
*Idaho Cleanup Project Progress
Citizens Advisory Board
September 2010 Status*

James Cooper
Department of Energy
Idaho Operations Office



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Idaho Cleanup Project Scope – ARRA Work Included

- Transuranic Waste Disposition
- Advanced Mixed Waste Treatment Project
- Waste Area Group 7 (Radioactive Waste Management Complex)
 - Subsurface Disposal Area Record of Decision
 - Accelerated Retrieval Project Interim Actions
- Idaho CERCLA Disposal Facility
- CERCLA Remediation
 - Waste Area Group 1 – Test Area North
 - Waste Area Group 3 – Idaho Nuclear Technology and Engineering Center
 - Waste Area Group 10 – Site-wide Miscellaneous Sites/Snake River Plain Aquifer



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Idaho Cleanup Project Scope ARRA Work Included (con't)

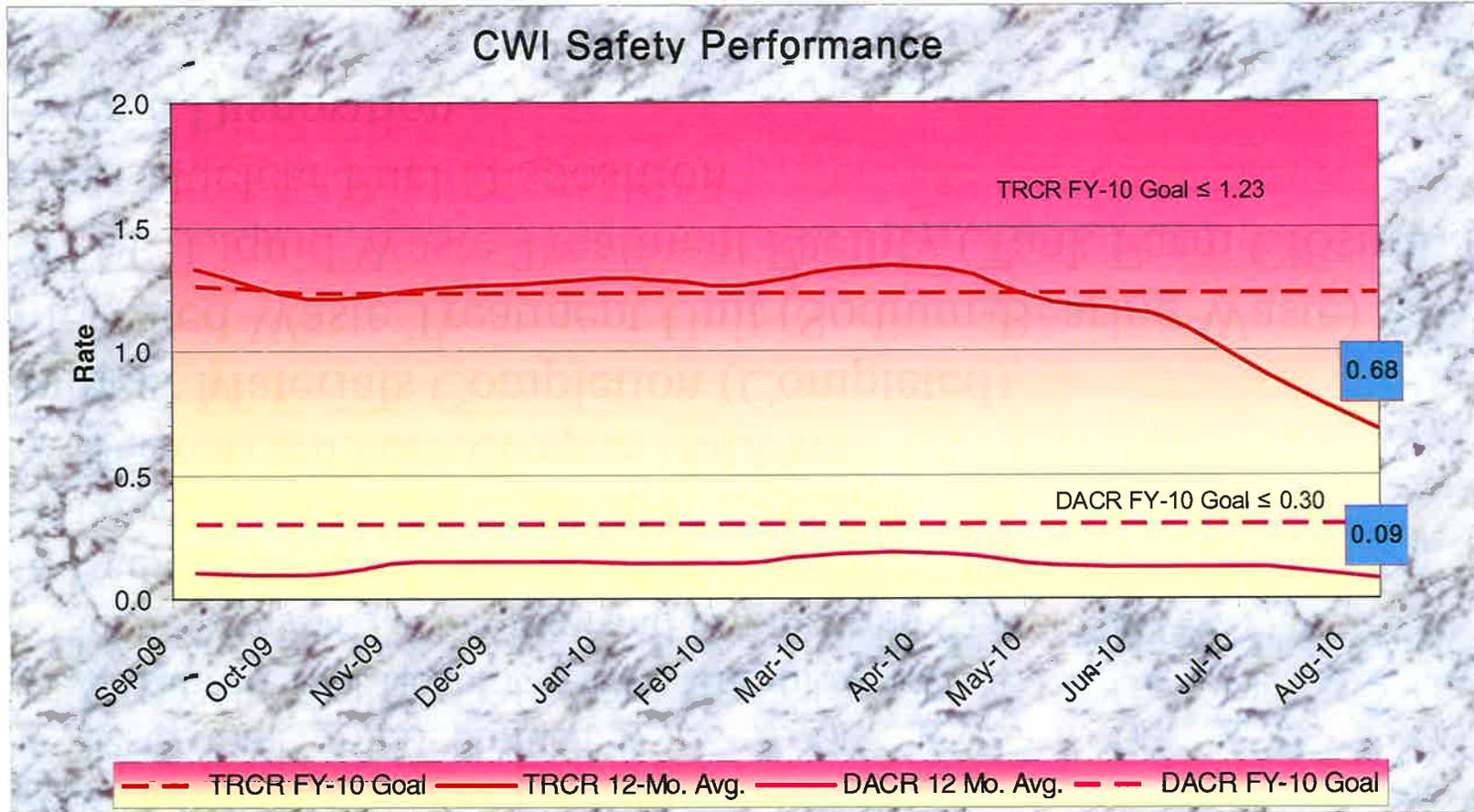
- Decontamination and Decommissioning
 - Test Area North (Completed)
 - Advanced Test Reactor (ATR) Complex
 - Idaho Nuclear Technology and Engineering Center (INTEC)
 - Radioactive Waste Management Complex (RWMC)
 - Power Burst Facility (ARRA) (Completed)
 - Materials and Fuels Complex (ARRA)
- Nuclear Materials Completion (Completed)
- Integrated Waste Treatment Unit (Sodium-Bearing Waste)
- INTEC Liquid Waste Treatment Facility (Tank Farm Closure)
- Spent Nuclear Fuel Disposition
- Calcine Disposition



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Safety Performance - CWI



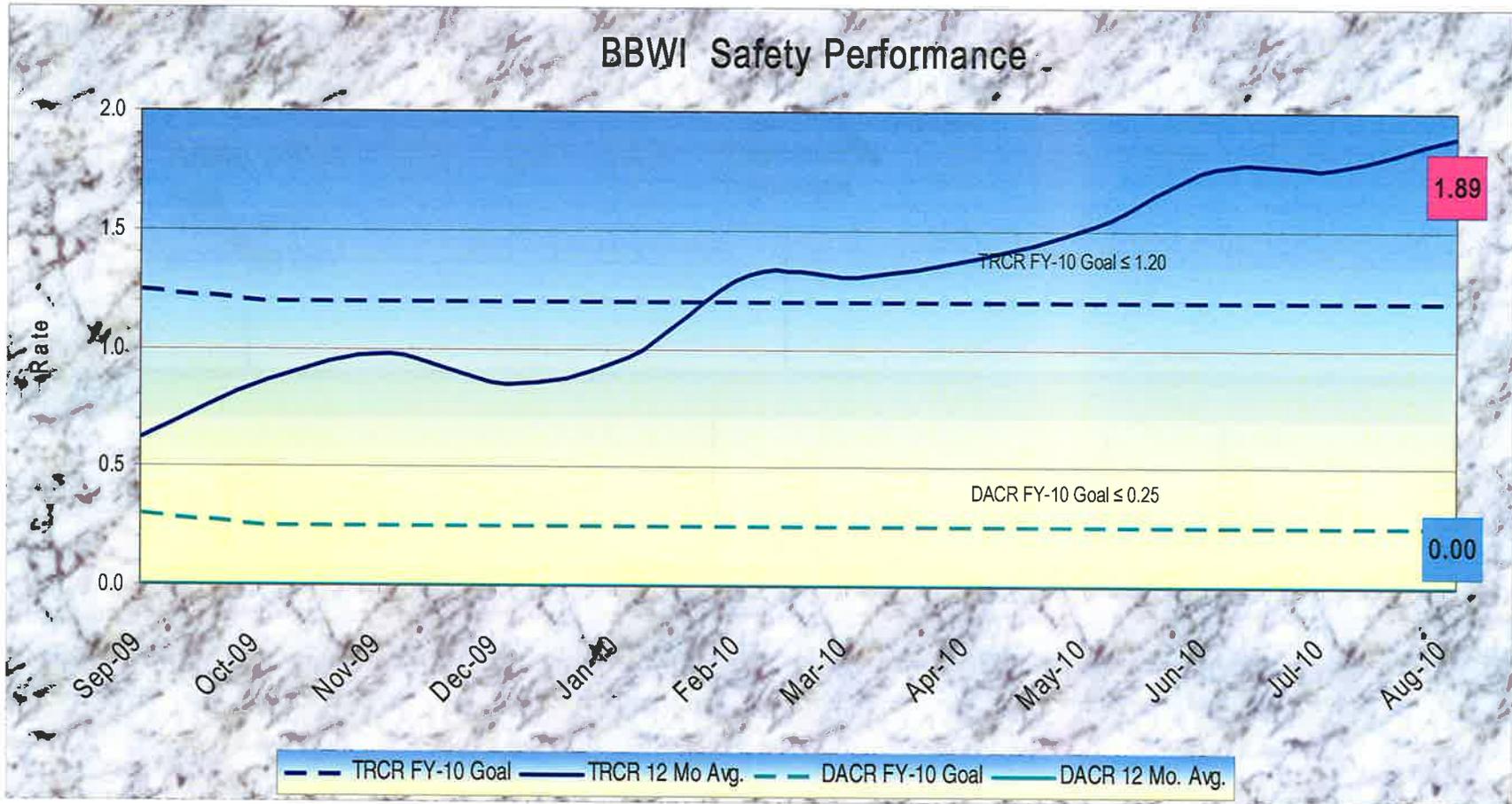
*Rate of occurrence per 200,000 man hours worked



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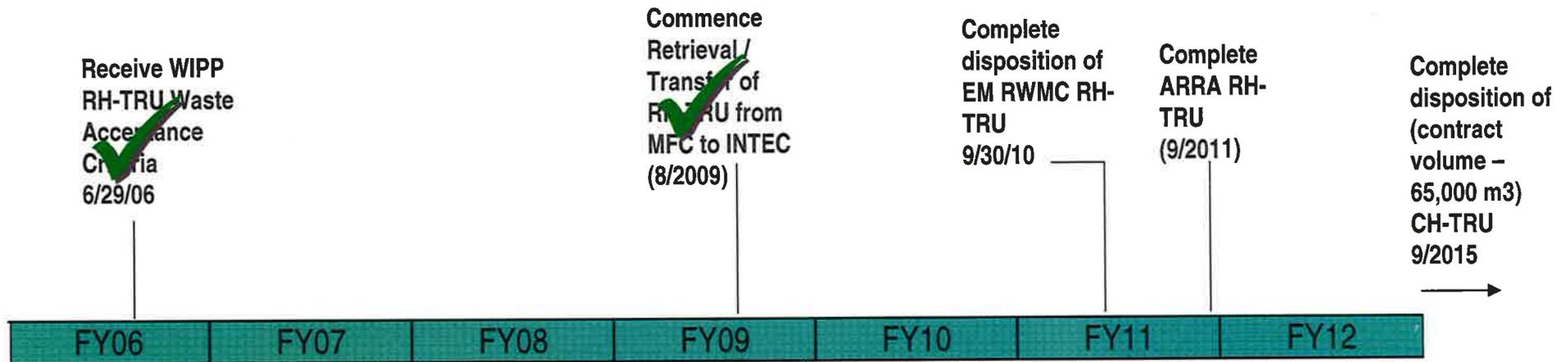
Safety Performance - AMWTP



