



Idaho Cleanup Project Overview

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EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

Idaho Cleanup Project

Accomplishments – Since October CAB

- ✓ Completed demolition of the Accelerated Retrieval Project-II retrieval enclosure
- ✓ Concluded Integrated Waste Treatment Unit (IWTU) maintenance outage and initiated IWTU startup preps
- ✓ Received approval of revised site treatment plan milestones for calcine disposition

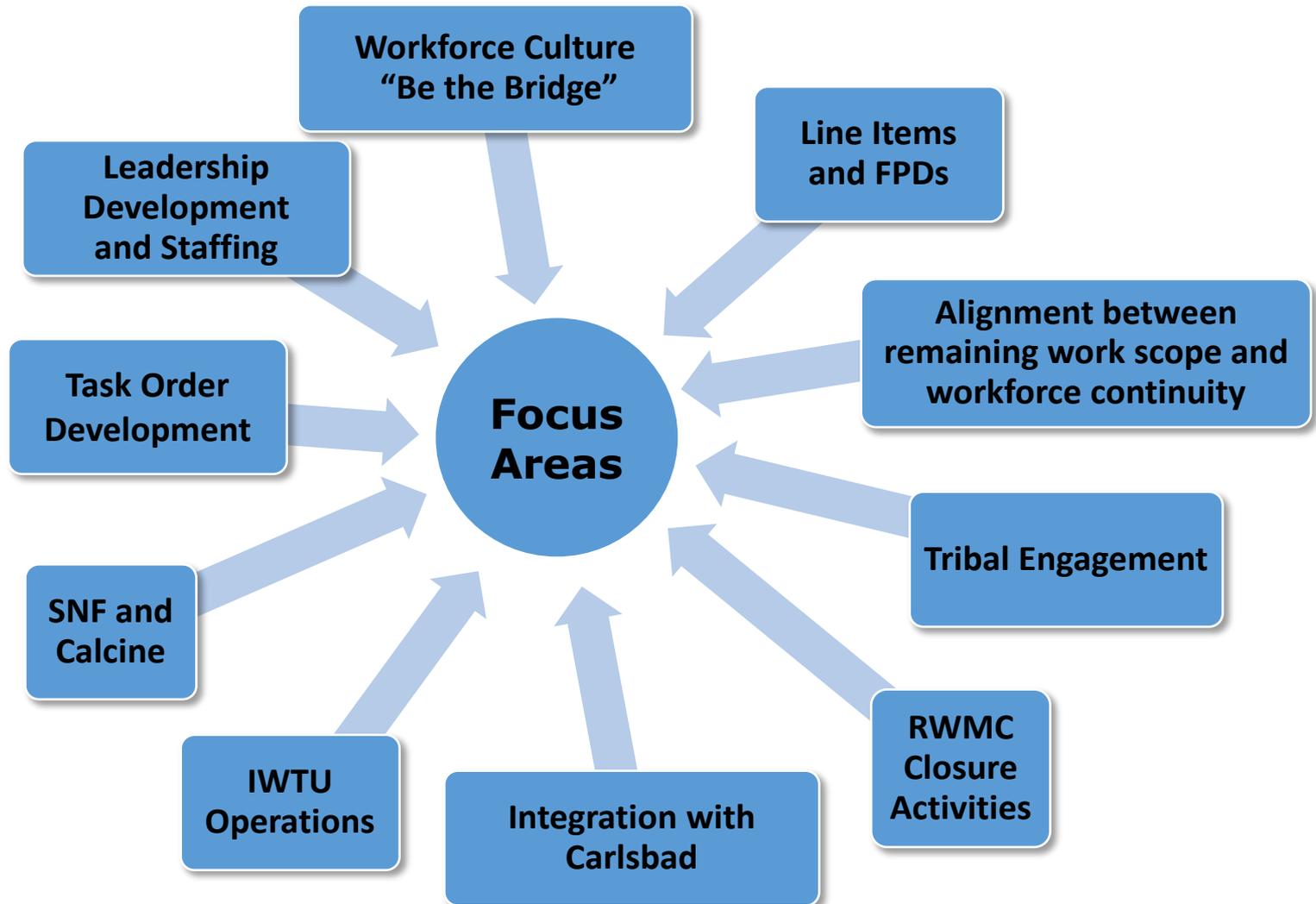


Site Priorities

- Continue sodium bearing waste processing operations
- Complete demolition of remaining ARPs and prepare for cap construction
- Maintain TRU shipping and continue waste certification
- Continue Naval Reactors demolition efforts at S1W and A1W
- Continue progress for line items projects
 - Calcine disposition project (CDP)
 - SNF staging facility
 - ICDF additional cell and evaporation ponds
- Continue implementation of DOE-STD-5506-2021 for managing TRU waste

