
***Idaho Cleanup Project Progress
Citizens Advisory Board
March FY 2011 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

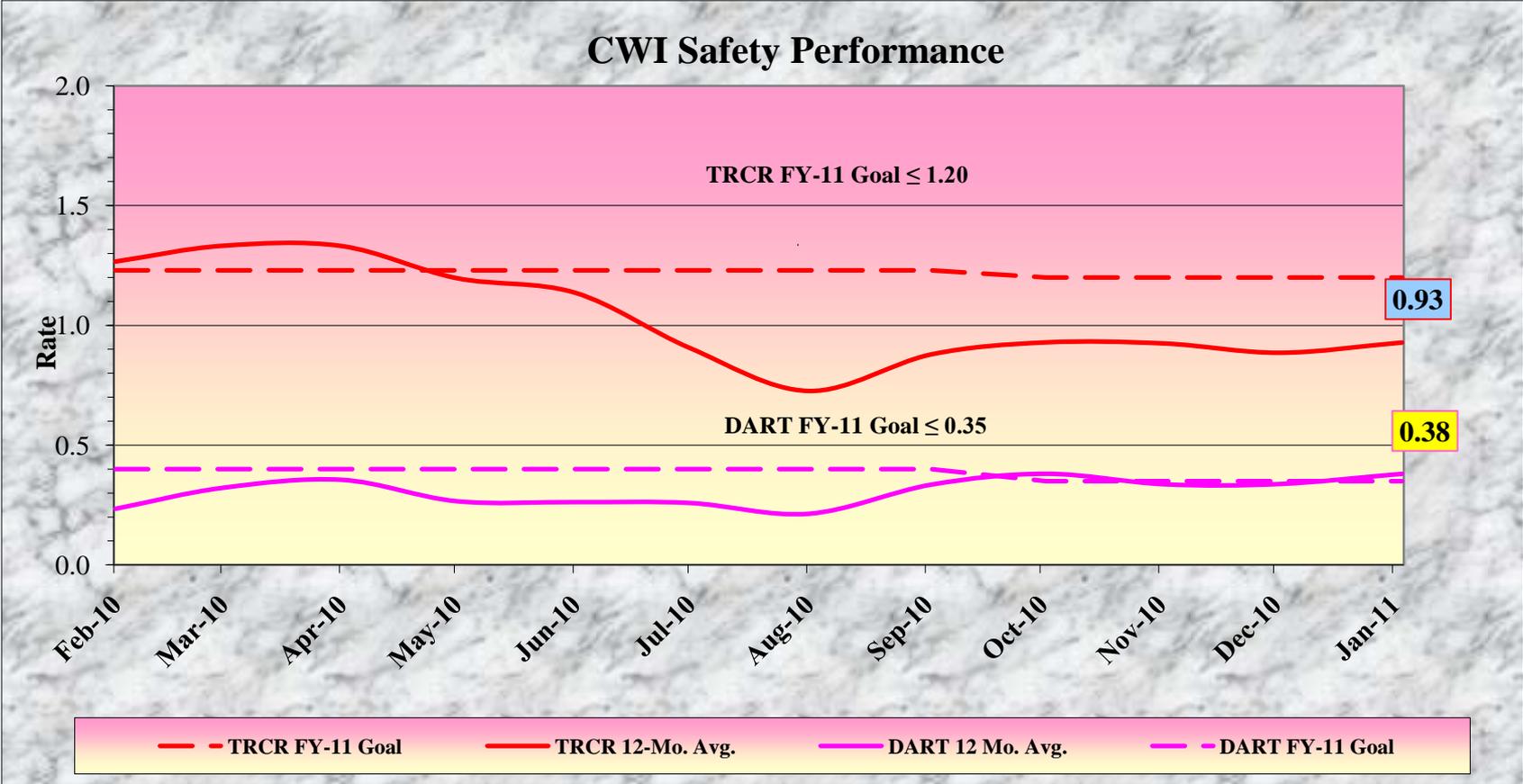


Idaho Cleanup Project Scope ARRA Work Included (con't)