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Transuranic Waste Disposition Project



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Transuranic Waste Disposition

Accomplishments since July

- ◆ Completed 20 of 88 Recovery Act RH-TRU shipments to WIPP (seven during July)
- ◆ Processed 98 of original 160 RH TRU containers (Recovery Act)
- ◆ Shipped 2,804 m³ (of 5,108 m³) of CH-TRU to WIPP
- ◆ Implemented two shipments per week for U-233 waste; completed 21 of 58 as of July 25 (10 during July)

Upcoming Activities

- Complete off-site transport, treatment, and disposal of AMWTP U-233 and Hot Chemistry Lab waste (December)
- Complete shipping RH TRU target (new date March 31, 2011)
- Award small business contract for Sodium Process System Design in Sept/Oct 2010



Drum load-out CPP-666



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Advanced Mixed Waste Treatment Project

Accomplishments Since July

- Since start of current contract extension, shipped 1,198 cubic meters of stored transuranic radioactive waste out of Idaho (through August 22, 2010)
- AMWTP has shipped 40,719 m³ of 65,000 m³ of transuranic waste reclassified as mixed low-level waste out of Idaho as per the Idaho Settlement Agreement
- Since April 1999, 40,726 cubic meters of stored transuranic and mixed low-level waste shipped from INL site
- Working to complete all ARRA production and employment goals for the May-Sept. 30, 2010 extension period



AMWTP employees place a box of primary waste in a DOT shipping bag to preserve its integrity during shipping. This box of waste will be sent to Energy Solutions, Inc. for permanent disposal.

Upcoming Activities

- Continue to focus on awarding a new AMWTP contract



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AMWTP – Contract Extension

- Bechtel BWXT Idaho, LLC Contract Extension
- Period of Performance
 - May 1, 2010 – September 30,)
- Scope
 - Characterization, treatment, packaging, shipment and disposal of TRU, MLLW and LLW stored at the Idaho facility.



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Waste Area Group (WAG) 7 Project Objectives

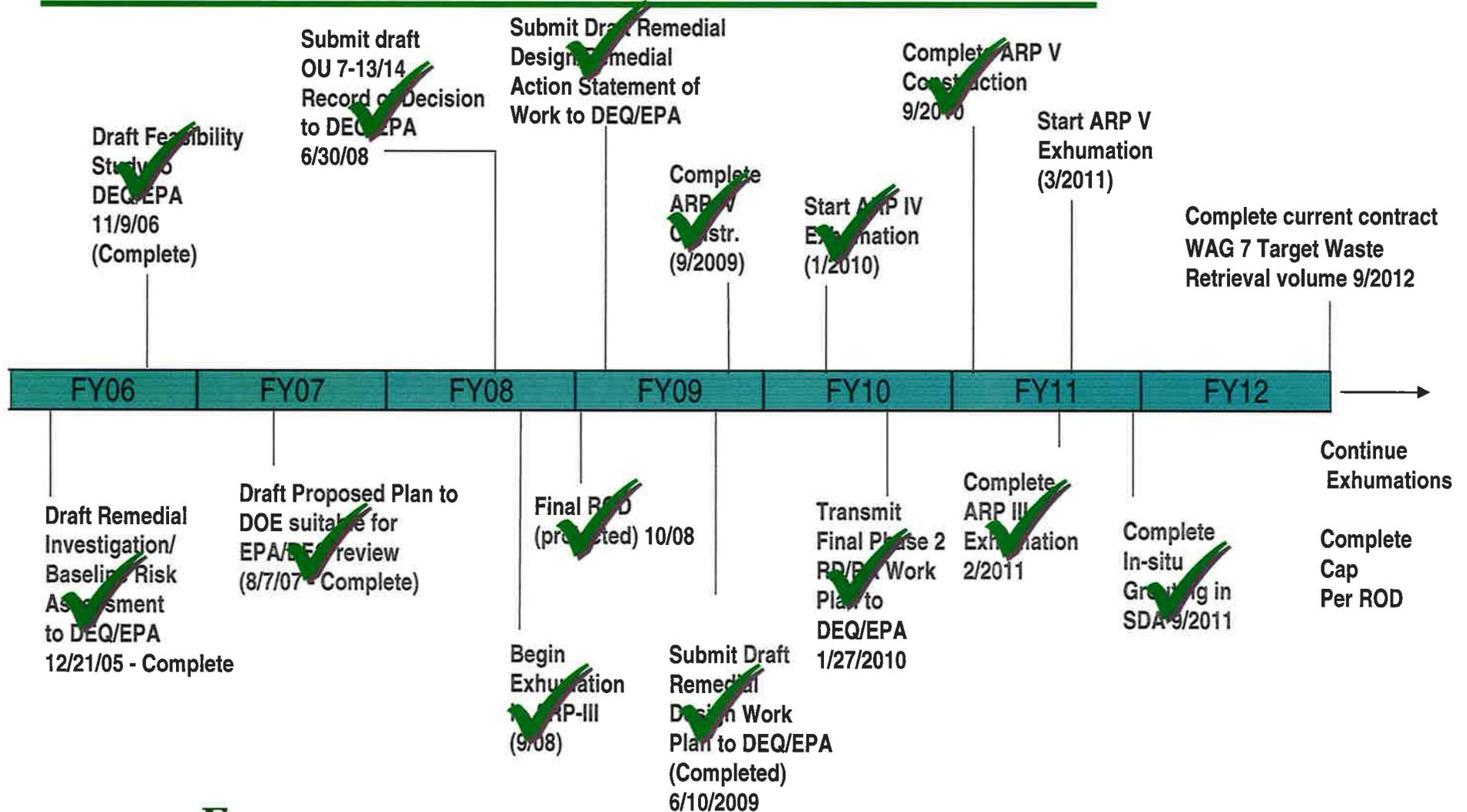
- Conduct Non-Time Critical Removal Actions at the Accelerated Retrieval Projects (ARP) I, II, III and IV
 - Exhume targeted waste material from the Subsurface Disposal Area
 - Disposition targeted waste (i.e., Rocky Flats 741, 742 and 743 sludges, graphite waste, roaster oxides, filters/prefilters)
- Complete remediation work in accordance with the Record of Decision (ROD) for OU 7-13/14
- Conduct In-situ grouting in SDA as per OU 7-13/14 Record of Decision through American Recovery and Reinvestment Act (ARRA) funding (Completed).



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WAG 7 Project



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WAG 7 Project

Accomplishments since July

- ARP V Construction 95% Complete
- Completed in-situ grouting operations five weeks ahead of schedule
- Completed erection of ARP VI structural steel and completed outer liner installation
- Awarded small business contract to NorthWind for construction of Pit 10W
- Completed waste exhumation of 1.62 acres

Upcoming Activities

- Start ARP V exhumation operations in December January.
- Complete ARP VII foundation concrete placement



In-situ grouting rigs



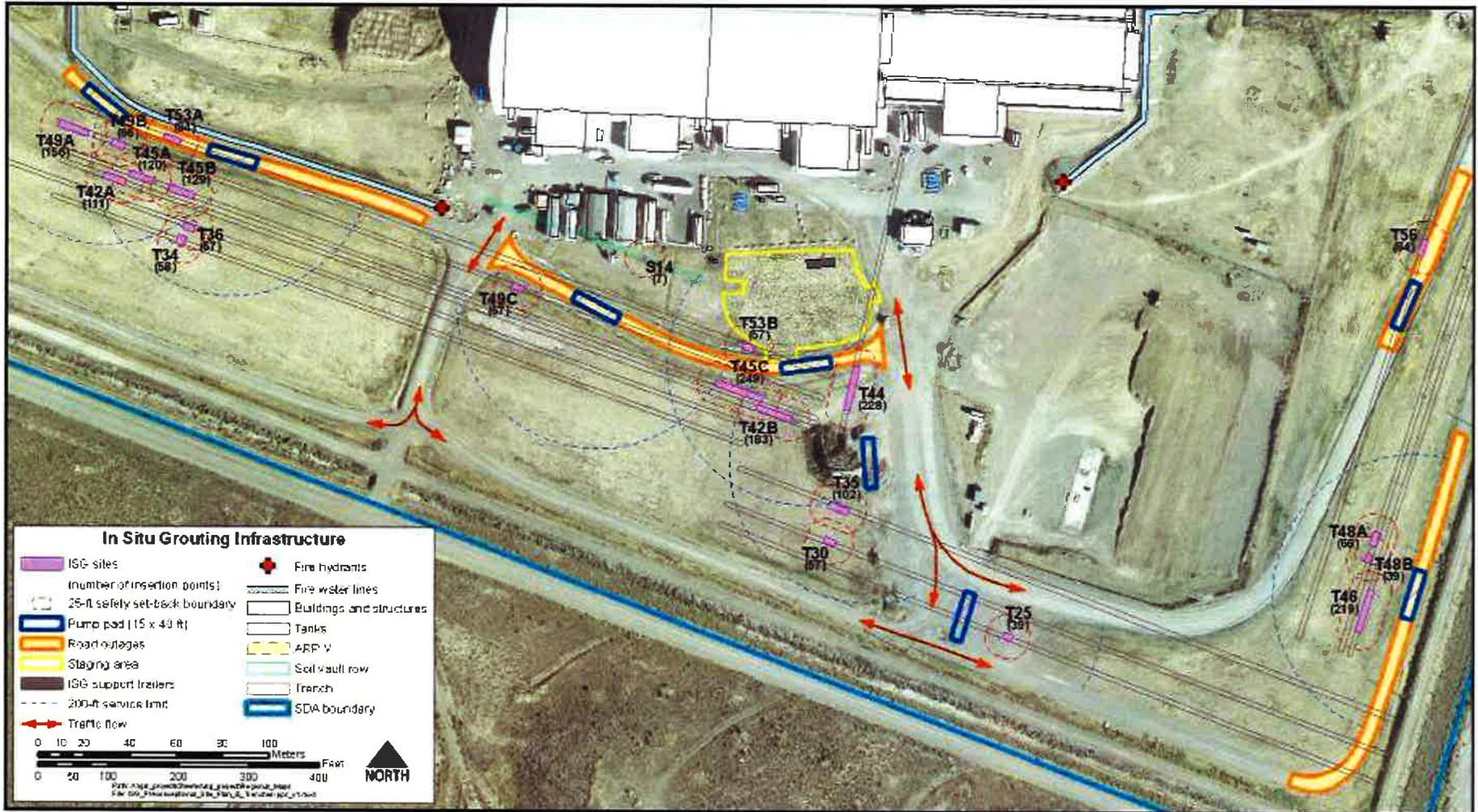
ARP VI North Canopy Install



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WAG 7 Project (cont'd)



