



Idaho Cleanup Project Overview

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Idaho Cleanup Project

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Idaho Cleanup Project

Accomplishments – Since February CAB

- ✓ Idaho share of WIPP shipments is 71% on 3 year running average (55% required)
- ✓ Commenced IWTU startup following original outage completion (subsequent shutdown due to process gas filter bypass indications)
- ✓ Completed 7 of 10 Peach Bottom transfers

IWTU – Integrated Waste Treatment Unit
WIPP – Waste Isolation Pilot Plant



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Site Priorities

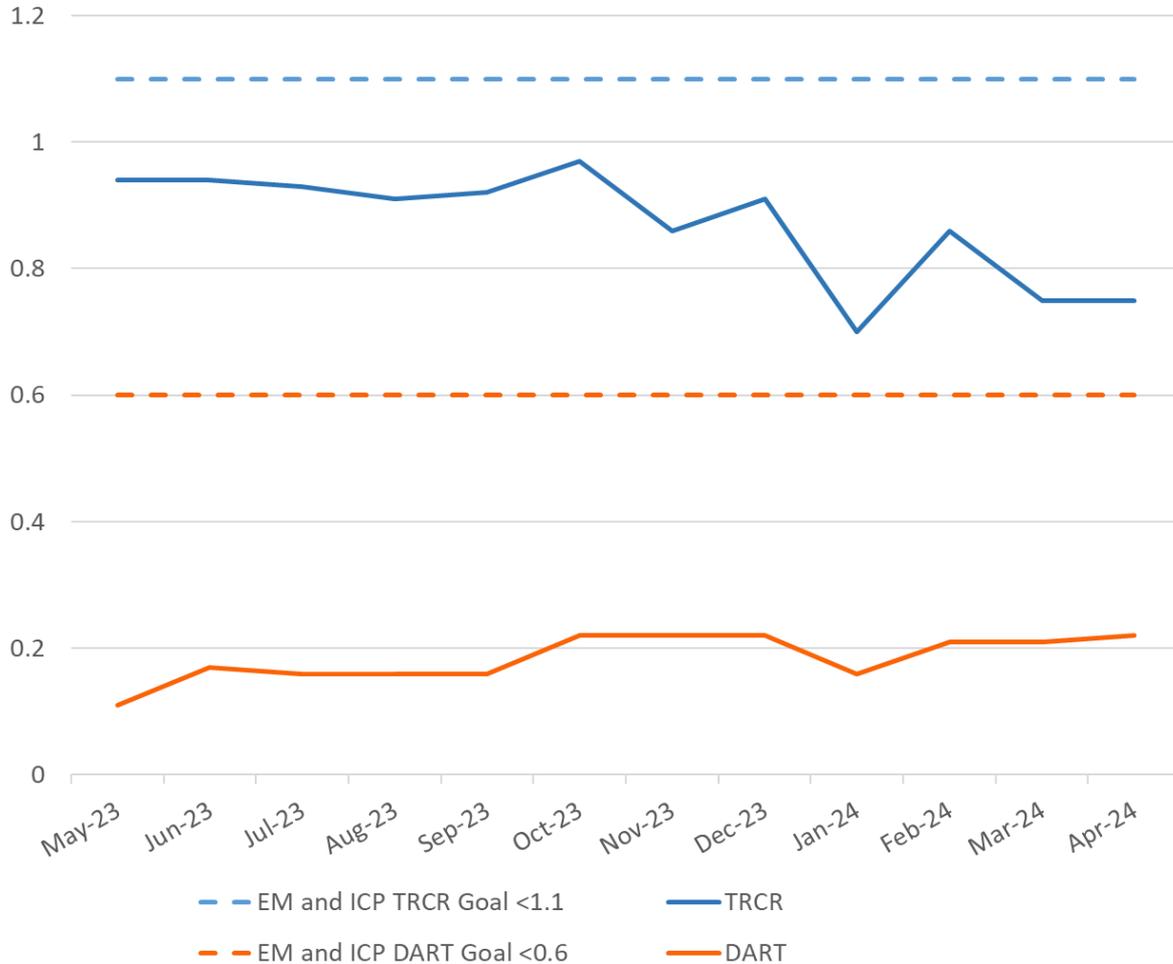
- Continue sodium bearing waste processing operations
- Complete demolition of remaining ARPs and prepare for cap construction
- Maintain TRU waste shipping and continue waste certification
- Continue Naval Reactors demolition efforts at S1W and A1W prototypes
- Continue progress for line items projects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

ARP – Accelerated Retrieval Project
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act
CDP – Calcine Disposition Project
ICDF – Idaho CERCLA Disposal Facility
SDA – Subsurface Disposal Area
SNF – Spent Nuclear Fuel
TRU – Transuranic