- 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



Safety Performance - CWI

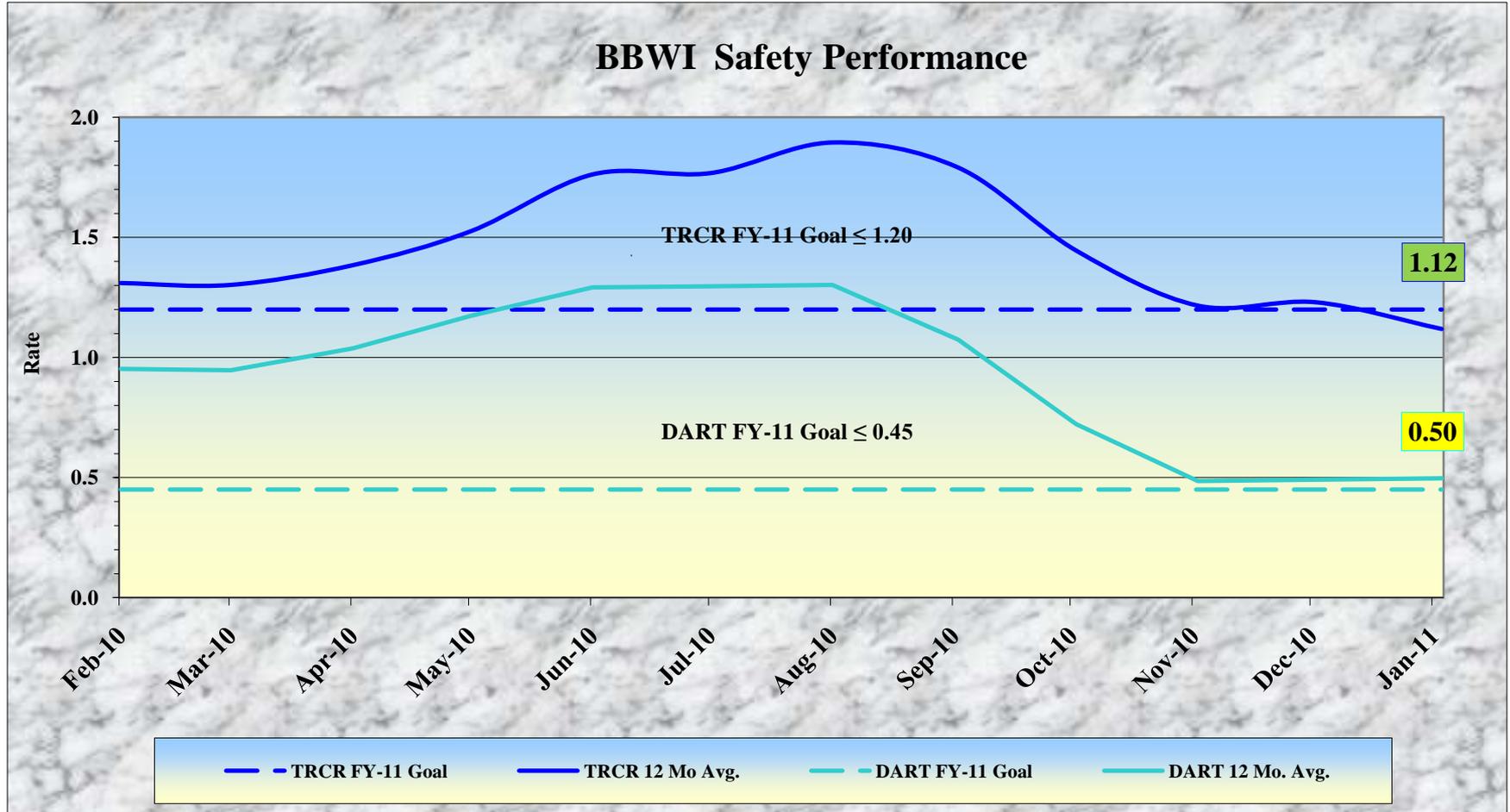


* Rate of occurrence per 200,000 man hours worked

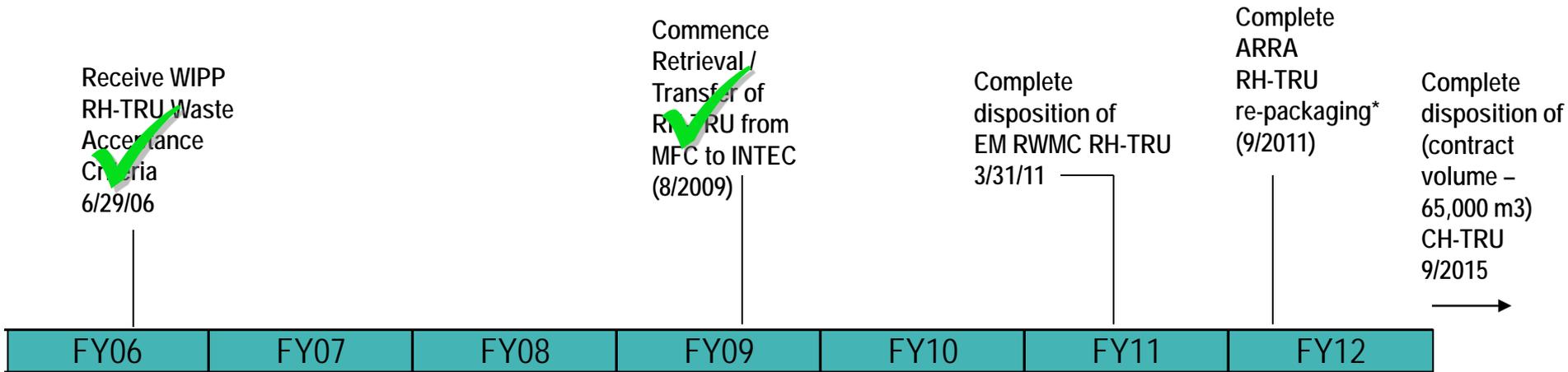


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Safety Performance - AMWTP



Transuranic Waste Disposition Project



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*Funding dependent



Transuranic Waste Disposition

Accomplishments Since January

- Nine shipments completed total of 240 remote handled (RH) transuranic (TRU) waste shipments to the Waste Isolation Pilot Plant (WIPP)
- Processed 17.63 m³ of 25.6 m³ of RH-TRU waste from MFC

Upcoming Activities

- Complete shipping RH-TRU target (new date March 31, 2011)
- Development of alternatives for sodium treatment systems designed



Repackaging an RH-TRU liner in the FDP



Advanced Mixed Waste Treatment Project

Accomplishments Since January

- Shipped 207 cubic meters of stored transuranic radioactive waste out of Idaho (through Feb. 28, 2011) - since Oct. 1, 2010 shipped 645 cubic meters
- Shipped 1,085 cubic meters of historically managed transuranic waste reclassified as mixed low-level waste out of Idaho (through Feb. 28, 2011) - since May 2005 AMWTP shipped 7,905 cubic meters
- Shipped 1,168 cubic meters of stored transuranic and mixed low-level waste from INL site (through Feb. 28, 2011) - since April 1999 shipped 42,750 cubic meters
- Developing new Retrieval Containment Enclosure for final ~10 percent of waste retrieval operations
- AMWTP employees worked 11.4 million hours without a lost time injury
- Bechtel BWXT Idaho contract extended from April 1 – June 30, 2011

Upcoming Activities

- Anticipated award of AMWTP contract scheduled for early May 2011



AMWTP employees verify the number of a box containing low level radioactive waste and where it is to be moved inside the Transuranic Storage Area-Retrieval Enclosure.