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Other CERCLA Remediation Project Objectives

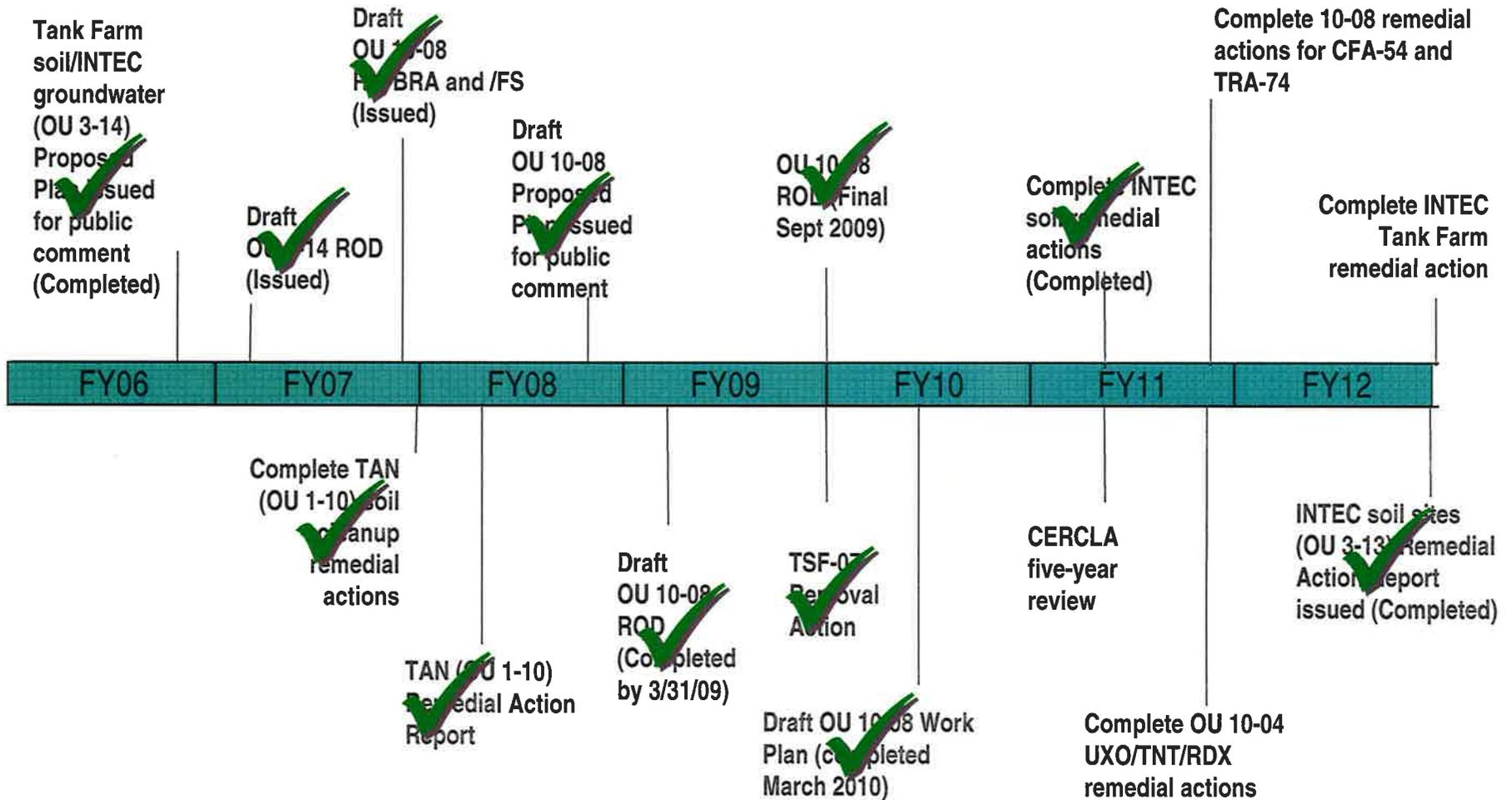
- WAG 1:
 - Continue TAN Groundwater Remediation to WAG 3:
 - Complete Phase I, II and III of the OU 3-14 Record of Decision (in the near term corrective actions includes drainage ditches, low-permeability pavement inside and outside of the tank farm to support the continued reduction of perched water in northern INTEC)
- WAG 10:
 - Maintain site wide Institutional Controls and Maintenance requirements
 - Maintain Groundwater Monitoring program
 - Maintain the site wide CERCLA Ecological Monitoring program
 - Remediate WAG 10 CERCLA sites at CFA and RTC
 - Maintain the New Site Identification Process for future CERCLA sites
 - Remediate unexploded ordnance (UXO) and explosives at designated areas in accordance with the OU 10-04 Record of Decision



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Other CERCLA Remediation Projects



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Other CERCLA Remediation Projects (con't)

Sitewide – Waste Area Group 10

Accomplishments since July

- Submitted Final OU 10-08 Remedial Design/Remedial Action work plan to the agencies
- Submitted the draft five-year review of CERCLA sites to the Agencies for review and comment
- Cleared UXO debris from 60 acres along HYW 20 within the Twin Buttes Bombing Range (TBBR)
 - No live ordinance was found
- Investigated the Railcar Explosion Area and the Naval Ordnance Disposal Area for live UXO



Practice bomb remnants and Twin Buttes

Upcoming Activities

- Finalize the five-year review of CERCLA sites
- Complete recovery and disposal of known UXO within the Naval Proving Grounds
 - Approximately 70 live projectiles and TNT/RDX remediated from the Railcar Explosion Area
 - Live projectiles are from Railcar and Naval Ordnance Disposal Area (NODA)
- Remediate TRA-74 soil site



Investigating a subsurface anomaly (with EOD oversight)



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Other CERCLA Remediation Projects (con't)

INTEC – Waste Area Group 3

On-Going Activities

- Monitoring perched water levels with radio
- Monitor water usage to prepare facility water balance.

Upcoming Activities

- Continue Phase I part II of the OU 3-14 remedy
 - Project includes upgrading and installation of drainage ditches and low permeability pavement inside and outside the tank farm
- Continue to eliminate sources of water releases to the perched water zones



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Other CERCLA Remediation Projects (con't)

Test Area North – Waste Area Group 1

On-Going Activities

- Performing bi-monthly injections to support ISB
- Operating the New Pump and Treat Facility
- Collecting required groundwater samples to track the progress of the remedial action

Upcoming Activities

- Develop new work plan for remediation strategy (mid FY11)
- Begin operation of the Air Stripper Treatment Unit (ASTU) (Sept 2010)



TAN Groundwater Laboratory



ISB Injection Facility

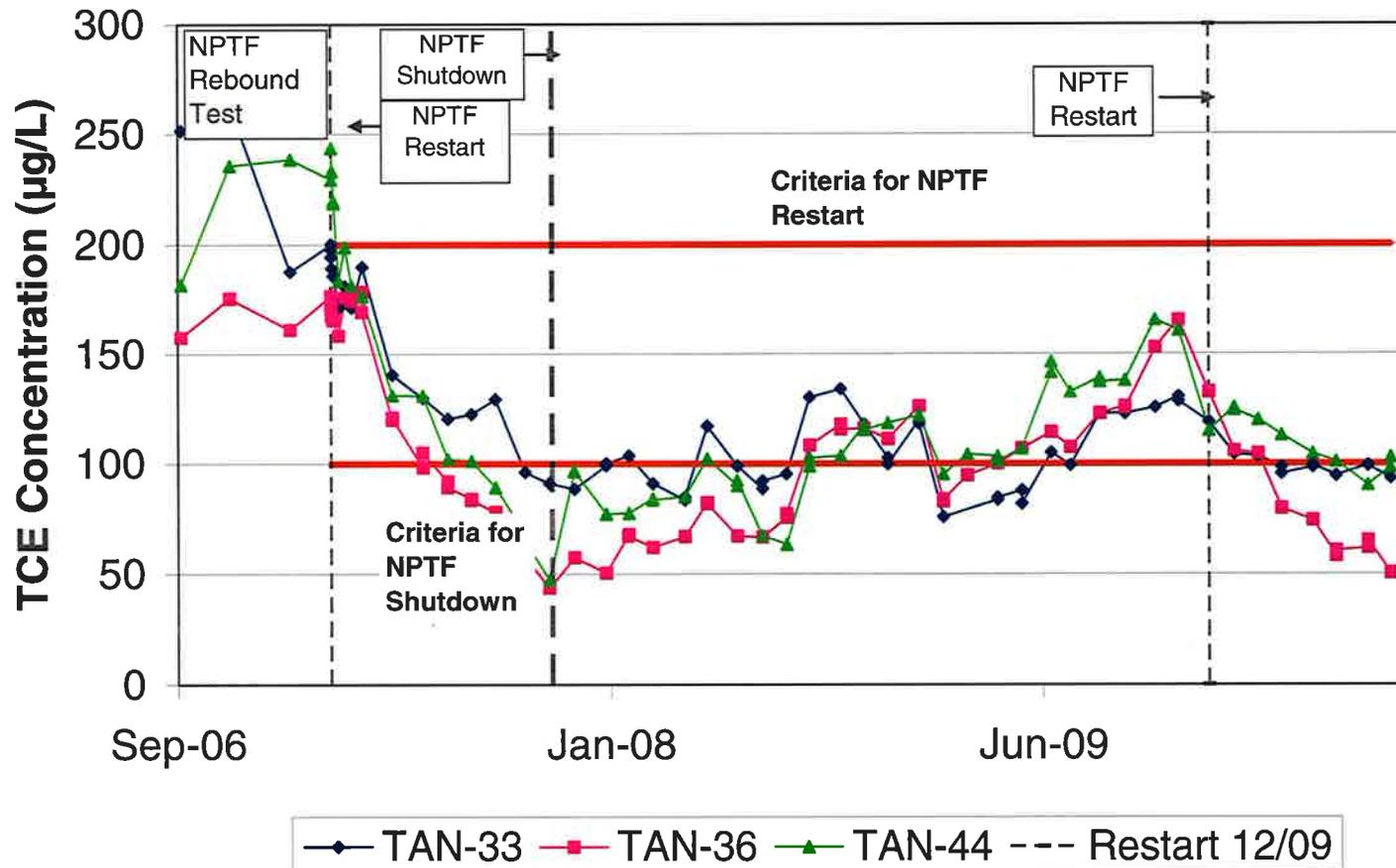


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Other CERCLA Remediation Projects (con't)

