

Idaho Cleanup Project Progress

Citizens Advisory Board

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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



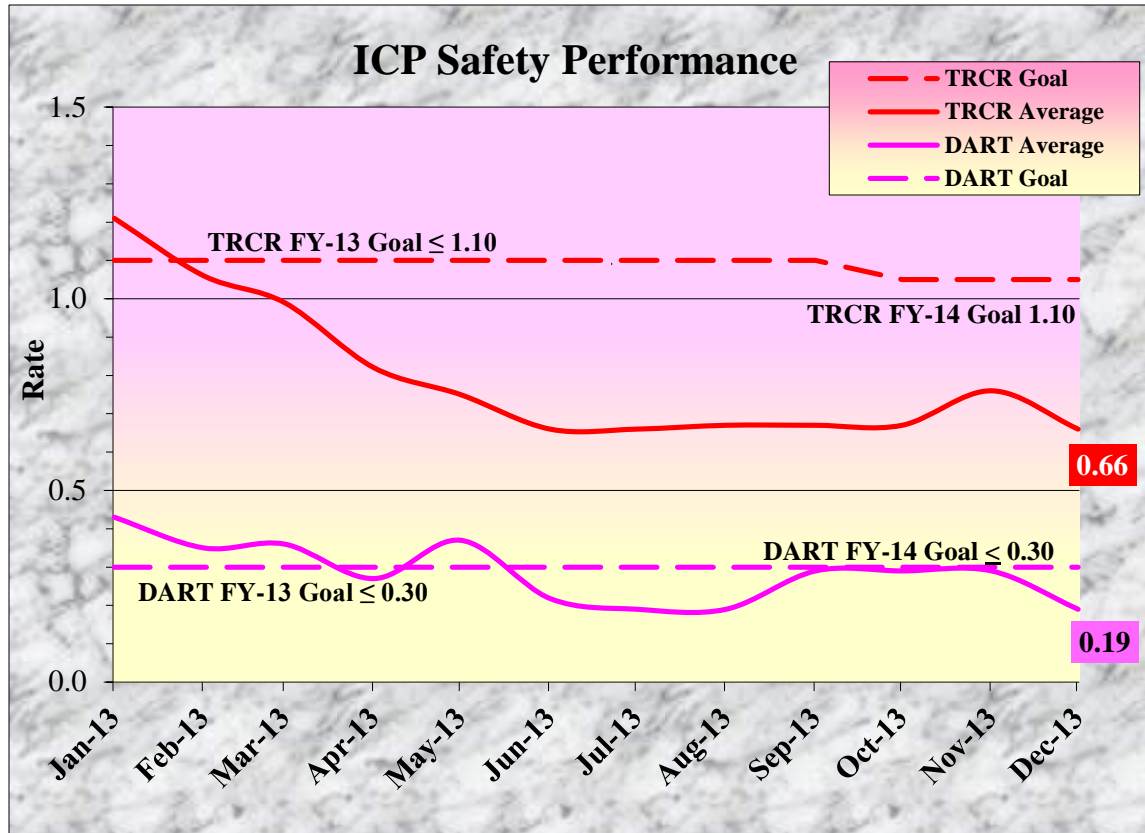
Idaho Cleanup Project Scope

- 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 – December 2013

(Data through **December 15, 2013**)



November 2013

Three First Aid Cases and One Recordable Injury

- An IWTU worker injured his back cleaning and sweeping a cell

Three ORPS Reportable Occurrences:

- Waste paint can seal failed due to gas buildup/insufficient inert gas
- IWTU Safety Analysis controls for isolation valves less than adequate
- IWTU Safety Significant rupture disk found to be ruptured

December 2013

Three First Aid Cases and No Recordable Injuries

Two ORPS Reportable Occurrences:

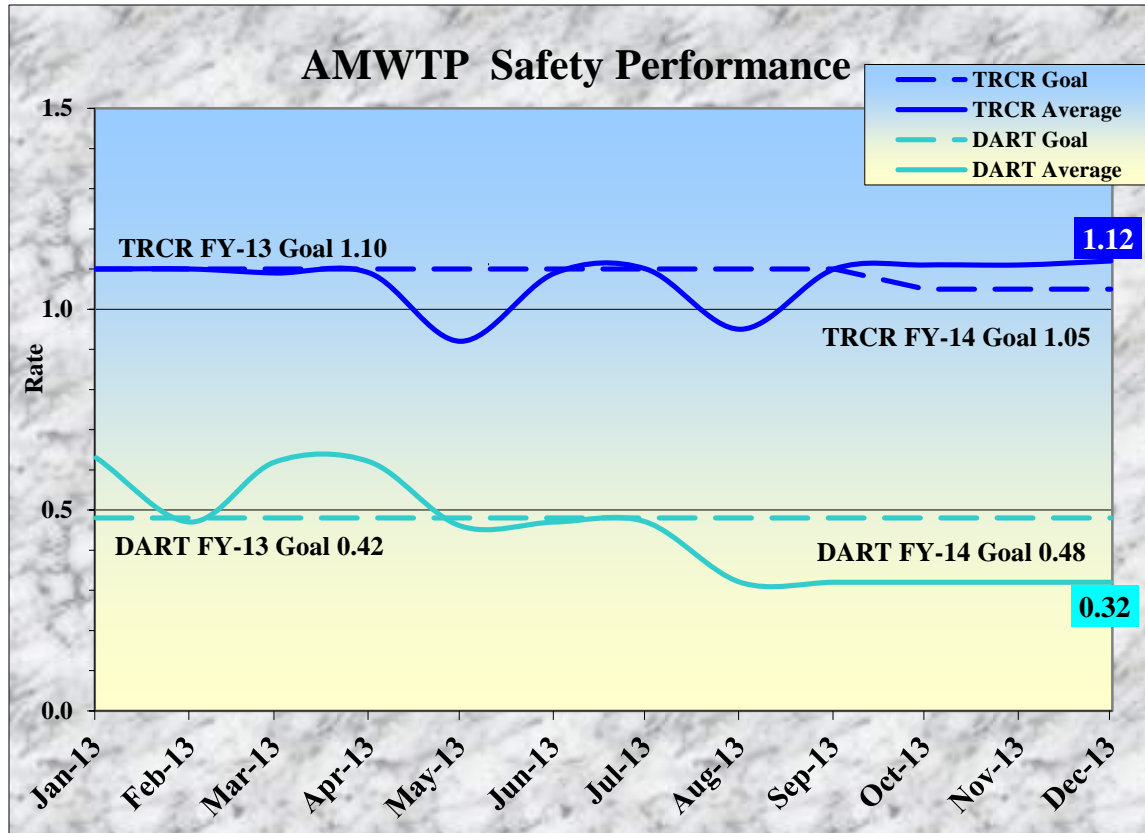
- Failure to control vent path for piping system Lockout/Tagout
- Legacy error in Criticality Safety Evaluation for Irradiated Fuel Storage Facility



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AMWTP Safety Performance – December 2013

(Data through **December 15, 2013**)



November 2013

No First Aid Cases and Two Recordable Injuries:

- A worker lifted waste material, injuring his shoulder requiring surgery (DART case)
- An operator chipped a tooth due to bumping into surveillance camera

No ORPS Reportable Occurrences:

December 2013

No First Aid Cases and No Recordable Injuries

One ORPS Reportable Occurrence:

- Surgery to repair injured shoulder (continuation of event listed above in November)



Remote-Handled Transuranic Waste Disposition

Key Activities/Actions:

- Completed two shipments of remote-handled transuranic waste to WIPP in January
- Provided notification to IDEQ of the initiation of construction activities for the Sodium Distillation System
- Completed shipping of Sodium Distillation System enclosure and other components from Premier Technology to INTEC and began assembling sections of the treatment system
- Transmitted letter of concurrence from the IDEQ to the Carlsbad Field Office (CBFO) regarding sodium distillation test plan results
- Started repackaging activities associated with sodium-contaminated Idaho Settlement Agreement waste

Upcoming Activities:

- Complete construction, system testing, and readiness review of the Sodium Distillation System



Assembly of sodium distillation equipment at INTEC



Advanced Mixed Waste Treatment Project



The first shipment of Los Alamos National Laboratory transuranic waste arrived at AMWTP on Nov. 18.



Key Activities/Actions:

- Employees marked 10 years – more than 15 million hours – without a lost time work injury on Dec. 7, 2013.
- Exceeded the FY 2013 baseline production plan by shipping 4,484 cubic meters of transuranic and mixed low-level waste out of Idaho.
 - Through December 2013, AMWTP operations have shipped over 52,000 cubic meters of waste out of Idaho.
- Received the first of 18 planned shipments of transuranic waste from Los Alamos National Laboratory on Nov. 18.
- Resumed restricted operations in the South Boxline on Nov. 5, following the Sept. 20 fire in the North Boxline.
- Working with DOE and the Idaho Department of Environmental Quality to resume un-restricted boxline operations by the end of January 2014.