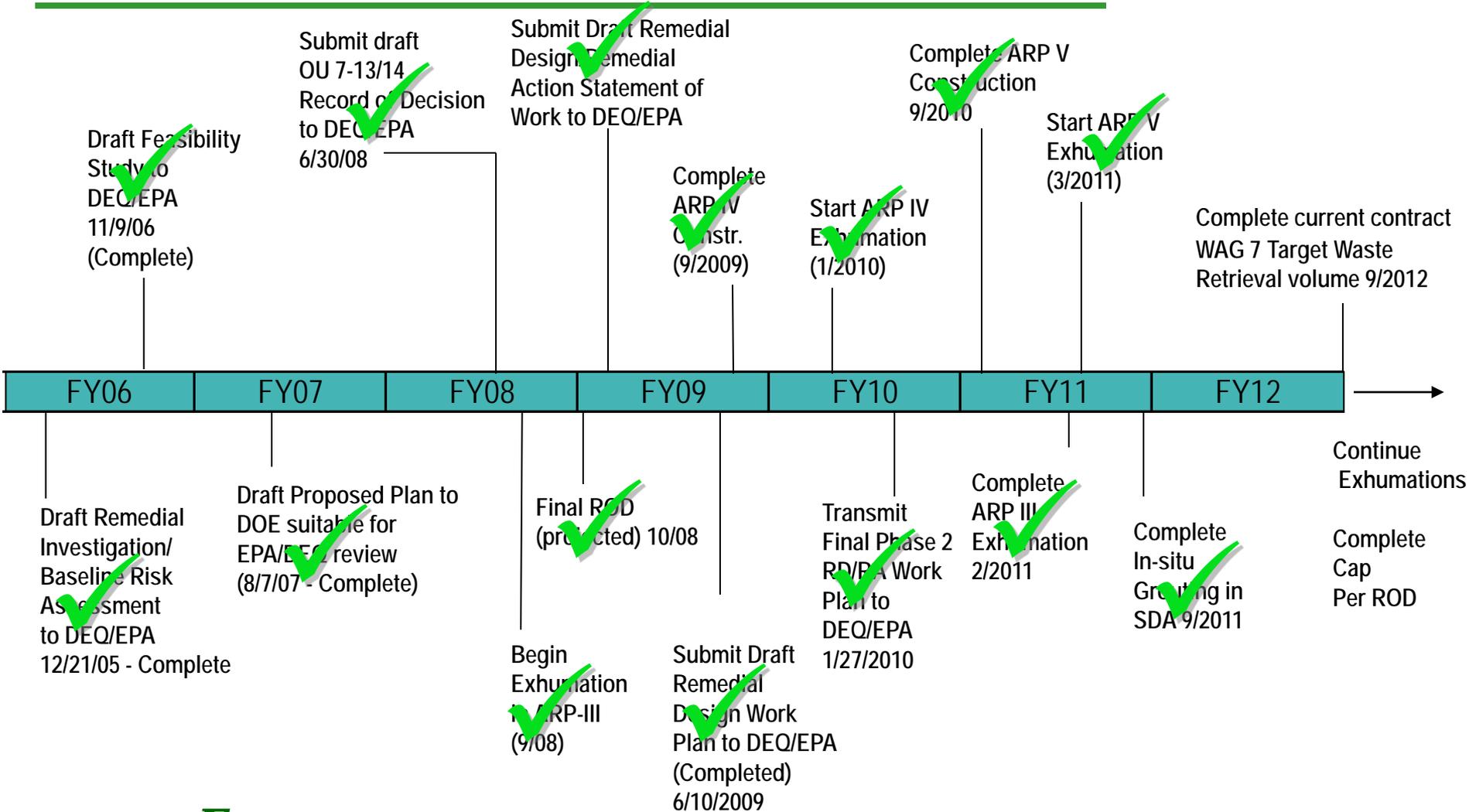
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Waste Area Group (WAG) 7 Project Objectives

- 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) I, II, III and IV and disposition waste
- Complete in situ grouting of 21 locations (completed)
- Continue subsurface solvent vapor extraction (OCVZ)
- Continue environmental monitoring and institutional controls



WAG 7 Project



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WAG 7 Project

Accomplishments Since January

- Completed waste exhumation at ARP IV
- Project-to-date exhumation and packaging:
 - Exhumed 3,391 cubic yards of waste zone materials (49,091 total)
 - Packaged 1,096 drums of targeted waste (22,370 total)
- Completed 2.13 acres out of 5.69, ahead of schedule, under budget
- Started ARP V exhumation (Pit 9)
- Completed ARP VI construction

Upcoming Activities

- Complete ARP VI readiness testing and begin waste exhumation
- Continue ARP VII construction