TCE Concentrations for the Medial Zone Wells



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Other CERCLA Remediation Projects

Idaho CERCLA Disposal Facility Accomplishments since July

- Received 2,222 gallons of aqueous waste into the evaporation ponds
- Received 5,288 cubic yards of soil and debris in the landfill
- Performed in-cell grouting of void spaces

Upcoming Activities

- Receipt and disposal of soil and debris from INTEC, ATRX, and RWMC site areas



Grouting Tank Farm CPP-694 tanks

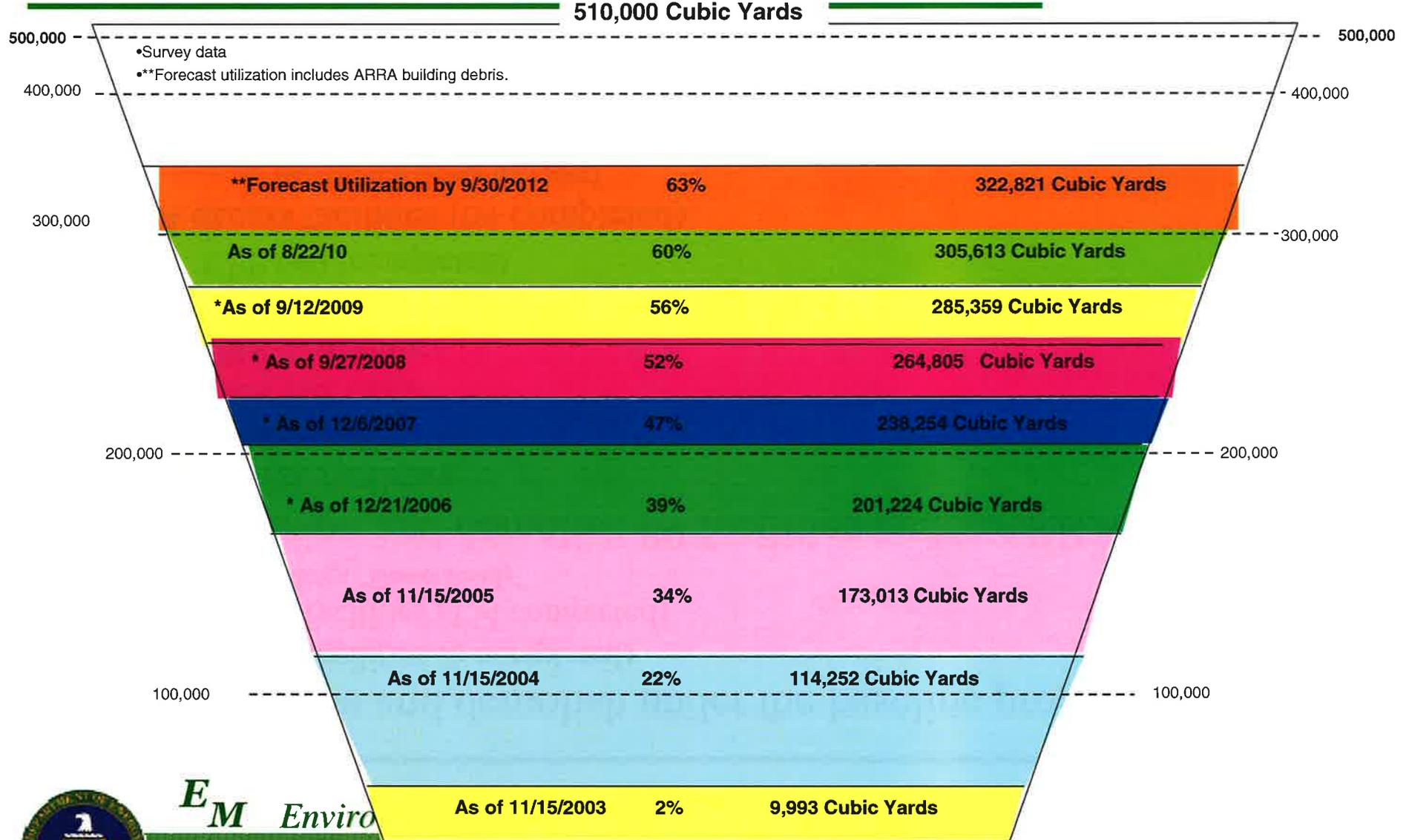


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ICDF Project Landfill Utilization

510,000 Cubic Yards



•Survey data
 ••Forecast utilization includes ARRA building debris.

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Opened 09/15/2003

Updated Sept 9, 2010



*Survey

D&D Objectives

- Decommission and demolish under the baseline program*
 - 7 high-risk facilities (6 completed)
 - 164 excess facilities (154 completed)
 - (2) Buildings “Demo-Ready”
- Decommission and demolish 89 facilities under ARRA funding
 - 5 high risk facilities
 - MTR Reactor
 - TRA Hot Cells
 - EBR-II Reactor
 - CPP 601
 - CPP 640 (completed)
 - 84 excess facilities (64 completed)
 - (6) Stretch goals included

** All D&D work is now ARRA funded*



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ARRA D&D – Advanced Test Reactor Complex (ATRC) / PBF / RWMC Project Objectives

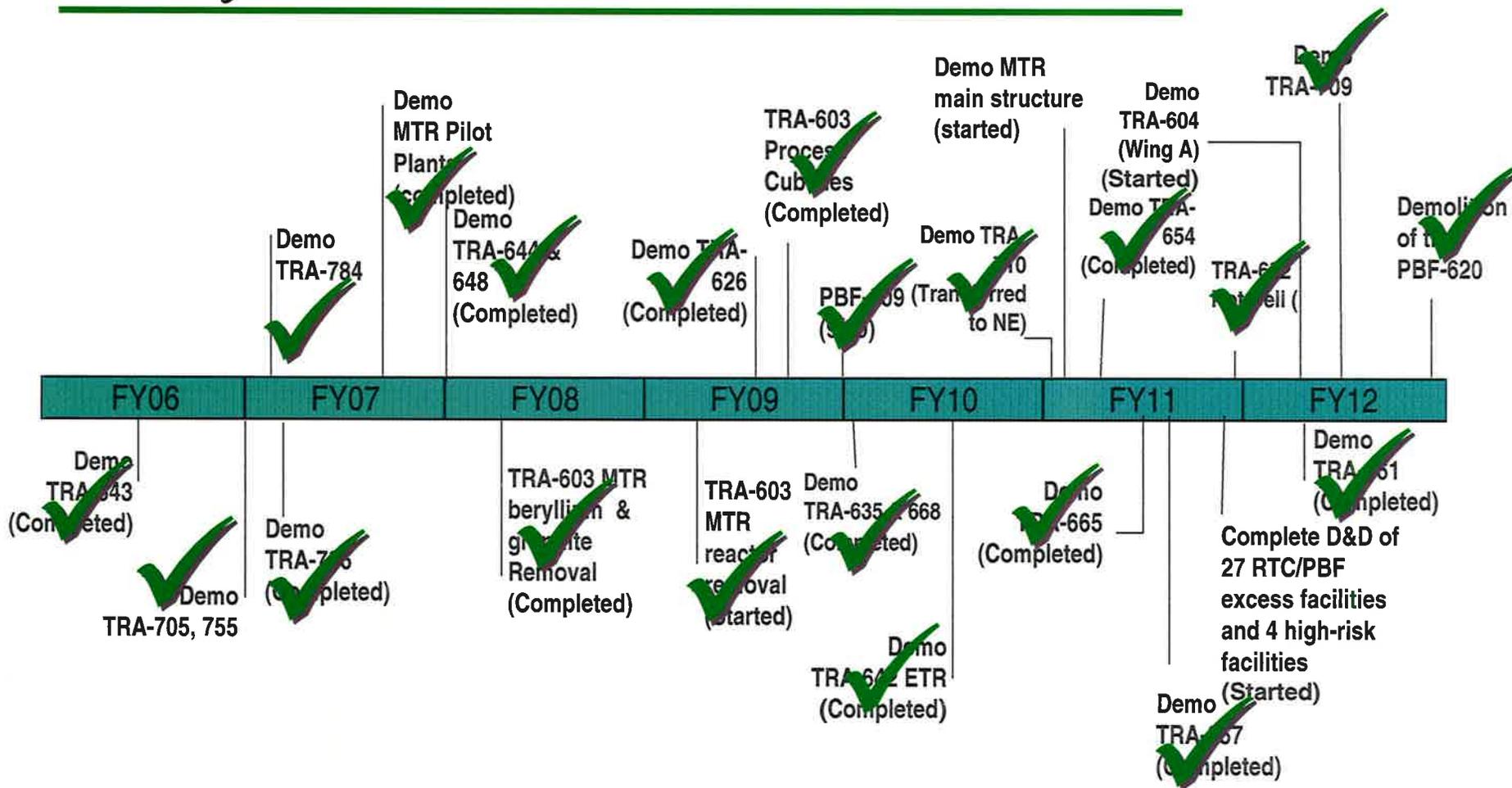
- Demolish 16 excess facilities
 - (1) Stretch goal included
- Demolish 2 high risk facilities
 - MTR Reactor
 - TRA Hot Cells



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D&D – Advanced Test Reactor Complex/Power Burst Facility D&D



- 24 of 27 excess facilities and two high-risk facilities completed to date



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ARRA D&D - Advanced Test Reactor Complex Project

Accomplishments since July

- Removed the Materials Test Reactor (MTR) vessel lower thermal shield plates
- Completed TRA-632 Hot Cell drain-line vent-point installations and line waxing
- Completed TRA-613 vault demolition
- Completed grouting of the TRA-713 tanks
- Received approval from the Nevada Test Site (NTS) for the TRA-632 Hot Cell #3 (HC3) mixed-waste treatment plan for shipment to NTS

Upcoming Activities

- Complete TRA-632 remediation activities
- Complete TRA-632 hot cell manipulator removal activities
- Initiate TRA-632 HC3 hazardous waste removal
- Complete TRA-730 vault demolition (stretch goal)
- Complete MTR reactor vessel pick



Lower thermal shield plate removal from the MTR reactor vessel



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ARRA D&D – INTEC Project Objectives

