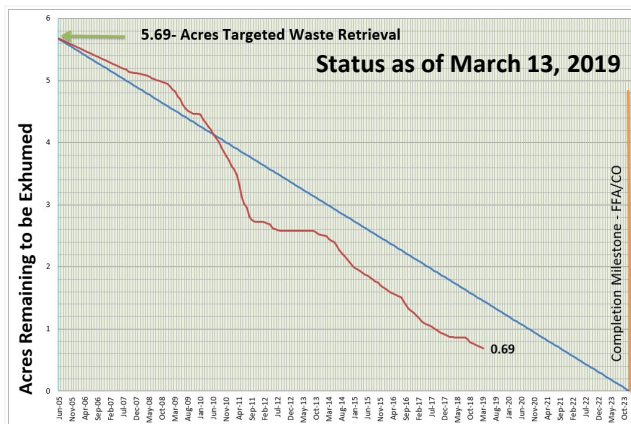
- Completed ARP VIII exhumation on 3/13/2019.
- Since 1996, 255,738 lbs. organic vapors removed.
- Regulatory review of 90% design of cap completed.

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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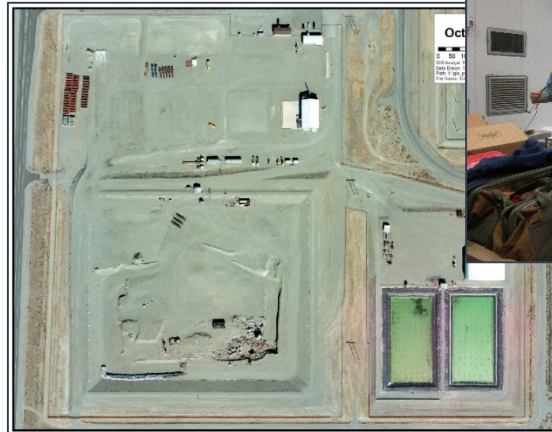
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Balance of CERCLA Cleanup Activities

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.



TAN ISB Injection

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.

Issues:

- Nothing at this time.



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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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