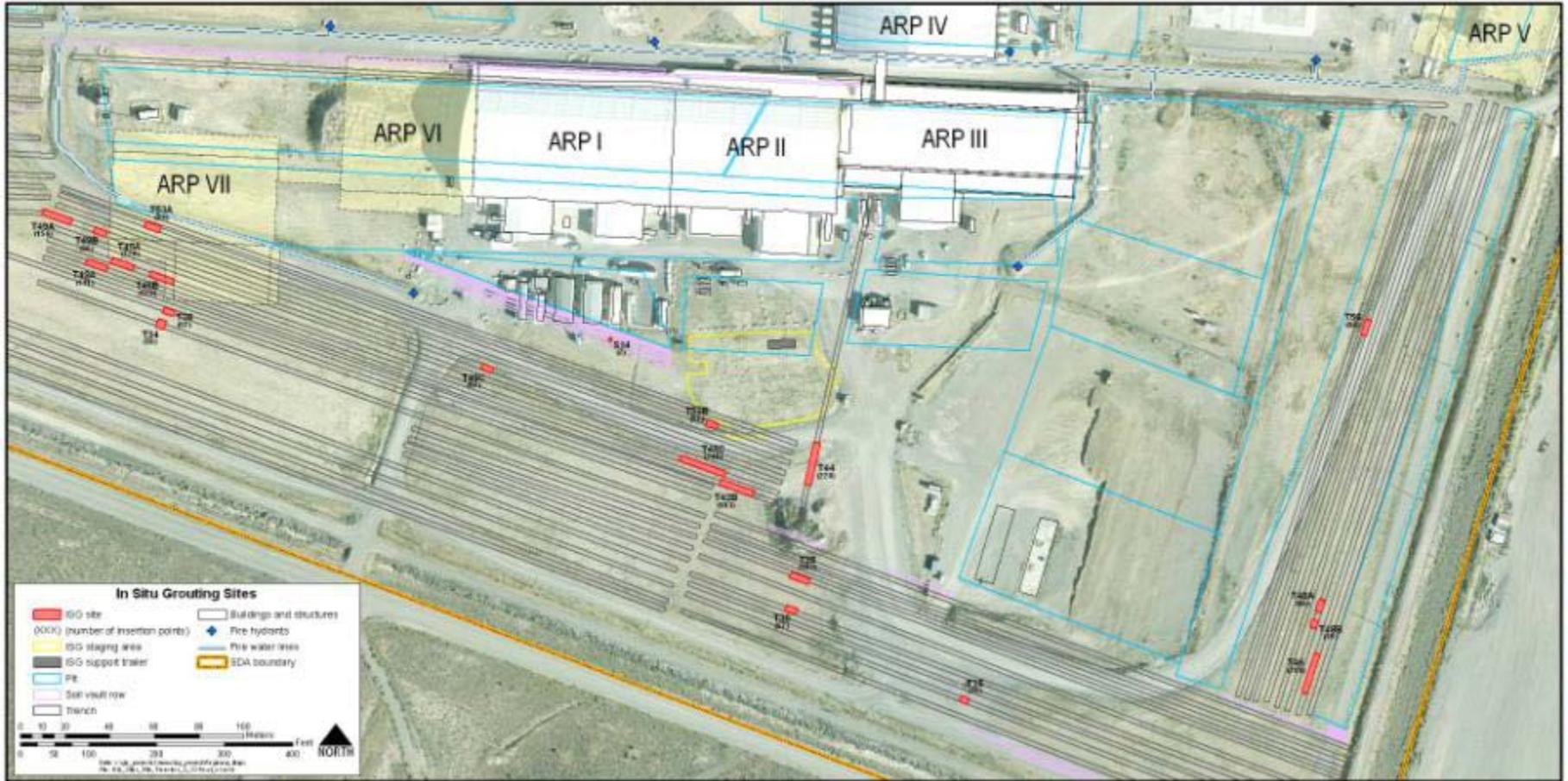


Exhumation and sorting of waste from Pit 9 (ARP-V)



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WAG 7 Project (cont'd)



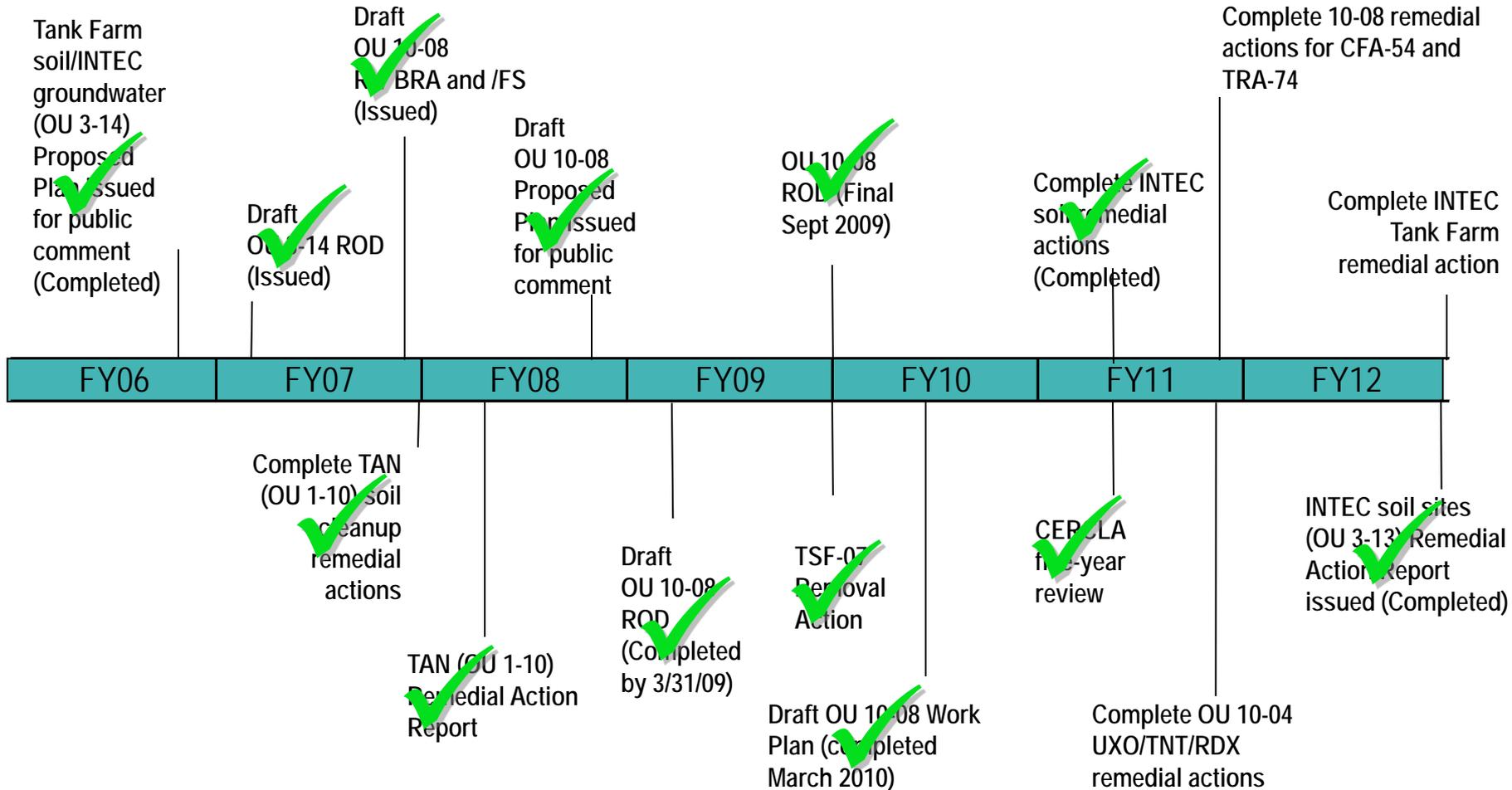
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Other CERCLA Remediation Project Objectives