ICP Safety Performance

ICP Injury Rates



January 2024

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

February 2024

- 5 First Aid Cases
- 4 Recordable Injuries
- 2 ORPS Reportable Events

March 2024

- 4 First Aid Cases
- 1 Recordable Injury
- 3 ORPS Reportable Events

April 2024

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

DART – Days Away, Restricted or Transferred
 ORPS – Occurrence Reporting and Processing System
 TRCR – Total Recordable Case Rate



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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	5,132* cubic meters 392* cubic meters	47,073 cubic meters 14,752 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	983 cubic meters awaiting shipment	9,166 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 and ARP III
- ✓ Completed demolition of WMF-698

Scope for FY 2024

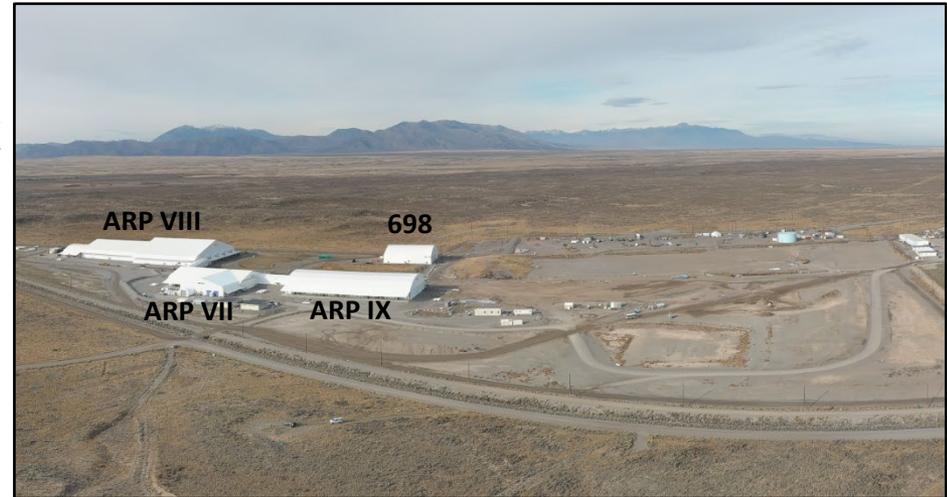
- Complete demolition of ARPs VII, VIII and IX
- Complete site excavation and initiate construction of ICDF landfill Cell 3 and evaporation ponds
- Complete 8 well abandonments at SDA

Regulatory Milestones

- SDA cap completion 2028

Challenges/Opportunities

- Treatment of TCE in the TAN groundwater plume
- CERCLA capital asset projects



Remaining ARPs at the subsurface disposal area

ARP – Accelerated Retrieval Project
ICDF – Idaho CERCLA Disposal Facility
CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act
SDA – Subsurface Disposal Area



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RWMC Closure

Accomplishments to date for FY 2024

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

Scope for FY 2024

- Finalize phase 3, Remedial Action Work Plan for SDA cap construction
- Continue TRU waste certification and shipping

Regulatory Milestones

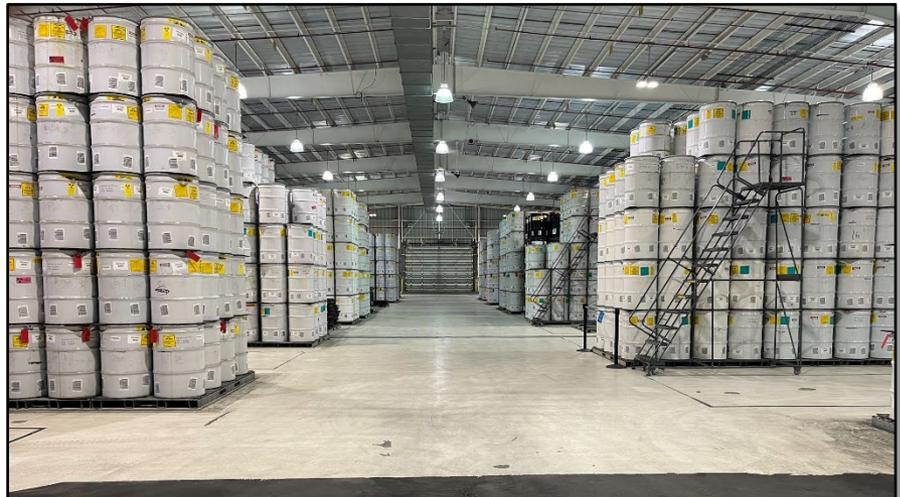
- Complete certification by 9/30/2028
- Complete SDA cap by 12/31/2028 per FFACO

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*	178/469

*status as of April 24, 2024



Drums awaiting shipment – Type II storage facility

FFACO – Federal Facility Agreement & Consent Order
SDA – Subsurface Disposal Area
TRU – Transuranic
WIPP – Waste Isolation Pilot Plant



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Naval Reactors Demolition

Accomplishments to date for FY 2024

- ✓ Turnover of A1W on November 2, 2023
- ✓ Continued demolition at S1W
- ✓ 384 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