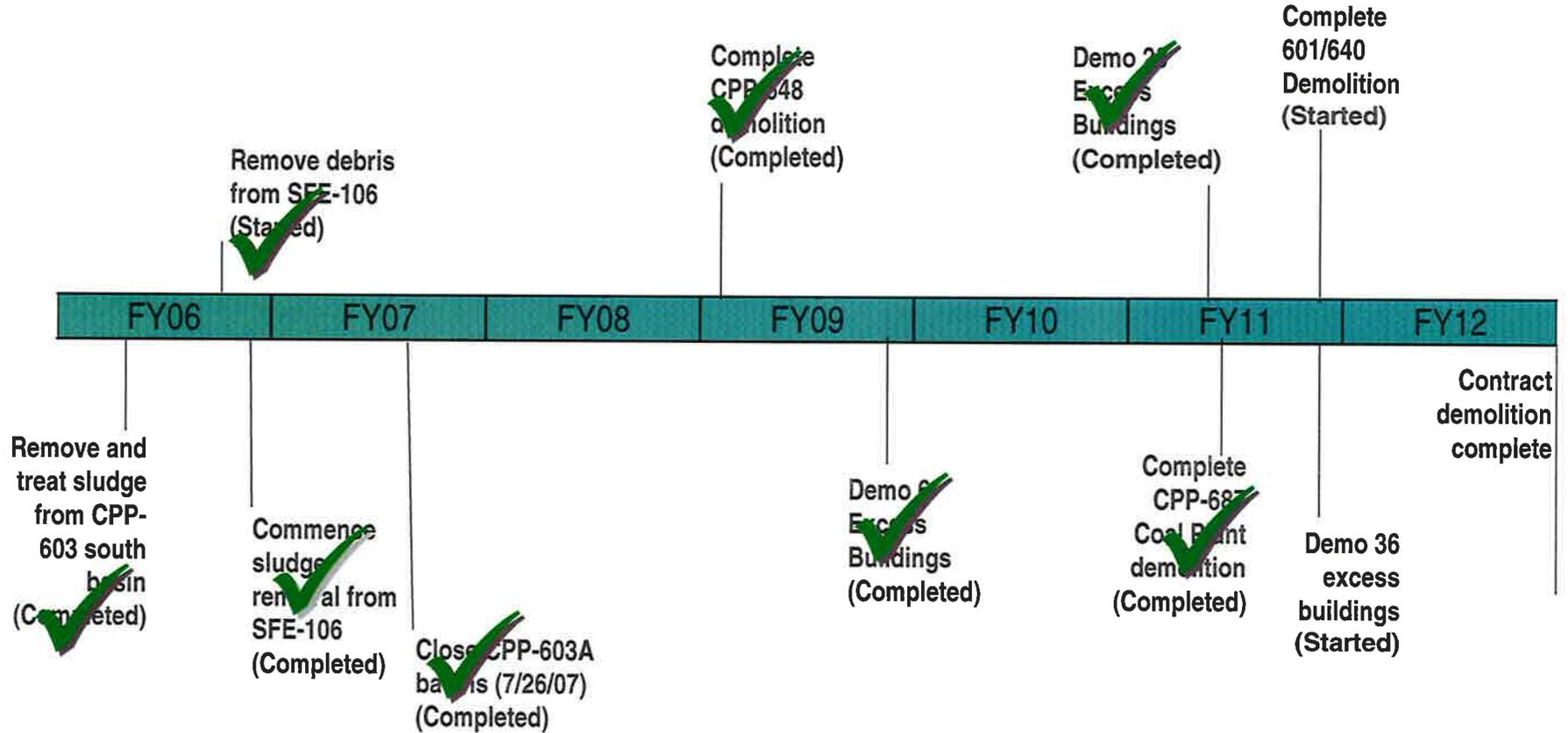
- Demolish 60 excess facilities
 - (1) Stretch goal included
- Demolish 2 high-risk facilities:
 - CPP-601 (Fuel Processing Facility)
 - CPP-640 (Head End Fuel Processing Facility) - Completed



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D&D – INTEC Project



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ARRA D&D – INTEC Project

Accomplishments since July

- Completed transite removal and steel-structure demolition of the Fuel Reprocessing Building (CPP-601)
- Completed demolition of CPP-619, -762, and -1672

Upcoming Activities

- Complete CPP-694 demolition (Stretch goal)
- Complete demolition of the Fuel Reprocessing Building (CPP-601)
- Complete CPP-1649 demolition
- Continue CPP-602 D&D



CPP- 601 transite removal and steel-structure demolition



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

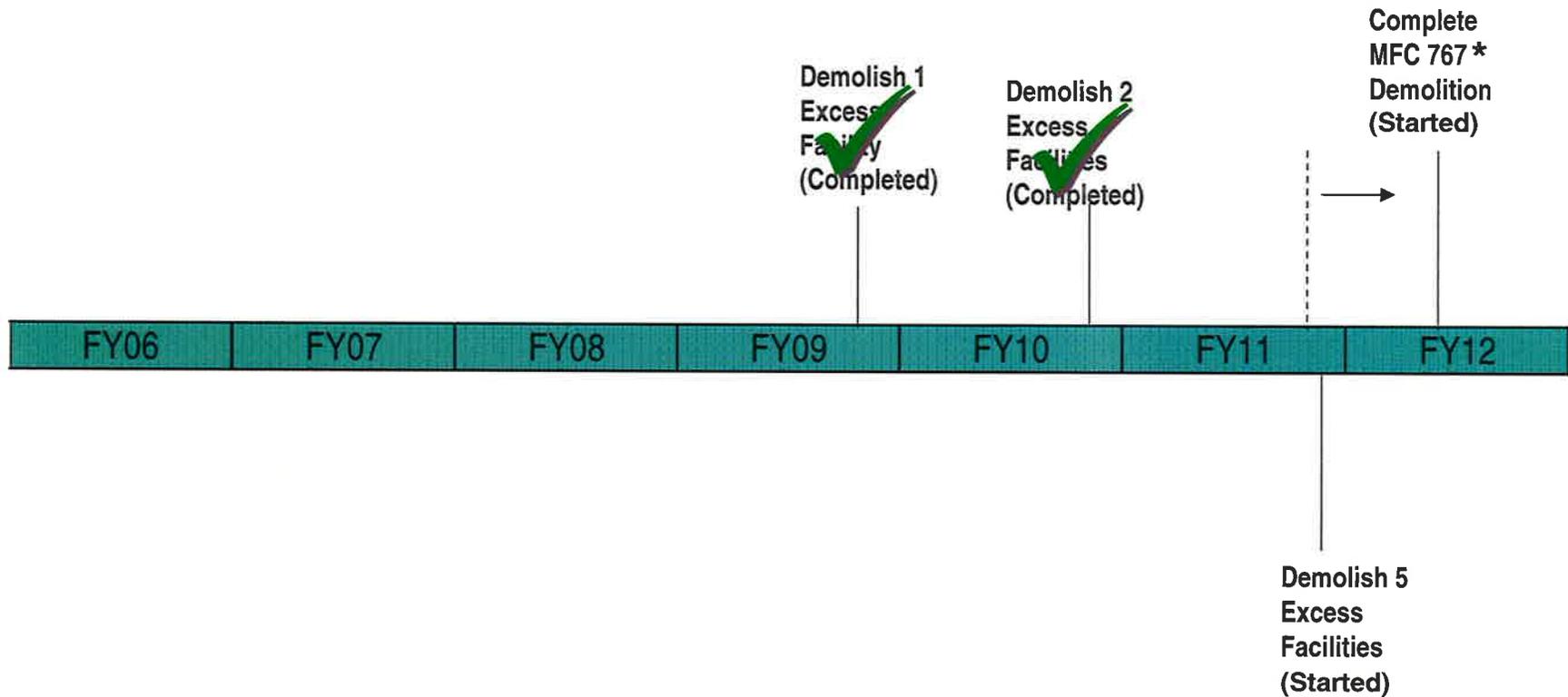
- Demolish 8 excess facilities
 - (4) Stretch goals included
- Demolish 1 high risk facility
 - EBR-II Reactor



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



* MFC 767 (EBR II) demolition shifted to 2012 due to sodium processing and asbestos abatement concerns



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

Accomplishments since July

- Completed all elemental sodium treatment in MFC-766 West
- Performed camera inspections of the MFC-767 primary vessel

Upcoming Activities

- Continue asbestos removal in EBR-II
- Begin passivated sodium treatment process in the MFC-766/767 transfer lines
- Finalize EBR-II Historical Preservation Actions
- Complete MFC-793A Alcohol Recovery Facility Pad/Tank



MFC-767 Reactor vessel nozzle removal: Camera inspections



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Integrated Waste Treatment Unit (Sodium-Bearing Waste) Project Objectives