- WAG 1:
 - Continue TAN Groundwater Remediation
- WAG 3:
 - Complete Phase I, II and III of the OU 3-14 Record of Decision (near term corrective actions include 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



Other CERCLA Remediation Projects



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Other CERCLA Remediation Projects (con't)

Site wide – Waste Area Group 10

Accomplishments Since January

- Completed the five-year review of CERCLA sites
- Completed the Ecological Long-Term Monitoring report

Upcoming Activities

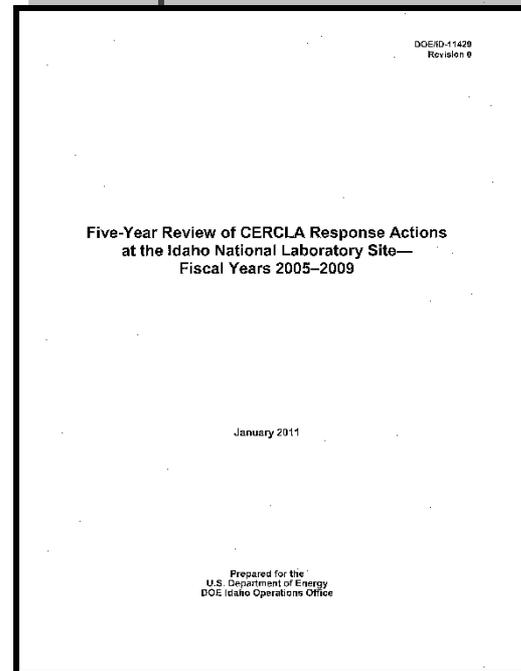
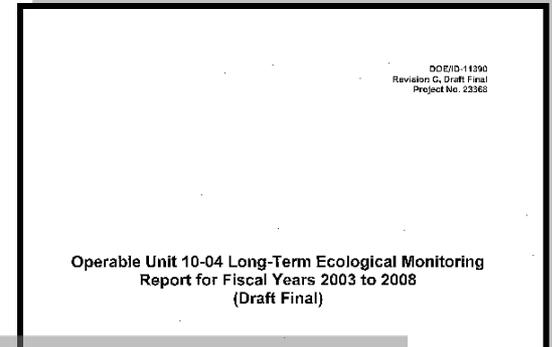
- Revise OU 10-04 Phase IV Work Plan
- Perform surficial ordnance remediation at the Mass Detonation Area



Ecological monitoring (2007)



Ordnance disposal (2010)



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Other CERCLA Remediation Projects (con't)

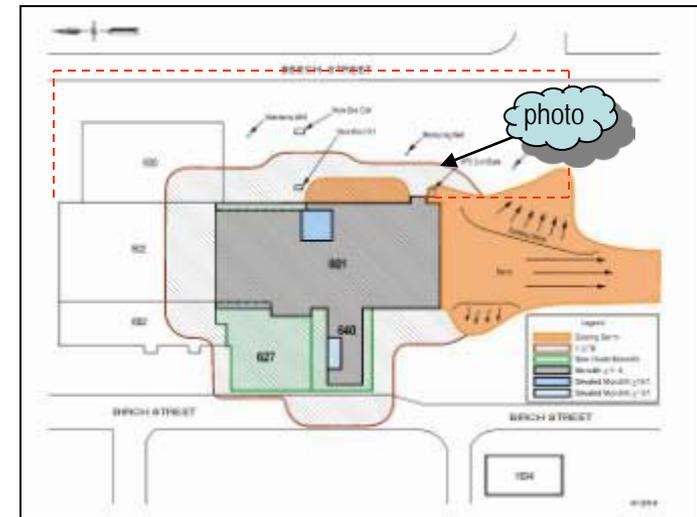
INTEC – Waste Area Group 3

On-Going Activities

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

Upcoming Activities

- Complete Phase I of the OU 3-14 remedy - installation of low permeability pavement outside the Tank Farm (FY11)
- Continue to eliminate sources of water releases to the perched water zones



OU 3-14 Phase I paving east of CPP-601



Other CERCLA Remediation Projects (con't)

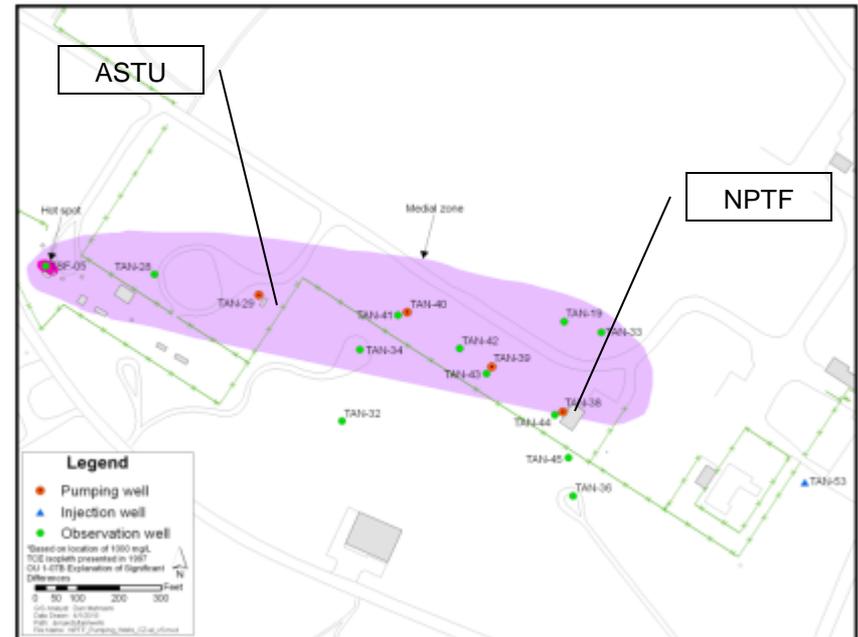
Test Area North – Waste Area Group 1

On-Going Activities

- Perform bi-monthly injections to support in situ bioremediation (ISB)
- Operate the New Pump and Treat Facility
- Operate the Air Stripper Treatment Unit
- Collect required groundwater samples to track the progress of the remedial action