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CERCLA Remediation Project Objectives

- WAG 1: Test Area North (TAN)
 - TAN Groundwater Remediation
- 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 3.17 acres as of 1/6/14](#))
 - 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:

- Completed a 20-year-long ordnance investigation, walking over 1,100 miles to survey munitions and explosives
- Continued operation of the Test Area North pump and treat facility and vapor vacuum extraction units at the Subsurface Disposal Area

Upcoming Activities:

- Following completion of the ordnance investigation, the project will transition to a long-term institutional control program that will provide protection and educational resources to personnel and the public



Ordnance detonation



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CERCLA Remediation Projects – Idaho CERCLA Disposal Facility (ICDF)

Key Activities/Actions:

- Received 4,379 gallons of liquid waste at the Evaporation Ponds First Quarter FY 2014 from MFC D&D, WAGs 2 and 3, and USGS
- Received a total of 228.46 m³ of waste for landfill disposal First Quarter FY 2014 from MFC (D&D tanks, cargos, and soils) and from WAGs 1, 3, and 7

Upcoming Activities:

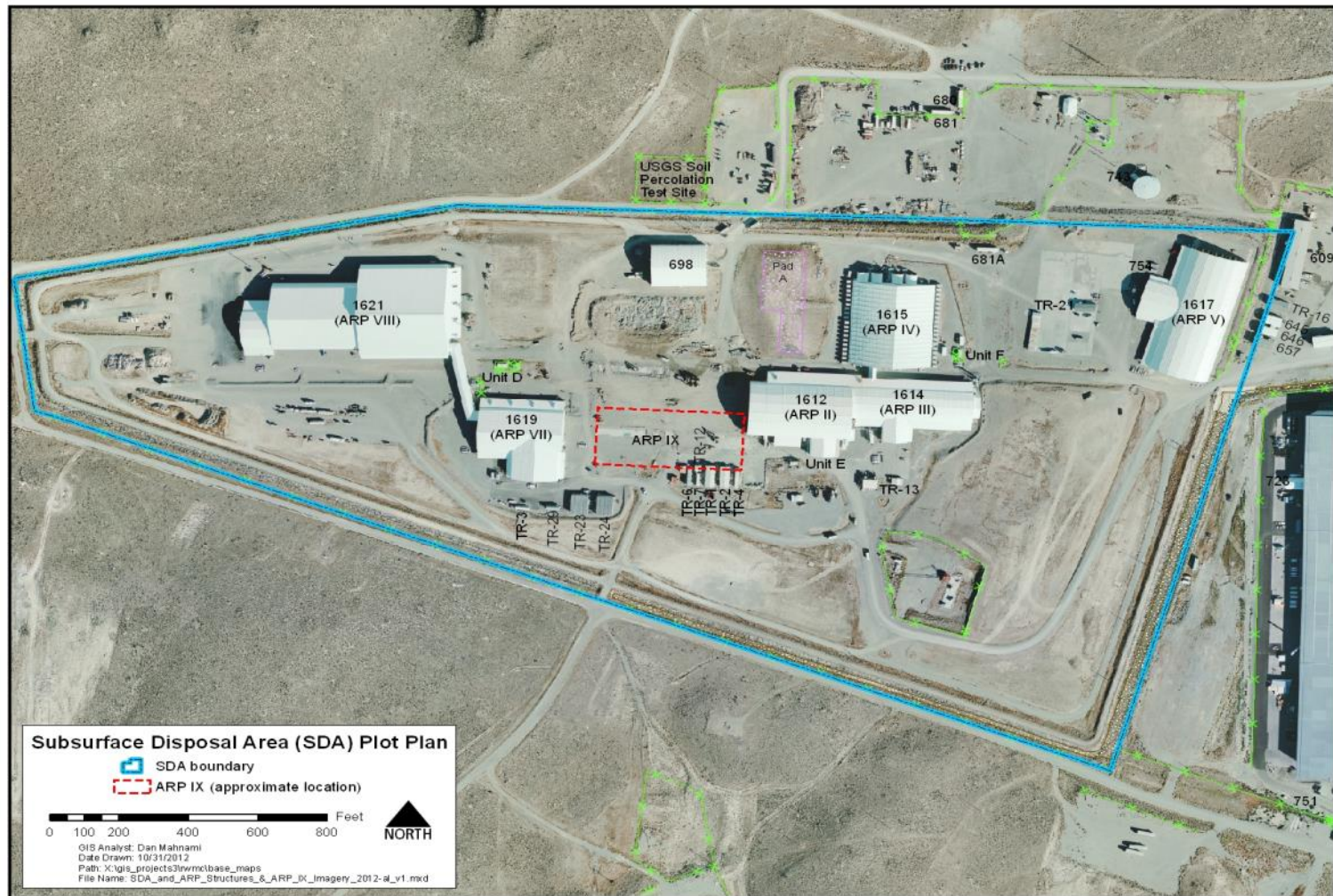
- Continue receipt and disposal of aqueous wastes in Evaporation Ponds
- Dispose of solid waste from environmental restoration actions
- Continue operation and maintenance of ICDF complex processes and facilities