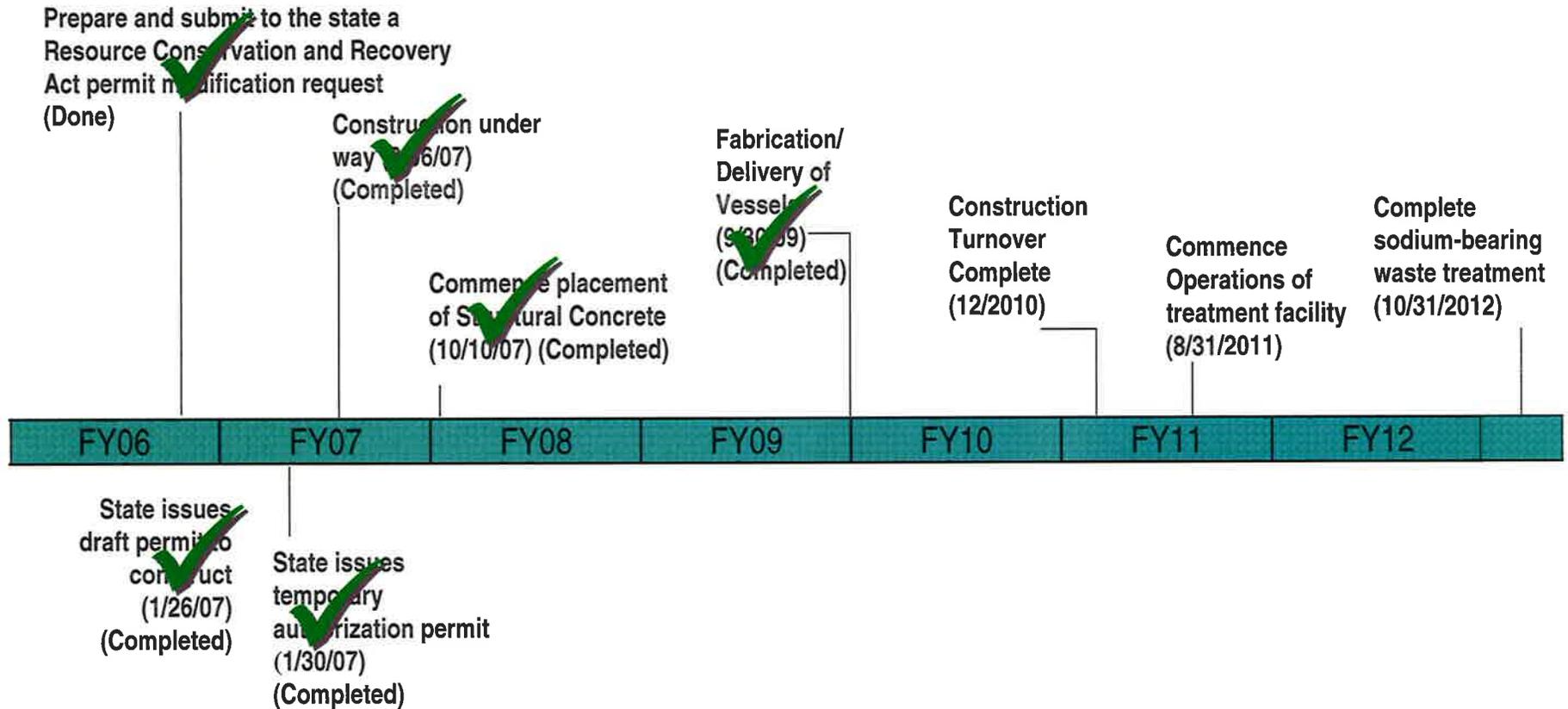
- Design, construct, test and operate the Sodium Bearing Waste Treatment Facility
- Process all sodium-bearing waste material no later than December 31, 2012



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Integrated Waste Treatment Unit (Sodium-Bearing Waste) Project



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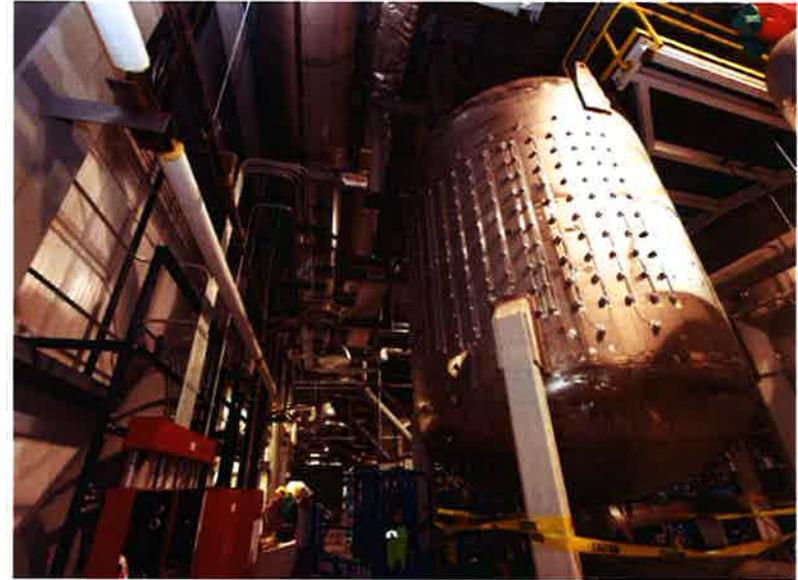
Integrated Waste Treatment Unit (Sodium-Bearing Waste) Project

Accomplishments since July

- Pipe fabrication and installation (treated water, instrument air, chilled water, steam/condensate, nitrogen, etc.)
- Installation of electrical grounding, conduit, wire, cable and cable tray
- Physical completion: 75%
- Project completion: 83%

Upcoming Activities

- Systems testing/turnover
- Complete construction - October 2010
 - systems needed for hot nitrogen integrated plant testing
- Complete remaining construction – December 2010



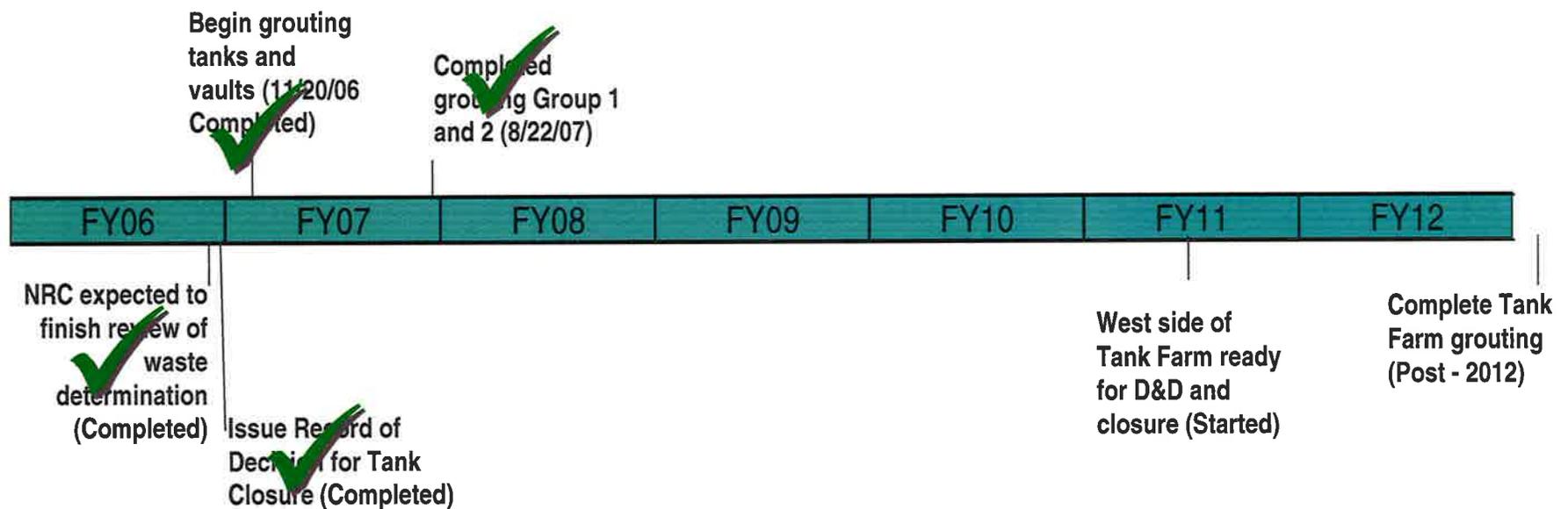
One of two mercury adsorber vessels in the off-gas treatment system



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INTEC Liquid Waste Facility (Tank Farm) Closure Project



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Spent Nuclear Fuel Disposition Project Objectives

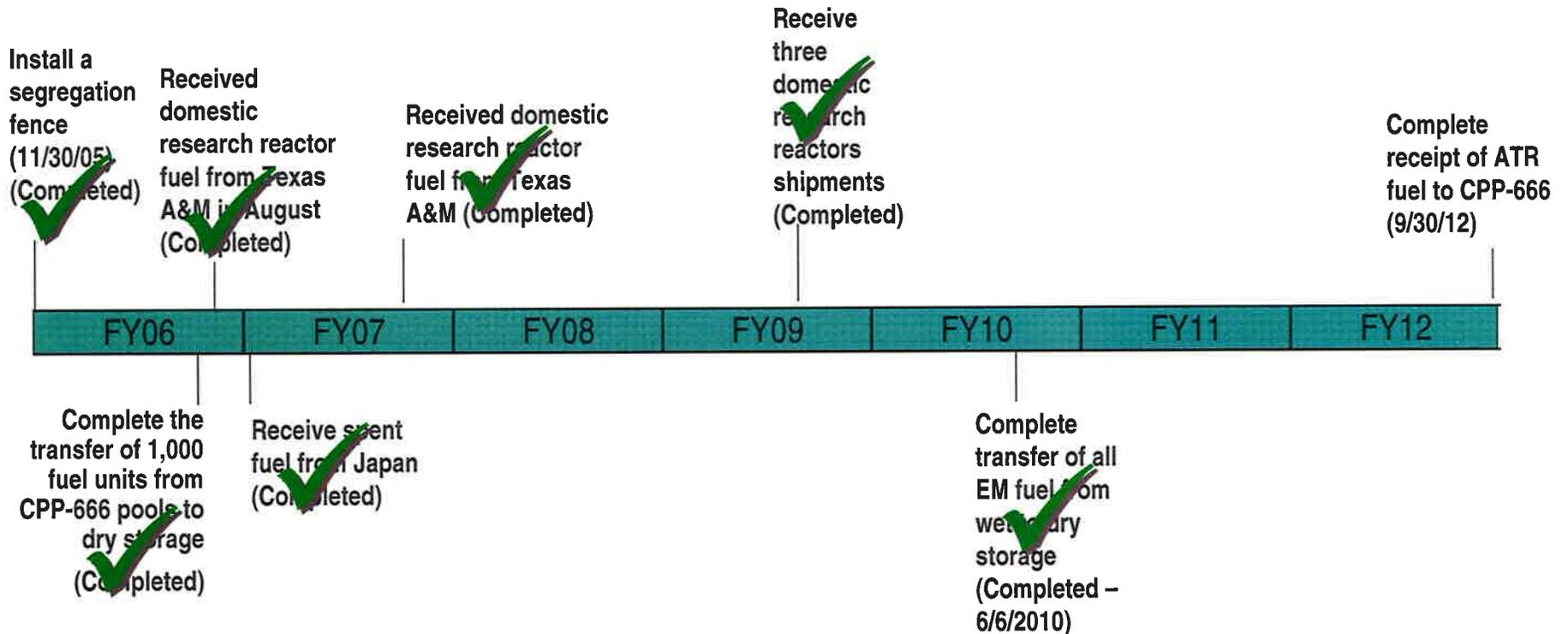
- Transfer legacy, EM-owned spent nuclear fuel (SNF) from wet storage to appropriate dry storage (completed)
- Receive and store SNF from the Advanced Test Reactor
- Receive Domestic and Foreign Research Reactor SNF for storage
- Prepare the SNF facilities for transition to another government entity by installing a segregation fence (Completed)
- Provide safe, regulatory-compliant, routine operations for INTEC SNF handling and storage facilities



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Spent Nuclear Fuel Disposition Project



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Calcine Disposition Project Objectives