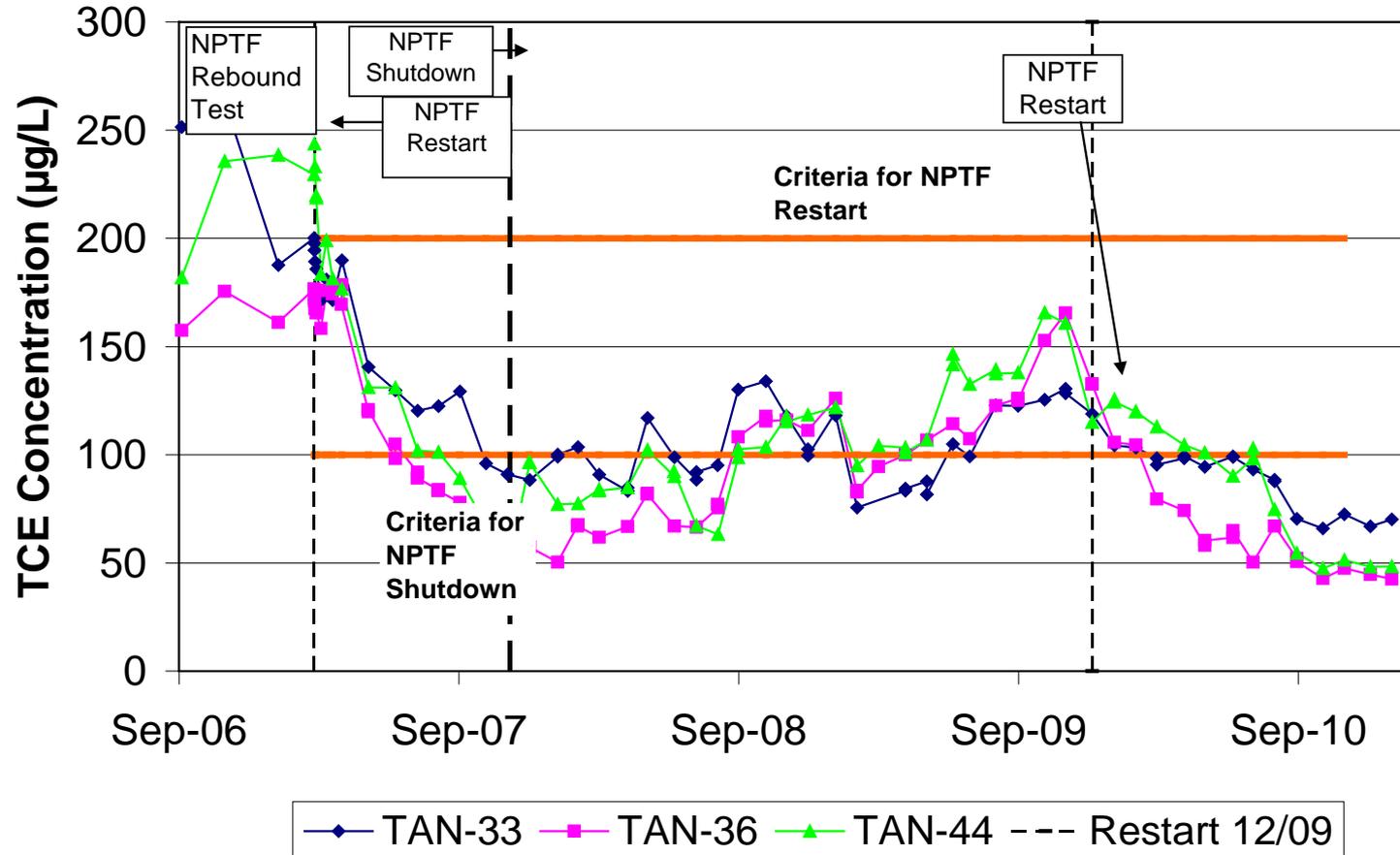
Upcoming Activities

- Develop 5-year test plan for remedial strategy (FY11)



Other CERCLA Remediation Projects (con't)

TCE Concentrations for the Medial Zone Wells



Other CERCLA Remediation Projects

Idaho CERCLA Disposal Facility

Accomplishments Since January

- Received 302 cubic yards (194,000 pounds) of soil and debris
- Received and disposed of MTR vessel in landfill

