

Idaho Cleanup Project Progress Citizens Advisory Board April 2014

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EM Environmental Management

Idaho Cleanup Project Scope

- Transuranic Waste Disposition
- Advanced Mixed Waste Treatment Project (AMWTP)
- Comprehensive Environmental Response Compensation Liability Act (CERCLA) Remediation
 - Waste Area Group (WAG) 1 – Test Area North (TAN)
 - Waste Area Group (WAG) 2 – Test Reactor Area (TRA)
 - Waste Area Group (WAG) 3 – Idaho Nuclear Technology and Engineering Center (INTEC)
 - Waste Area Group (WAG) 4 – Central Facilities Area (CFA)
 - Waste Area Group (WAG) 5 – Power Burst Facility (PBF)/Auxiliary Reactor Area (ARA)
 - Waste Area Group (WAG) 6 – Experimental Breeder Reactor No. I (EBR-I)
 - Waste Area Group (WAG) 7 – Radioactive Waste Management Complex (RWMC)
 - Waste Area Group (WAG) 9 – Argonne National Laboratory – West (ANL-W)
 - Waste Area Group (WAG) 10 – Site-wide Miscellaneous Sites/Snake River Plain Aquifer
- Idaho CERCLA Disposal Facility



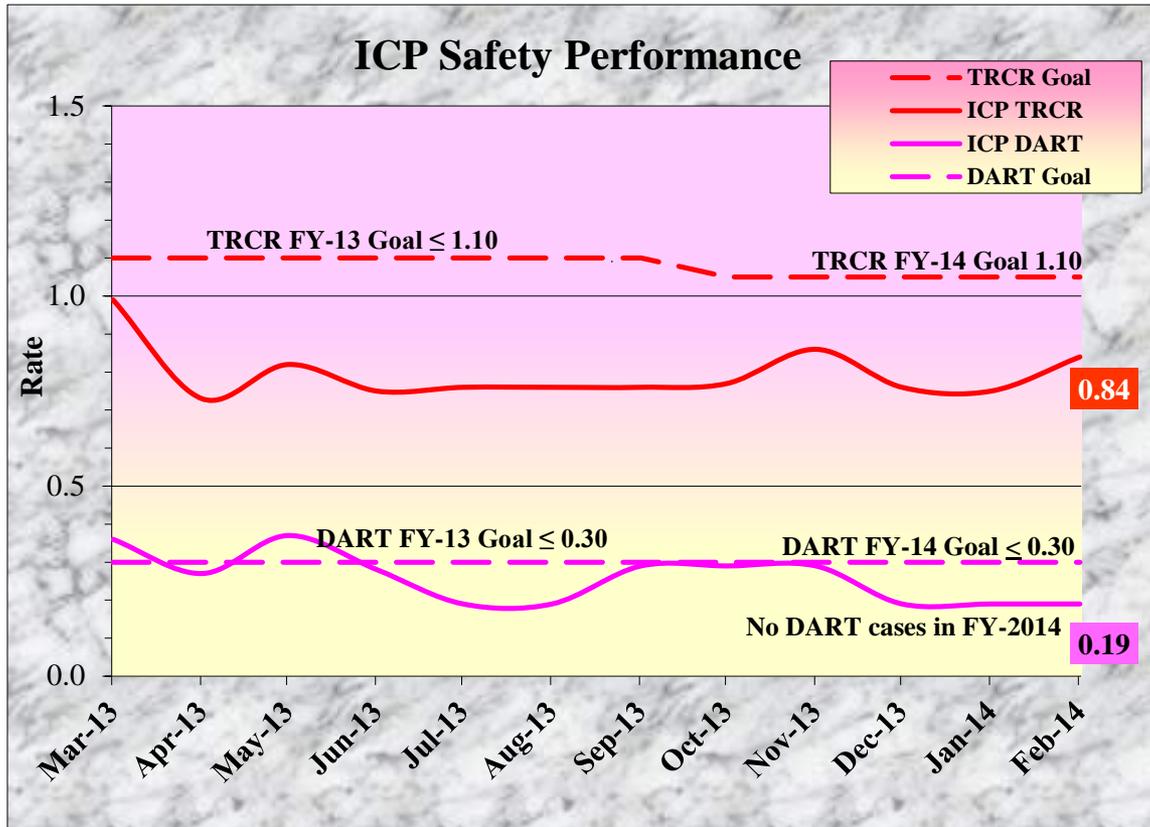
Idaho Cleanup Project Scope

- Sodium Bearing Waste Treatment
- INTEC Liquid Waste Treatment Facility (Tank Farm Closure)
- Calcine Disposition
- Decontamination & Decommissioning
 - MFC (Materials and Fuels Complex)
 - INTEC (Idaho Nuclear Technology and Engineering Center)
 - RWMC (Radioactive Waste Management Complex)



ICP Safety Performance – March 2014

(Data through **February 23, 2014**)



January 2014

One First Aid Case and No Recordable Injuries

One ORPS Reportable Occurrence:

- Positive USQ from PISA for NWCF HEPA filter failure source term

February 2014

Six First Aid Cases and One Recordable Injury

- Employee pinched and fractured a finger tip unfolding a hand cart

Three ORPS Reportable Occurrences:

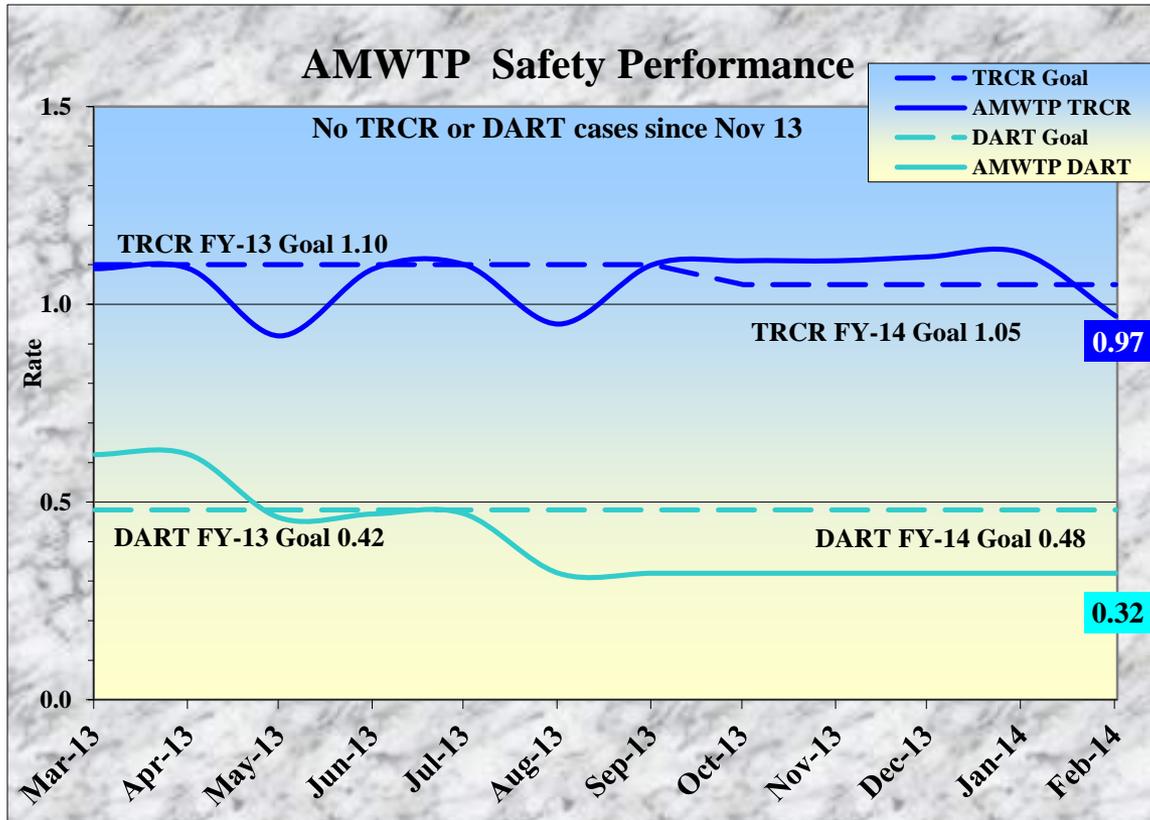
- Unidentified electrical conduit encountered when core drilling through a concrete floor
- Positive USQ from PISA for fuel storage water treatment IX resin degradation
- IWTU spreader bar damaged from contact with Overhead Bridge Crane