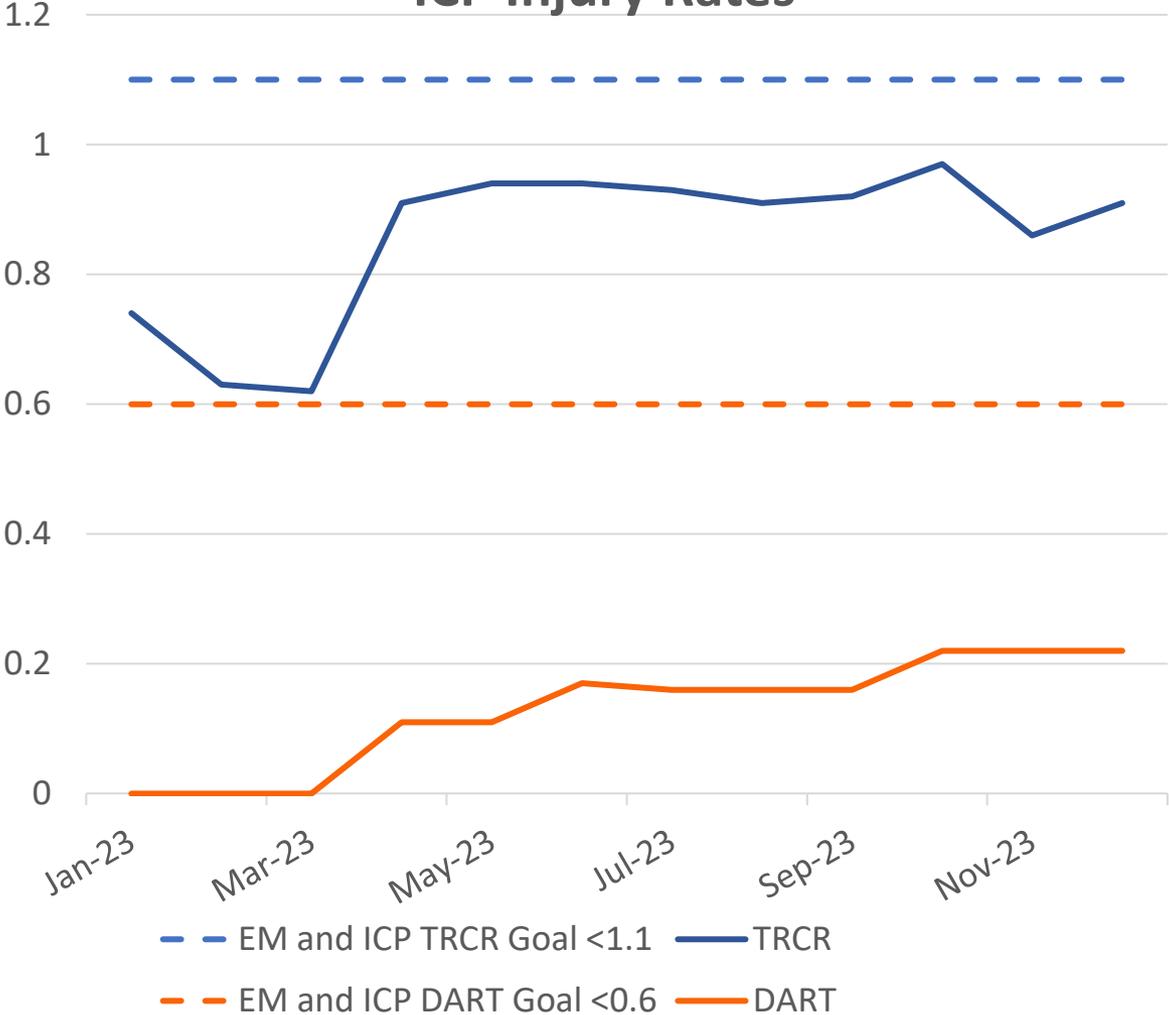


Manager's Perspective



ICP Safety Performance

ICP Injury Rates



October 2023

- 2 First Aid Cases
- 1 Recordable Injury