Upcoming Activities

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

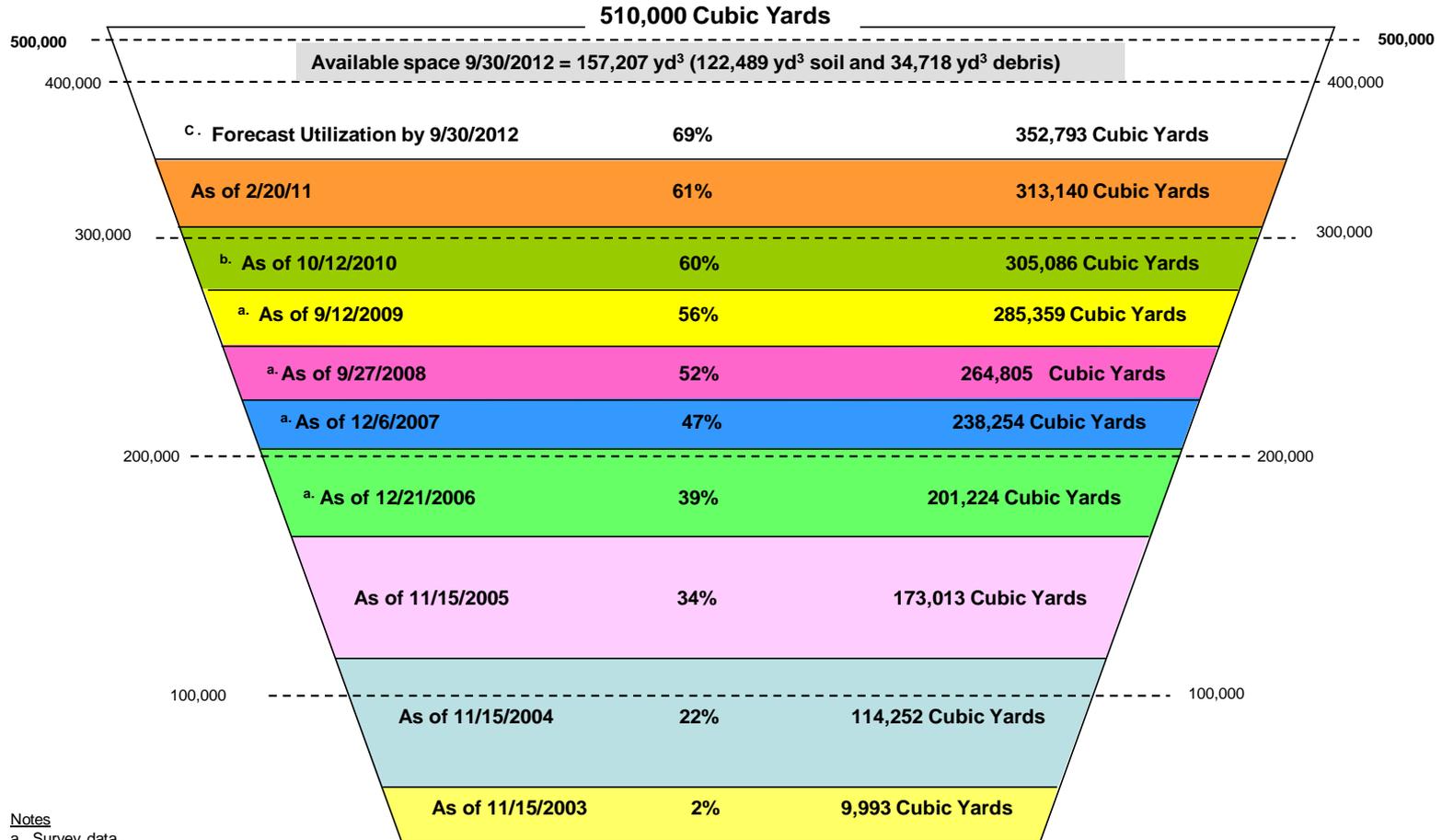


An aerial view of ICDF



Other CERCLA Remediation Projects

ICDF Project Landfill Utilization



Notes

- a. Survey data
- b. Preliminary Survey data
- c. Forecast utilization includes ARRA building debris.

Opened 09/15/2003

Updated 2.20.11

D&D Objectives

- Decommission and demolish 171 under the baseline program*
 - 164 Completed:
 - 7 high-risk facilities (6 completed)
 - 164 excess facilities (158 completed)
- Decommission and or demolish 49 “New” facilities under ARRA funding
 - 39 Completed:
 - 4 high risk facilities (1 completed)
 - TRA Hot Cells
 - EBR-II Reactor
 - CPP 601
 - CPP 640 (completed)
 - 39 excess facilities (36 completed)
 - 6 Stretch goals (2 completed)

** All D&D work is now ARRA funded (40 baseline; 49 “New”; Total = 89)*

“72 of 89 completed under ARRA through February 2010”



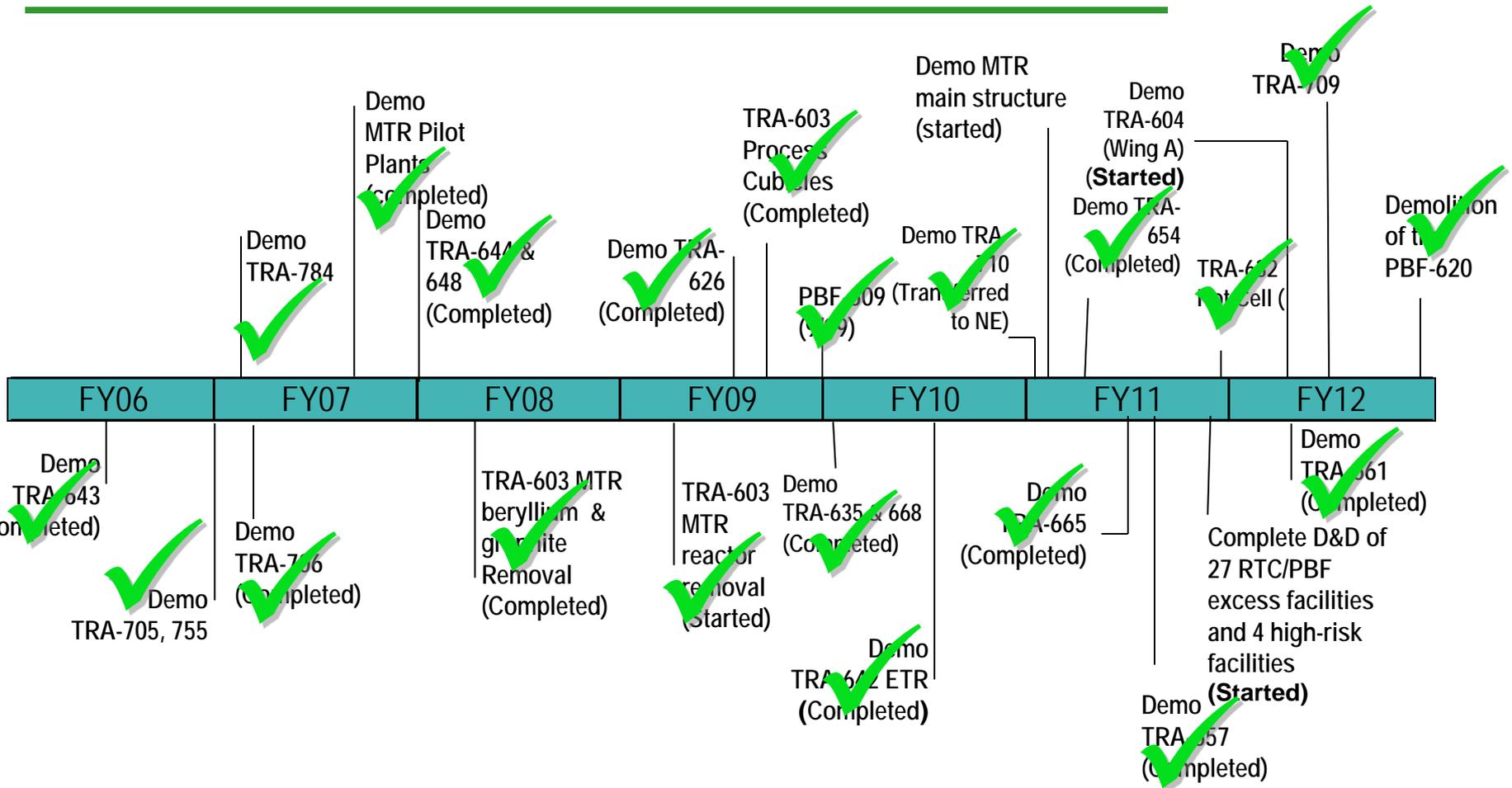
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ARRA D&D – ATR Complex / PBF / RWMC Project Objectives