Disposal of one of the MFC sodium tanks following treatment of residual sodium



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 exhumation completed 0.15 acres of 0.27 acres
 - ARP VIII exhumation began late November 2013 and has completed .01 of 1.72 acres
 - ARP I & VI D&D (Completed)
- Complete in situ grouting of 21 locations (completed)
- Subsurface solvent vapor extraction (OCVZ)
- Environmental monitoring and institutional controls



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WAG 7 Project

Key Activities/Actions:

- Completed buried waste exhumation in Accelerated Retrieval Project (ARP) III
- Completed the contractor readiness assessment and began exhumation in ARP VIII

Upcoming Activities:

- Continue ARP VII and VIII waste exhumation
- Continue sludge drum treatment and repack

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



ARP VIII interior before exhumation began last fall



Integrated Waste Treatment Unit (SBW) Project

Key Activities/Actions:

- Commenced TI-102 in January

Upcoming Activities:

- Completed contractor Readiness Assessment
- DOE Readiness Assessment to be completed by February
- Begin simulant run in late March/early April

Metric	Baseline
Treat sodium-bearing waste	820,000 gallons to loss of suction
Package SBW Waste	704 canisters filled
Process tank "heels"	360,000 gallons



Workers close door to the Carbon Reduction Reformer in late December



INTEC Liquid Waste Facility Closure Project

Key Activities/Actions:

- Completed installation of a cooling coil flush pump to the water storage tank piping
- Initiated demolition in CPP-636 and completed demolition in CPP-635 of selected cooling coil lines to allow future flushing to occur
- 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
- Complete demolition in CPP-636
- 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



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Spent Nuclear Fuel Disposition

Project Objectives:

- Receive and store SNF from the Advanced Test Reactor
- **Receive Domestic and Foreign Research Reactor SNF for storage (suspended at this time)**
- Provide safe, regulatory-compliant, routine operations for INTEC SNF handling and storage facilities



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Spent Nuclear Fuel Disposition Project

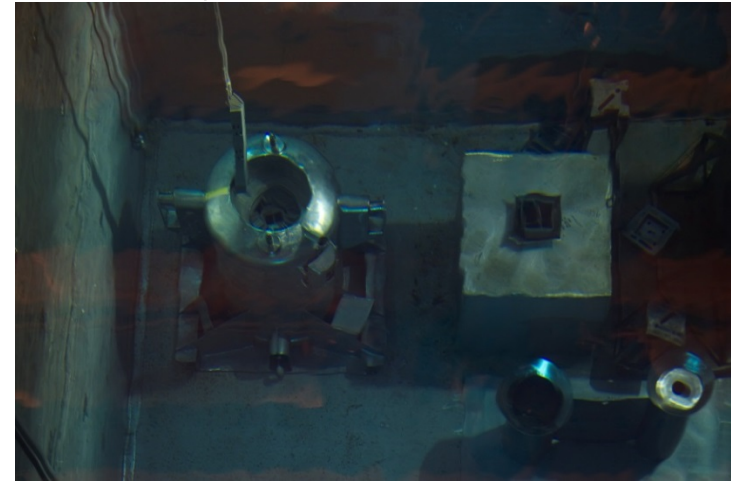
Key Activities/Actions:

- Three cask shipments of SNF received from the Advanced Test Reactor (ATR) to date in FY-14
- One Experimental Breeder Reactor (EBR) II shipment made to the Materials and Fuels Complex to date in FY-14
- 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– 12 of 15 remaining in FY-14
- Continue EBR-II Fuel transfer – 5 of 6 remaining in FY-14
- Transfer West Valley Casks From rail cars to cask storage pad
- Continue to prepare Three Mile Island-2 NRC license renewal application due March 2017