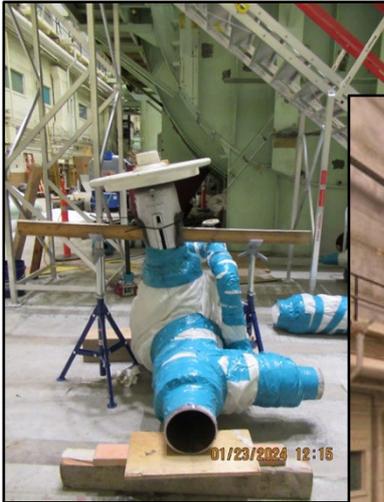
- A1W/S5G work will require cleared personnel



Demolition in progress for S1W diesel generator and radiac calibration rooms



Naval Reactors – S1W Demolition



Piping removed



Upper-level hull removed



Deep Pit grouted to minus 10 feet



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S5G Prototype Removal Action

- DOE is proposing a CERCLA non-time-critical removal action (NTCRA) for decommissioning the Naval Reactors Facility S5G Prototype
 - DEQ and EPA provide consultation, review, and oversight
 - S5G was used for training and research from 1965 to 1995 and was defueled in 1999
- Approval steps:
 - DEQ and EPA review the S5G engineering evaluation/cost analysis
 - Consultation with Shoshone-Bannock Tribes
 - Public comment period (30 days - mid October to mid November)
 - Presentation to the CAB
 - Document selected alternative in an S5G specific action memorandum



S5G Prototype on Keel Blocks



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SNF Transfer & Packaging

Accomplishments to date for FY 2024

- ✓ Completed 7 of 10 scheduled Peach Bottom transfers

Scope for FY 2024

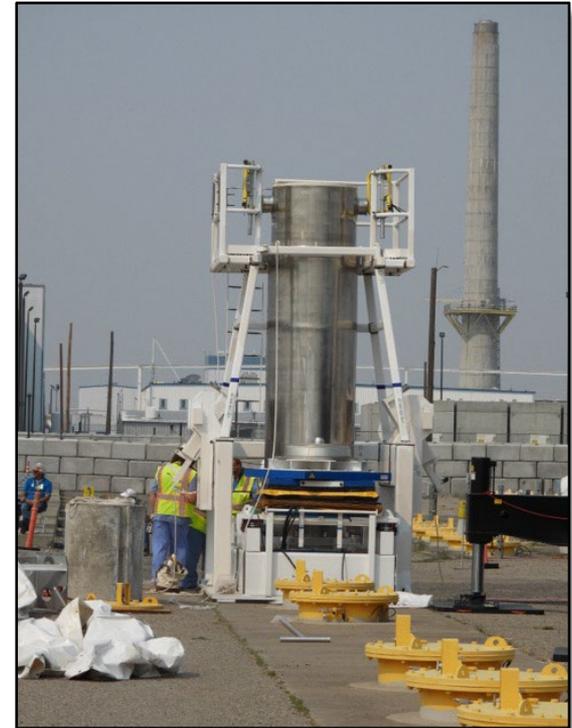
- Continue Peach Bottom transfers (10 scheduled for FY24)
- Progressing towards SNF Staging Facility CD-1
- Advancing CPP-603 Transfer Car insert modifications

Regulatory Milestones

- 1/1/2035: SNF removed from Idaho

Opportunities/Challenges

- Finalizing Idaho integrated SNF management plan
- Recovery from accidental weapon discharge at Fort St. Vrain
- Initial discussion with NE-ID and NE-8 on high burnup cask



Peach Bottom transfer



Calcine Disposition

Accomplishments to date for FY 2024

- ✓ Initiated technology validation studies
- ✓ Approved 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
 - Completed Independent Cost Review (April 2024)
- 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



Various vendor glass melts from Phase I validation studies



Integrated Waste Treatment Unit

Accomplishments to date for FY 2024

- ✓ Completed GAC media conditioning
- ✓ Commissioned the onsite N₂ generation system
- ✓ Completed FY24 vault construction (3 of 3)
- ✓ Completed PSB II electrical duct banks, began pouring floor slabs
- ✓ Initiated unplanned outage to resolve PGF bypass

Scope for FY 2024

- Resolve cause of PGF bypass & restore plant
- Resume sodium bearing waste treatment operations
- Continue PSB II construction



Crews inspecting and surveying PGF vessel head



Views of PGF vessel head & tubesheet during remote inspection



Integrated Waste Treatment Unit (continued)

Regulatory Milestones

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

Opportunities/Challenges

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



Construction crews pour floor slabs of PSB II

DMR – Denitration Mineralization Reformer
GAC – Granular Activated Carbon
Hg – Mercury
PGF – Process Gas Filter



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Key Upcoming Activities

- Completion of Subsurface Disposal Area (SDA) facility demolitions
- Idaho CERCLA Disposal Facility (ICDF) construction
- Integrated Waste Treatment Unit (IWTU) resumption of sodium bearing waste processing