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AMWTP Safety Performance – March 2014

(Data through **February 23, 2014**)



January 2014

No First Aid Cases and No Recordable Injuries

No ORPS Reportable Occurrences

February 2014

One First Aid Case and No Recordable Injuries

No ORPS Reportable Occurrences

- Last ORPS reportable occurrence in November 2013



Remote-Handled Transuranic Waste Disposition

Key Activities/Actions:

- Remote-handled transuranic waste shipments are on hold until WIPP re-opens
- Disposed off site 47.3 m3 of low-level/mixed low-level waste generated from RH-TRU processing
- Completed installation of all sodium distillation system (SDS) in the CPP-666 facility
- Completed SDS component testing and started Management Self-Assessment (MSA)

Upcoming Activities:

- Complete SDS MSA and Contractor Readiness Assessment by the end of May 2014
- Obtain startup approval of the SDS in early June 2014



Assembly of sodium distillation equipment at INTEC



Advanced Mixed Waste Treatment Project



The clamshell tool grabs a drum of debris waste



Employees working on Unoverpacking Project

Key Activities/Actions:

- Through March 22, 2014, AMWTP operations have shipped over 53,000 cubic meters of waste out of Idaho.
- Shipments to WIPP were expected to resume the week of March 10, 2014; resumption of shipments is unknown at this time.
- Received eight (8) of ten (10) planned shipments of transuranic waste from Los Alamos National Laboratory. Remaining two (2) waste shipments expected to be received by April 5, 2014.
- Full operations in the Treatment are on hold until corrective actions can be put into place to address a Technical Safety Requirement violation that occurred on March 5, 2014 (drums mislabeling).



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CERCLA Remediation Project Objectives

- WAG 1: Test Area North (TAN)
 - TAN Groundwater Remediation-In Situ Bioremediation (ISB) Rebound Test is nearing completion in June 2014.
- WAG 3: Idaho Nuclear Technology and Engineering Center (INTEC)
Complete the OU 3-14 Record of Decision for the Tank Farm
 - Operate the Idaho CERCLA Disposal Facility (ICDF) to compliantly disposition CERCLA waste
- WAG 7: Radioactive Waste Management Complex (RWMC)
 - Exhume 5.69 acres of buried waste (Completed 3.22 acres as of 3/24/2014)
 - Complete the OU 7-13/14 Record of Decision
- WAG 10: Site Wide
 - Maintain site wide institutional controls and operations and maintenance program
 - Maintain groundwater monitoring program
 - Maintain the New Site Identification Process for future CERCLA sites
 - Remediate Munitions and Explosives of Concern (MEC)



CERCLA Remediation Projects

Key Activities/Actions:

- After completion of a 20-year-long ordnance investigation, walking over 1,100 miles, the Mass Detonation Area will be closed and transitioned to long-term institutional control program.
- Continued operation of the Test Area North pump and treat facility and vapor vacuum extraction units at the Subsurface Disposal Area
- TAN In Suite Bioremediation Rebound Test completion date, 2014. A 3-5 year extension is being considered for the test so that more information can be obtained.

Upcoming Activities:

- New scope was added to CWI's contract to develop Field Sampling Plans for several New Sites in preparation for remediation.



Mass Detonation Area Disposal Crater



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CERCLA Remediation Projects – Idaho CERCLA Disposal Facility (ICDF)

Key Activities/Actions:

- Received 2,515 gallons of liquid from WAG 3 at INTEC.
- Received a total of 7.67 m³ of waste for landfill disposal from INTEC Tank Farm WAG 3

Upcoming Activities:

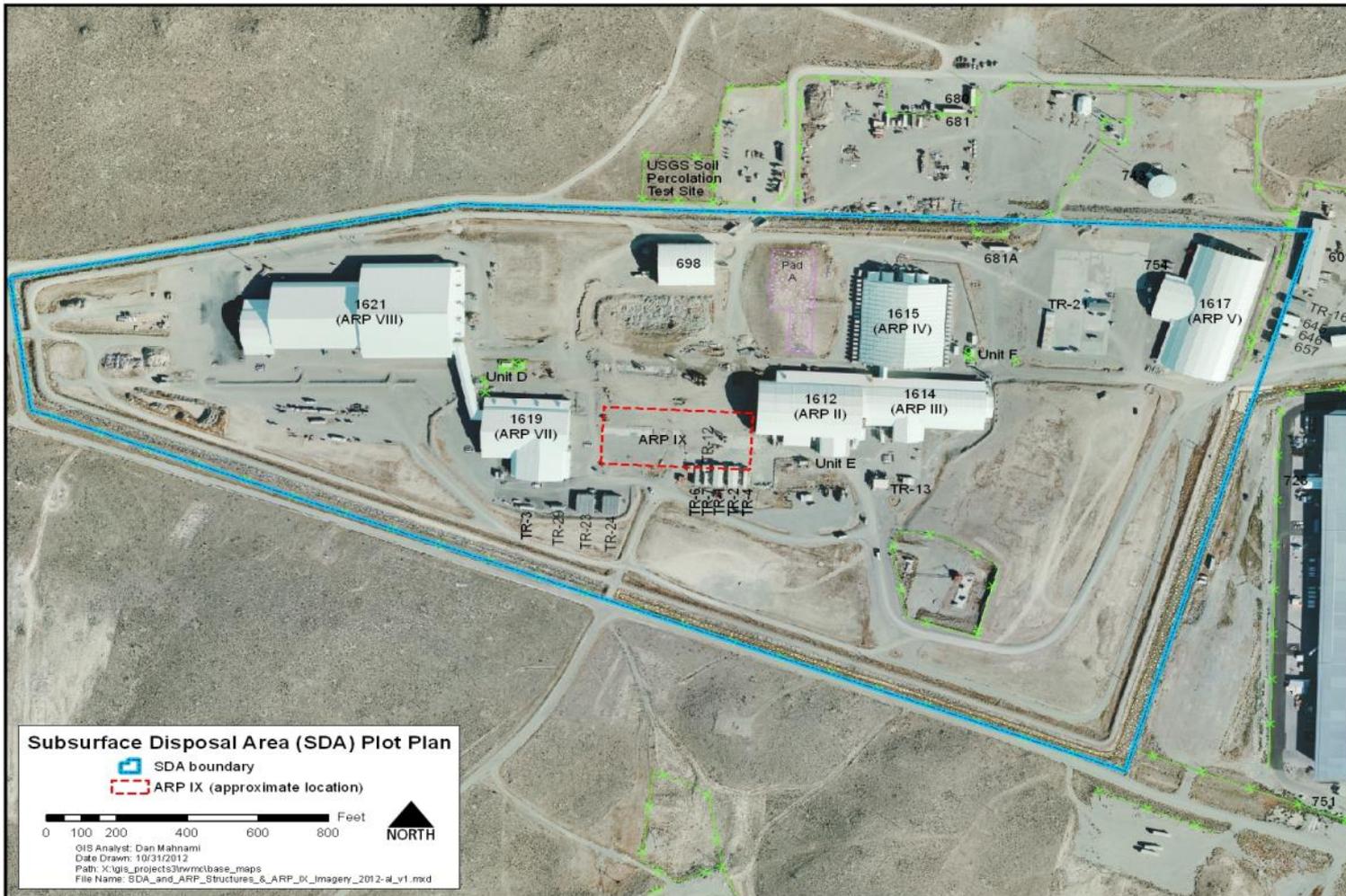
- Continue receipt and disposal of aqueous wastes in Evaporation Ponds
- Dispose of solid waste from environmental restoration actions
- Continue operation and maintenance of ICDF complex processes and facilities