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



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

Completed Activities:

- Completed removal of the MFC-799 Sodium Storage Tank (post treatment MFC-766)
- Submitted RCRA closure documentation for MFC-799/ 799A to the regulatory agencies
- 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
- Obtain RCRA closure certification for MFC-799/799A

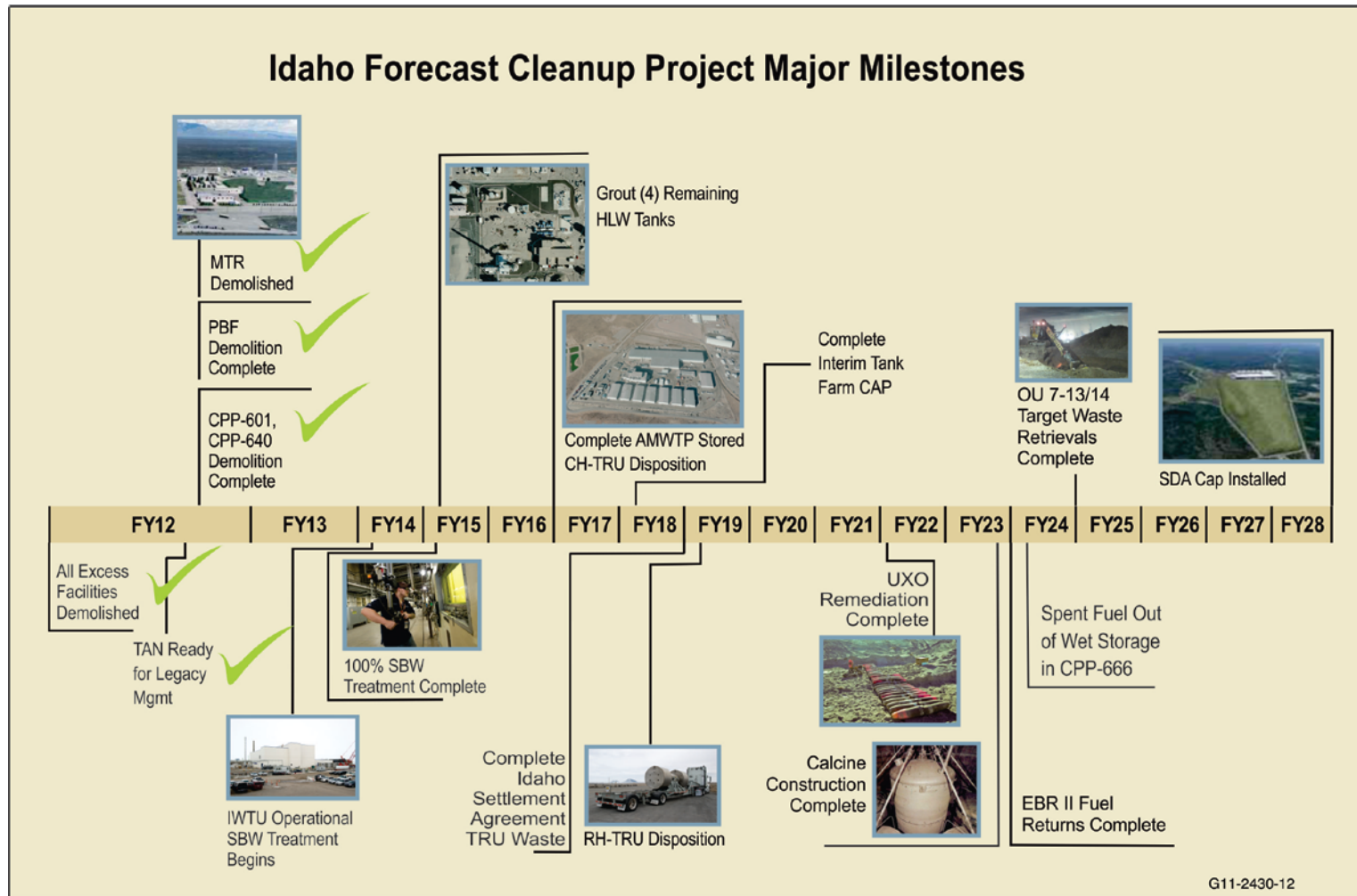


Demolition of MFC-799A








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Idaho Completion Project Milestones



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