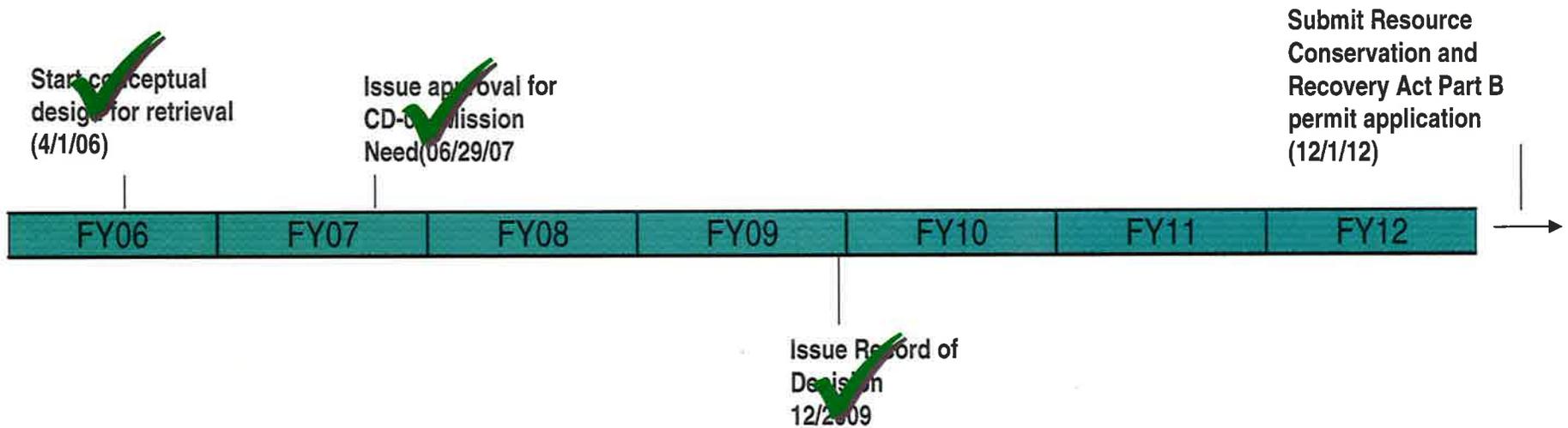
- Meet the requirements of the Idaho Settlement Agreement:
 - Issue a Record of Decision regarding the treatment of calcine by December 31, 2009 (Completed)
 - Submit an application for a RCRA Part B Permit governing the treatment and in-state disposition of calcine (transport and interim storage, if necessary)
 - Render calcine in a "road-ready" form (ready to be shipped out of State) by a "target" date of December 31, 2035
- Meet the requirements of the Idaho Site Treatment Plan for the safe management of calcine as a mixed hazardous waste under the Resource Conservation and Recovery Act per permits and agreed upon milestones



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Calcine Disposition Project



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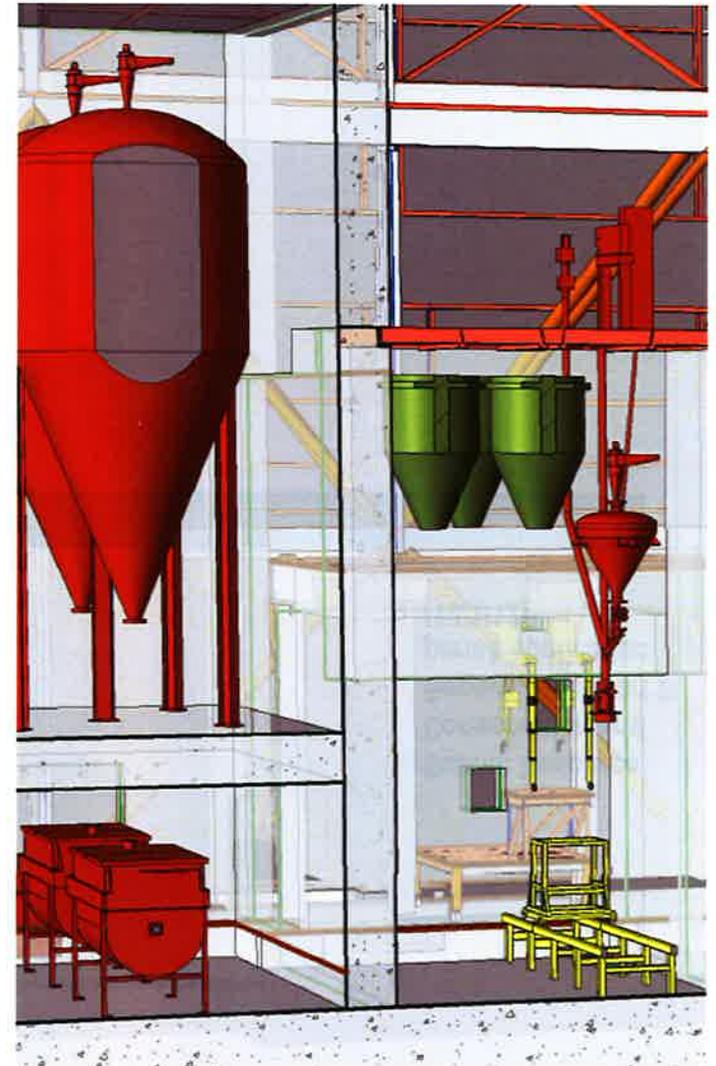
Calcine Disposition Project

Accomplishments since July

- Completed integrated review of Conceptual Design (30%) status with DOE-HQ, DEQ, and EPA
- Completed Phase 1 of DOE-HQ-directed Technology Readiness Assessment (TRA)

Upcoming Activities

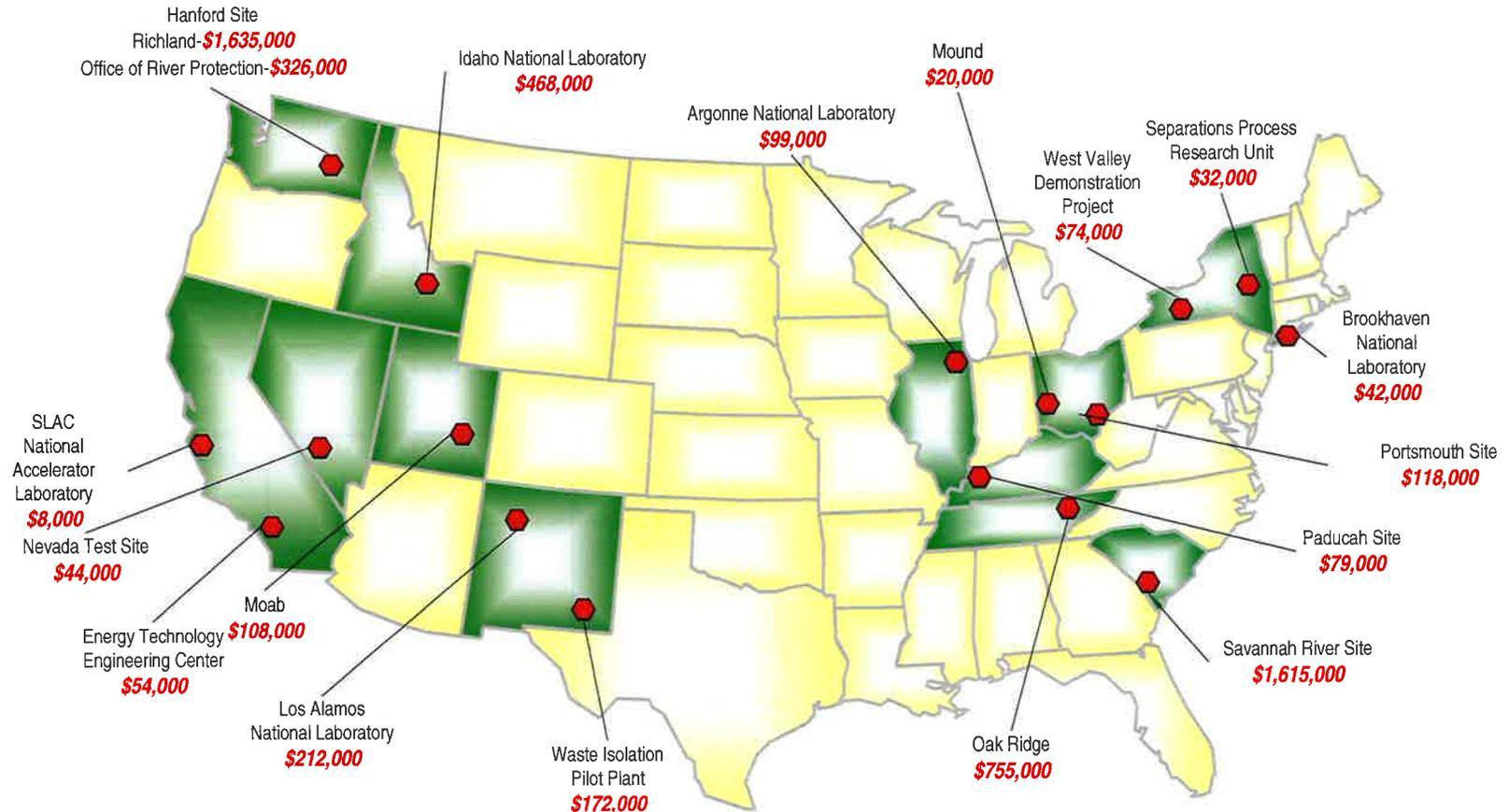
- Continue engineering evaluations and design in support of the RCRA Part B Permit Mod
- Initiate technology assessments in support of the RCRA Part B Permit Modification



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ARRA – DOE \$6 Billion— Where is the Money Going (\$ in thousands)



12 States, 17 Sites
Uranium/Thorium \$69 million
Management & Oversight \$70 million



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ARRA Performance Measures

Metrics Through: August 2010

PBS	Performance Metric	Unit	Life-Cycle Target	Previous Year Actuals	Current Year Totals	Cum Actual	CY Total Targets	Cum Target	Percentage Actual vs. Cum Target
ID-0013.R1	D&D Debris Disposed	meters 3	24,643	2,931	10,843	13,774	11,035	12,955	106%
ID-0013.R1	LLW Disposed	meters 3	650	503	1,462	1,965	500	1,000	197%
ID-0013.R1	MLLW Disposed	meters 3	1,095	894	337	1,231	305	1,195	103%
ID-0013.NEW.R1 TRU Waste	RH-TRU Certification Ready	meters 3	25.11	1.00	14.63	16	5.55	6.55	239%
ID-0030B.R1.2	Holes Grouted	holes	2,168.00	-	2,168.00	2,168	1220	1,220.00	178%
ID-0030B.R1.3 Soil and Ground Water Operations	Buried Waste Exhumed	acres	0.71	0.22	0.48	0.70	0.18	0.40	175%