ICDF in late March 2014



Waste Area Group (WAG) 7 Project



WAG 7 Project Objectives

- Complete remediation work in accordance with the Record of Decision (ROD) for OU 7-13/14
- Conduct Targeted Waste Retrieval at the Accelerated Retrieval Projects (ARP) and disposition waste:
 - ARP I, II, III, IV, V, and VI (Completed)
 - ARP VII: 0.18 acres out of 0.27 acres has been exhumed
 - ARP VIII: 0.03 acres out of 1.72 acres has been exhumed
 - ARP I & VI D&D (Completed)
- Complete in situ grouting of 21 locations (completed)
- Subsurface solvent vapor extraction (OCVZ)
- Environmental monitoring and institutional controls



WAG 7 Project

Key Activities/Actions:

- Continued ARP VII waste exhumation
- Continued ARP VIII waste exhumation, on an as needed bases
- Continuing sludge drum treatment in ARP V (more than 4,500 of 6,000 drums opened/treated as of late March)
- CWI baseline is to exhume 0.51 acres by 9/20/2015, completed 0.12 acres

Upcoming Activities:

- Complete ARP VII exhumations by the end of December 2014.
- Complete 6,000 sludge drum repacking campaign by the end of June 2014.

Metric	Baseline
Exhume targeted buried waste	0.51 acres by 9/2015



ARP VIII exhumation



Integrated Waste Treatment Unit (SBW) Project

Key Activities/Actions:

- Completed Contractor Readiness Assessment
- Completed DOE Readiness Assessment
 - Five Pre-Start Findings

Upcoming Activities:

- Begin simulant run in April
- Prepare for Radioactive Operation

Metric	Baseline
Treat sodium-bearing waste	~ 850,000 gallons to loss of suction
Package SBW Waste	704 canisters filled
Process tank “heels”	360,000 gallons



Integrated Waste Treatment Unit Facility



INTEC Liquid Waste Facility Closure Project

Key Activities/Actions:

- Completed installation of a cooling coil flush pump.
- Initiated the draining of the cooling coil underground line headers in preparation of flushing the system

Upcoming Activities:

- Complete the draining of the cooling coil underground lines
- Perform demolition and modifications in valve boxes to separate the active and inactive lines from each other

Metric	Baseline
Close liquid waste tanks	4 tanks by 9/2015



Prepping for tank farm work



Spent Nuclear Fuel Disposition Project

Key Activities/Actions:

- Ten cask shipments of SNF received from the Advanced Test Reactor (ATR)
- One Experimental Breeder Reactor (EBR) II shipment made to the Materials and Fuels Complex
- Held public meeting for Three Mile Island-2 license renewal process with the Nuclear Regulatory Commission in DC

Upcoming Activities:

- Continue SNF cask receipts from ATR
- Continue EBR-II Fuel transfer
- Transfer West Valley Casks From rail cars to cask storage pad
- Continue to prepare Three Mile Island's NRC license renewal application

Metric	FY 14 Baseline
Ship Advanced Test Reactor fuel Ship EBR-II	15 ATR 6 EBR



Fuel movement in CPP-666



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Calcine (HLW) Disposition

Project Objectives:

DOE shall treat all high-level waste currently at INL so that it is ready to be moved out of Idaho for disposal by a target date of 2035. (Idaho Settlement Agreement)

- Design and construct processing facility using IWTU structure
- Treat Calcine
- Package treated waste form
- Store resultant canisters pending shipment out of State
- Perform RCRA performance-based closure on existing HLW facilities

Calcine (HLW) Disposition Project

Key Activities/Actions:

- Continue to support DEQ's review of RCRA Part B Permit



D&D – Materials and Fuels Complex (MFC) Project

Completed Activities:

- Completed removal of the MFC-799 Sodium Storage Tank
- Completed affected, small bore, & dead leg sodium contaminated pipe removal from MFC-766
- Initiated fabrication of MFC-766 evaporator treatment mock-up assembly

Upcoming Activities:

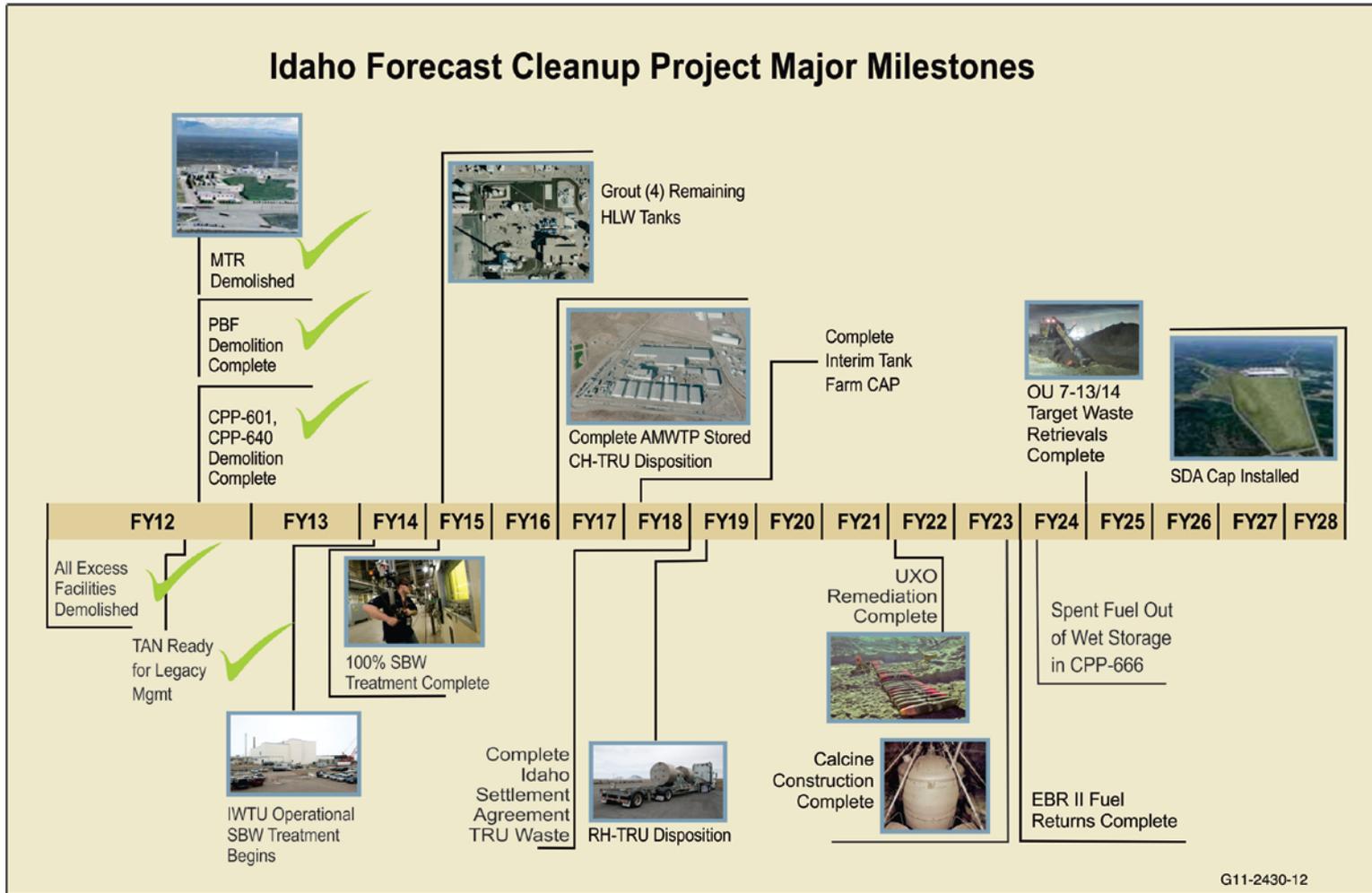
- Complete MFC-766 evaporator treatment mock-up assembly testing
- Initiate removal of the balance of sodium contaminated piping from MFC-766



Removal of sodium-contaminated piping



Idaho Completion Project Milestones



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Dashboard Summary for ICP Program

Key Questions	Dashboard Indicator	Comments
Budget Concerns and Issues		An appropriation for FY14 has been signed. Appropriations provides adequate funding for ITG and CWI.
Employment/Economic Conditions		Employment/Economic conditions should remain consistent.
Affect on Agreements		No impact on meeting current agreements
Safety and Environment		CWI Safety record is exceptional ITG safety record is at targets and improving
ICP Cleanup Condition		ICP continues to support WIPP – Meet scheduled TRU shipments