- No ORPS Reportable Events

November 2023

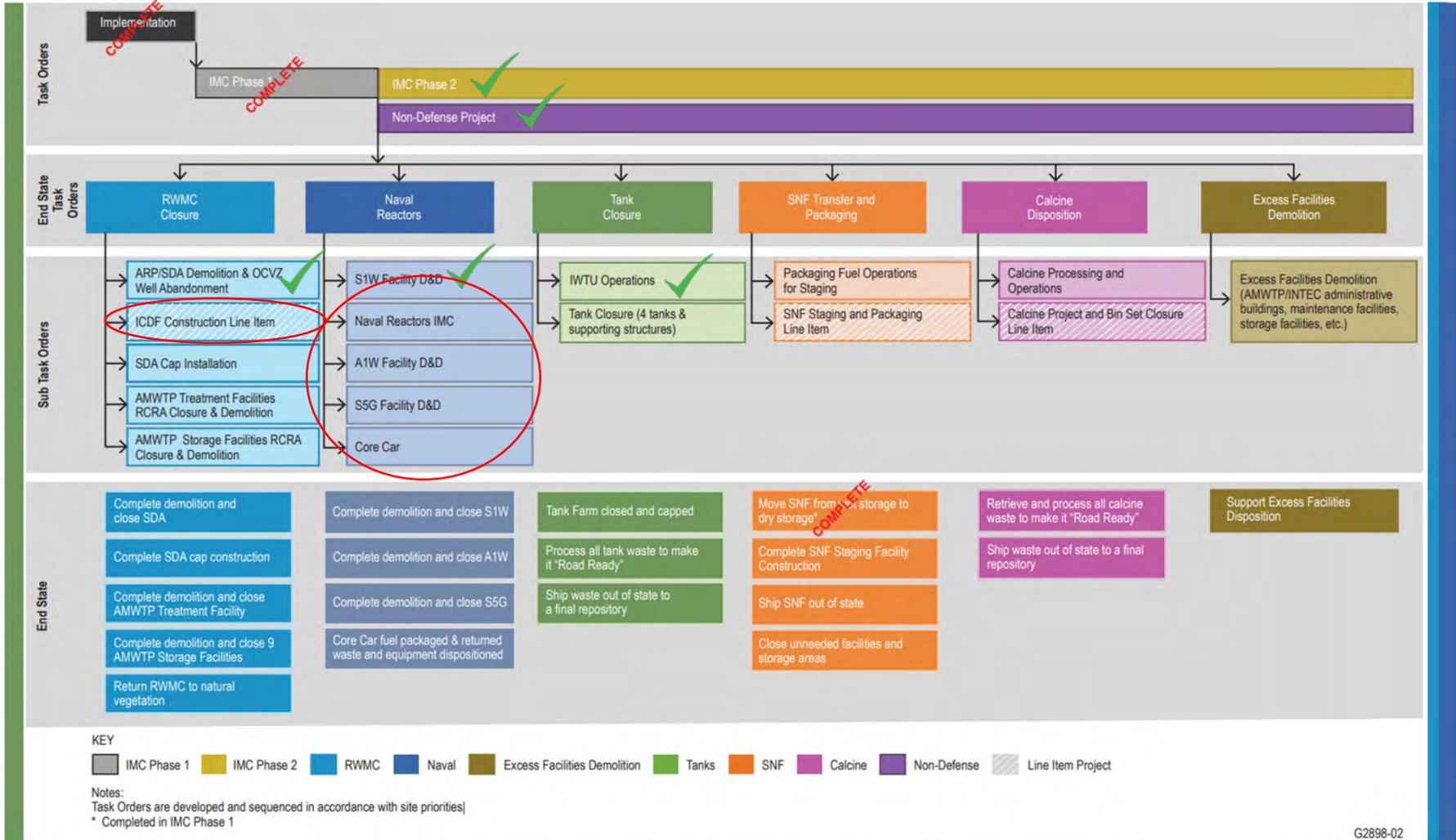
- 5 First Aid Cases
- No Recordable Injuries
- 1 ORPS Reportable Event