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ARRA Performance Measures Con't

Metrics Through: August 2010

PBS	Performance Metric	Unit	Life-Cycle Target	Previous Year Actuals	Current Year Totals	Cum Actual	CY Total Targets	Cum Target	Percentage Actual vs. Cum Target
ID-0040B.R1.1 - Nuclear Facility Completions	Nuclear Facilities Demolished	count	11	3	8	11	7	10.0	110%
ID-0040B.R1.1 - Radioactive Facility Completions	Radioactive Facilities Demolished	count	16	1	13	14	12	13.0	108%
ID-0040B.R1.1 - Industrial Facility Completions	Industrial Facilities Demolished	count	12	3	2	5	3	6.0	83%
ID-0040B.R1.1 - Facility Square Footage Demolished	Gross Square Footage Demolished	gross square footage	258,222	68,469	31,722	100,191	31,738	100,207	100%
ID-0040B.R1.2 - Nuclear Facility Completions	Nuclear Facilities Demolished	count	5	1	2	3	-	1.0	300%
ID-0040B.R1.2 - Radioactive Facility Completions	Radioactive Facilities Demolished	count	7	2	4	6	3	5.0	120%
ID-0040B.R1.2 - Industrial Facility Completions	Industrial Facilities Demolished	count	20	10	6	16	6	16.0	100%
ID-0040B.R1.2 - Square Footage Demolished	Gross Square Footage Demolished	gross square footage	466,430	232,792	43,876	276,668	3,375	233,967	118%



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ARRA Performance Measures Con't

Metrics Through: August 2010

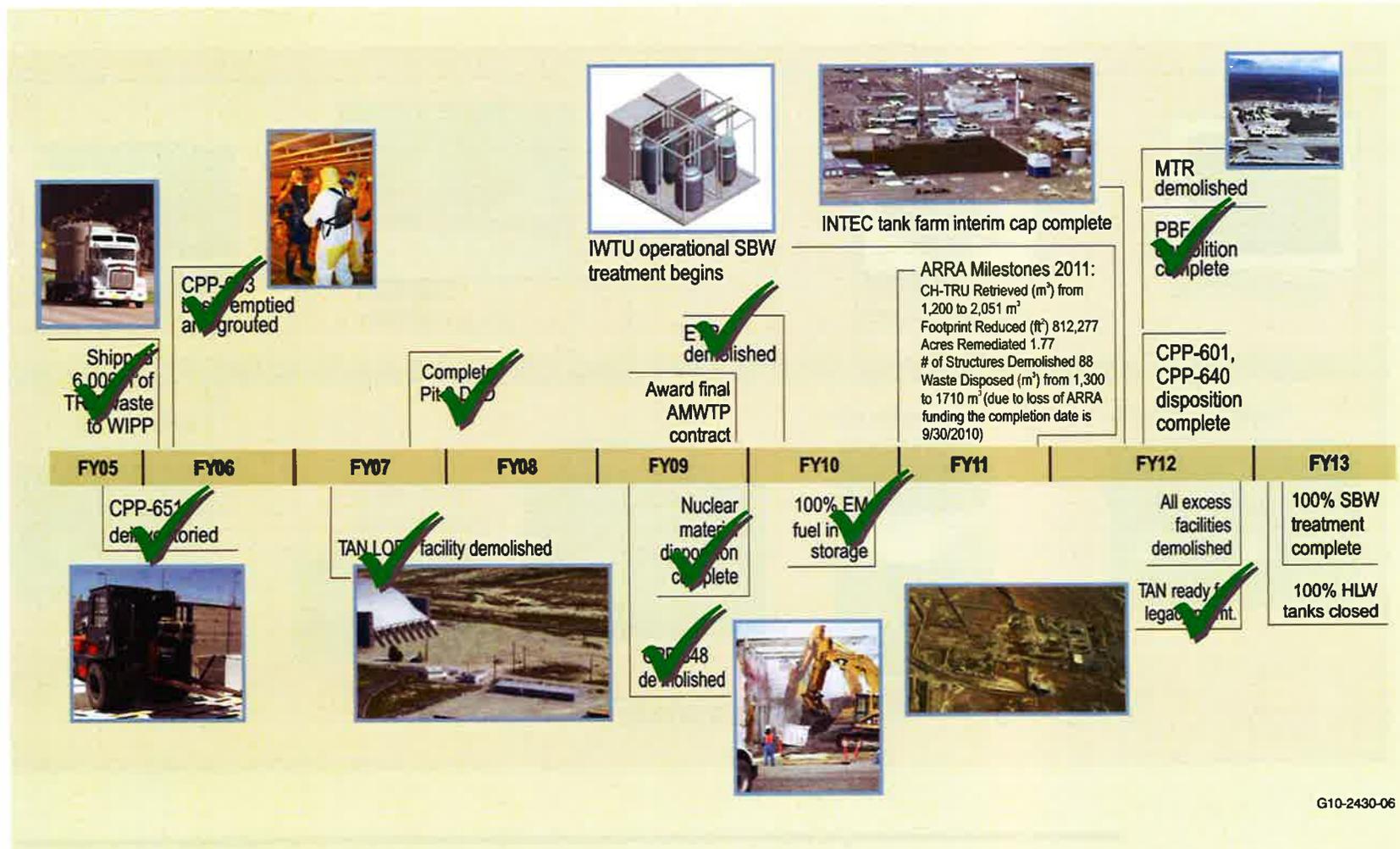
PBS	Performance Metric	Unit	Life-Cycle Target	Previous Year Actuals	Current Year Totals	Cum Actual	CY Total Targets	Cum Target	Percentage Actual vs. Cum Target
ID-0040B.NEW.R 1.3 - Nuclear Facility Completions	Nuclear Facilities Demolished	count	13	4	1	5	1	5.0	100%
ID-0040B.NEW.R 1.3 - Radioactive Facility Completions	Radioactive Facilities Demolished	count	5	-	2	2	2	2.0	100%
ID-0040B.NEW.R 1.3 - Industrial Facility Completions	Industrial Facilities Demolished	count	1	-	1	1	1	1.0	100%
ID-0040B.NEW.R 1.3 - Square Footage Demolished	Gross Square Footage Demolished	gross square footage	87,625	16,994	3,993	20,987	3,993	20,987.0	100%



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Key Activities/Completion Dates



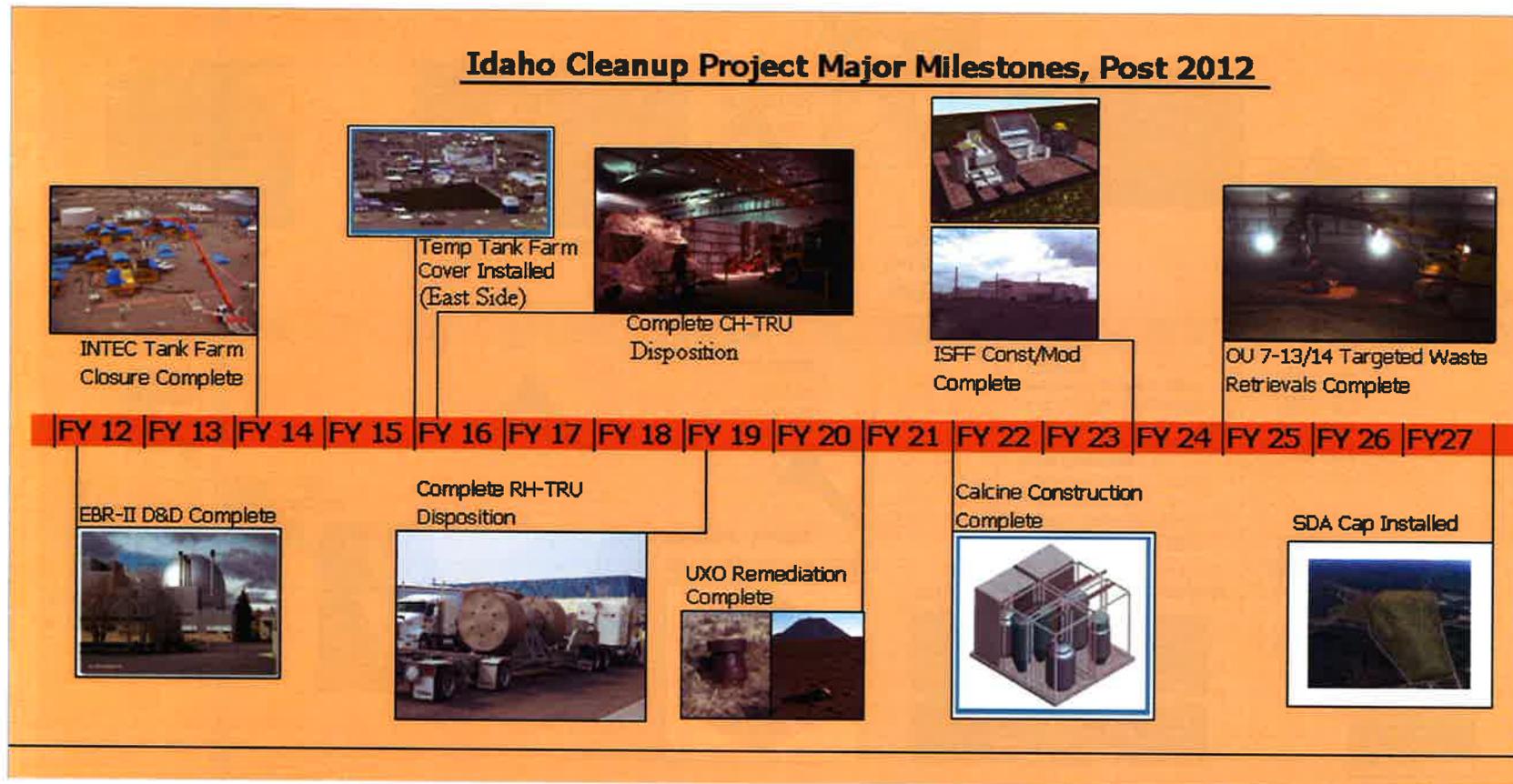
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Idaho Project Milestones – Post 2012



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Items of Potential Interest

- Post 2012 Contract Activities
- IWTY Construction Substantially Complete-
October 2010
- EM's Journey to Excellence
- FY 2012 and Outyear Budget



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