December 2023

- 2 First Aid Cases
- No Recordable Injuries
- No ORPS Reportable Events



Update to Task Order Sequencing



G2898-02



EM Environmental Management

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Idaho Cleanup Project

Principal Idaho Waste Streams

Waste Type	Origin	Volume Remaining	Amount Shipped	Ultimate Destination	Applicable Agreements
High-Level Waste (Calcine) 	Reprocessing of spent nuclear fuel	4,400 cubic meters	None	Out of State	Idaho Settlement Agreement, Site Treatment Plan
Spent Nuclear Fuel 	Site, research and commercial reactors	243.57 Metric Tons Heavy Metal (EM-only)	153 TRIGA elements 0.03 MTHM (for reuse)	Out of State	Idaho Settlement Agreement
Transuranic and Mixed Low-Level Waste 	Rocky Flats Plant, other DOE facilities, INL operations	5,035* cubic meters 394* cubic meters	47,170 cubic meters 14,750 cubic meters	Waste Isolation Pilot Plant Licensed off-site disposal facilities	Idaho Settlement Agreement, Site Treatment Plan
Sodium-Bearing waste 	Decon. of SNF reprocessing facilities	~830,000 gallons	None	Out of State	Idaho Settlement Agreement, Site Treatment Plan, Notice of Non-Compliance/Consent Order
Buried Waste 	Rocky Flats Plant, other DOE facilities, INL operations	1,372 cubic meters awaiting shipment	8,777 cubic meters	Waste Isolation Pilot Plant	FFA/CO (CERCLA), Agreement to Implement

*Settlement Agreement volume; does not include newly-generated waste



CERCLA Activities

Accomplishments to date for FY 2024

- ✓ Completed demolition of ARP II

Scope for FY 2024

- Complete demolition of remaining ARPs
- Continue construction of ICDF additional cell and evaporation ponds
- Continue SDA well abandonments

Regulatory Milestones

- CERCLA cleanup objectives by 2095

Challenges/Opportunities

- Treatment of TCE in the TAN groundwater plume



ICDF additional cell and evaporation pond preparation



RWMC Closure

Accomplishments to date for FY 2024

- ✓ 120 TRU shipments to WIPP
- ✓ Waste stream certifications

Scope for FY 2024

- Develop SDA cap construction work plan
- Continue TRU waste certification and shipping

Regulatory Milestones

- Complete certification by 9/30/2028
- Complete SDA cap by 12/31/2028

Opportunities/Challenges

- Agency approval for overpack bags
- Certification of difficult waste
- Maintaining TRU shipping commodities
- Container integrity

WIPP Shipments	
Year	Completed/Planned
FY23	348/390
FY24*	120/469

*status as of January 21, 2024



Drums awaiting shipment – Type II storage facility



Naval Reactors Demolition

Accomplishments to date for FY 2024

- ✓ Turnover of A1W on 9/2/2023
- ✓ Continued demolition at S1W
- ✓ 332 tons of metals sent for recycle
- ✓ 3 of 4 A1W ancillary buildings demolished
- ✓ Began work in A1W main structure

Scope for FY 2024

- Fill below-grade areas of S1W prototype
- Characterization and asbestos abatement of A1W main structure
- Complete draft S5G engineering evaluation/cost analysis

Opportunities/Challenges

- Integrate additional scope requested by NR
- A1W/S5G work will require cleared personnel



A1W support building demolition before (above) and after (right)



S1W hull dismantlement and piping removal



SNF Transfer & Packaging

Accomplishments to date for FY 2024

- ✓ Completed 3 of 10 scheduled Peach Bottom transfers in the first quarter.

Scope for FY 2024

- Continue Peach Bottom Transfers
- Progressing towards SNF Staging Facility CD-1
- Advancing CPP-603 Transfer Car insert modifications

Regulatory Milestones

- 12/31/2023: SNF wet to dry storage (COMPLETE)
- 1/1/2035: SNF removed from Idaho

Opportunities/Challenges

- Finalizing Idaho integrated SNF management plan



Peach Bottom transfer



Calcine Disposition

Accomplishments to date for FY 2024

- ✓ Initiated technology validation studies
- ✓ Revised Site Treatment Plan milestones
- ✓ Finalized calcine strategy document
- ✓ Transmitted CDP Mission Need Statement

Scope for FY 2024

- Collaborate with NRC on the technical review of NDAA Section 3116 Draft Basis Document
- Obtain approval for CD-0 revision
- Continue technology validation studies

Regulatory Milestones

- Revised STP milestones
 - Define project (CD-0): 3Q FY 2025
 - Identify and develop technology: 2Q FY 2027
 - Decision document/ROD amendment: 2Q FY 2028
 - Schedule for milestones: 1 year after CD-1 approval
- “Road ready” by 12/31/2035

Opportunities/Challenges

- Engagement with labs/industry



Calcine Bin Sets



Integrated Waste Treatment Unit

Accomplishments to date for FY 2024

- ✓ Concluded 1st major maintenance outage
- ✓ Upgraded the onsite N₂ generation system
- ✓ Completed construction of vault expansion pad
- ✓ Resumed canister vault construction
- ✓ Completed PSB II concrete footings & stem wall
- ✓ Completed Hazen run to evaluate DMR differential temperature excursions & mitigation strategies

Scope for FY 2024

- Resume sodium bearing waste treatment operations
- Continue construction of new vaults and PSB II
- Preparations for next facility outage



New canister vault construction



Product Storage Building II stem wall construction



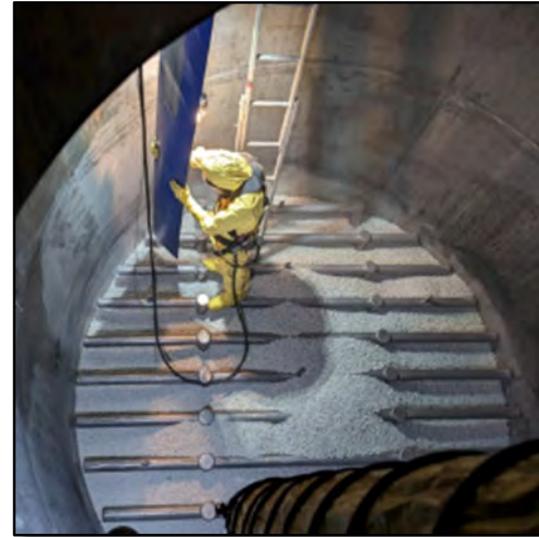
Integrated Waste Treatment Unit

Regulatory Milestones

- Treat 15% of sodium bearing waste annually (3 year running average)

Opportunities/Challenges

- Implement operational strategies to counter DMR high differential temperature and agglomerate formation
- Evaluate Hg removal efficiencies/loading of GAC media



Reloading GAC vessels



Interior of DMR vessel



Key Upcoming Activities

- Management transition