- Demolish 16 excess facilities
 - 1 Stretch goal included (Completed in September FY10)
- Demolish 2 high risk facilities
 - MTR Reactor
 - TRA Hot Cells



D&D – ATR Complex / PBF / RWMC



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

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ARRA D&D - ATR Complex / PBF / RWMC

Accomplishments Since January

- Completed MTR reactor vessel transport to ICDF
- Continued TRA-632 Hot Cell #3 (HC3) hazardous-waste removal.
- Completed WMF-711 exterior demolition
- Completed WMF-736 demolition

Upcoming Activities

- Initiate TRA-603 exterior demolition preparations
- Initiate TRA-610 reroute preparations
- Complete TRA-603/604 basement shared-wall installation
- Complete waste removal from TRA-632 Hot Cell 3
- Initiate TRA-632 exterior demolition
- Continue Retention Basin D&D



MTR Reactor vessel transportation to ICDF



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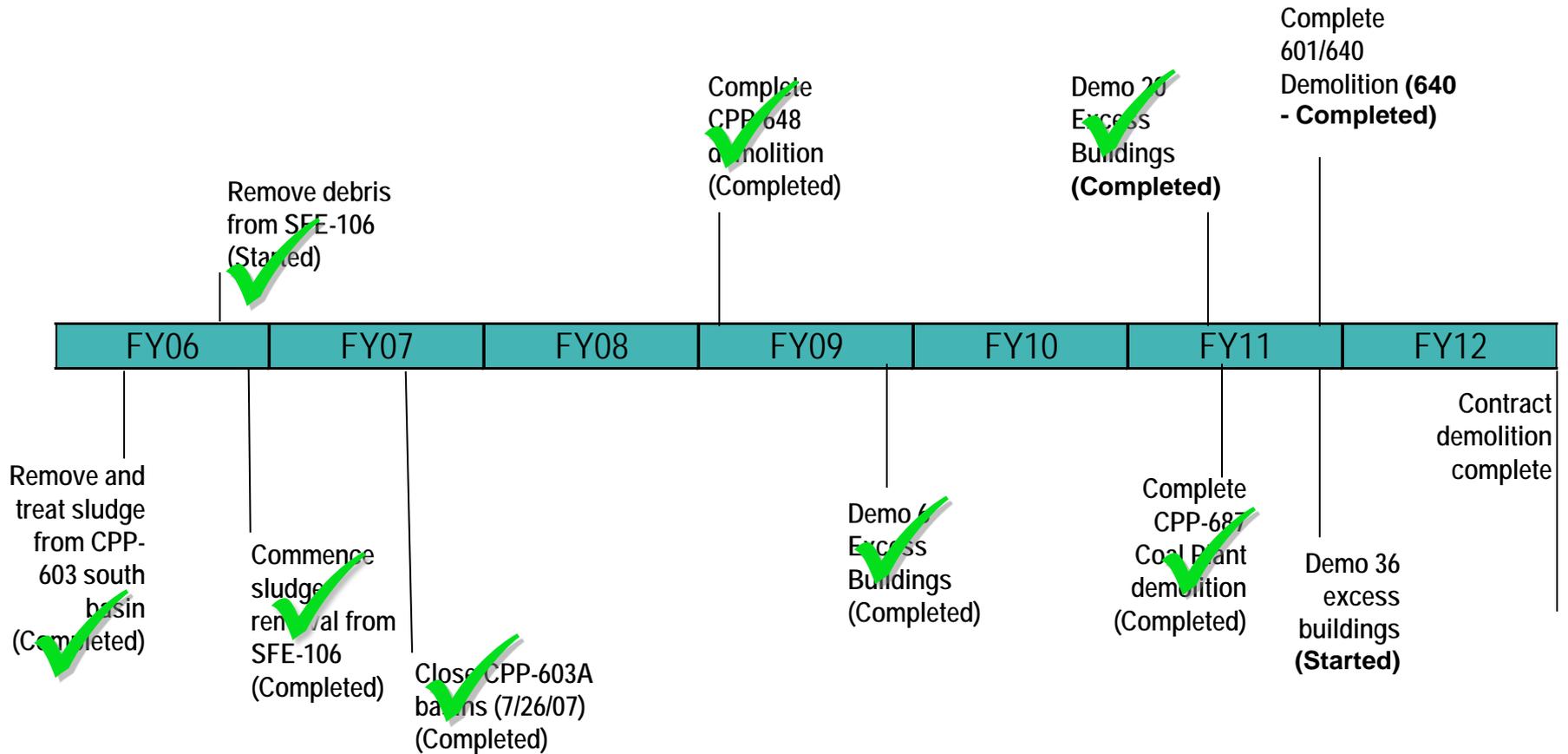
ARRA D&D – INTEC Project Objectives

- Demolish 60 excess facilities
 - 1 Stretch goal included (Completed in September FY10)
- 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 January

- Continued CPP-602 interior demolition, mechanical/electrical isolations and waste removal
- Completed CPP-1638 demolition
- Completed CPP-1637 demolition

Upcoming Activities

- Complete demolition of the Fuel Reprocessing Building (CPP-601)
- Complete CPP-602 D&D

Removing debris of CPP-1637 warehouse



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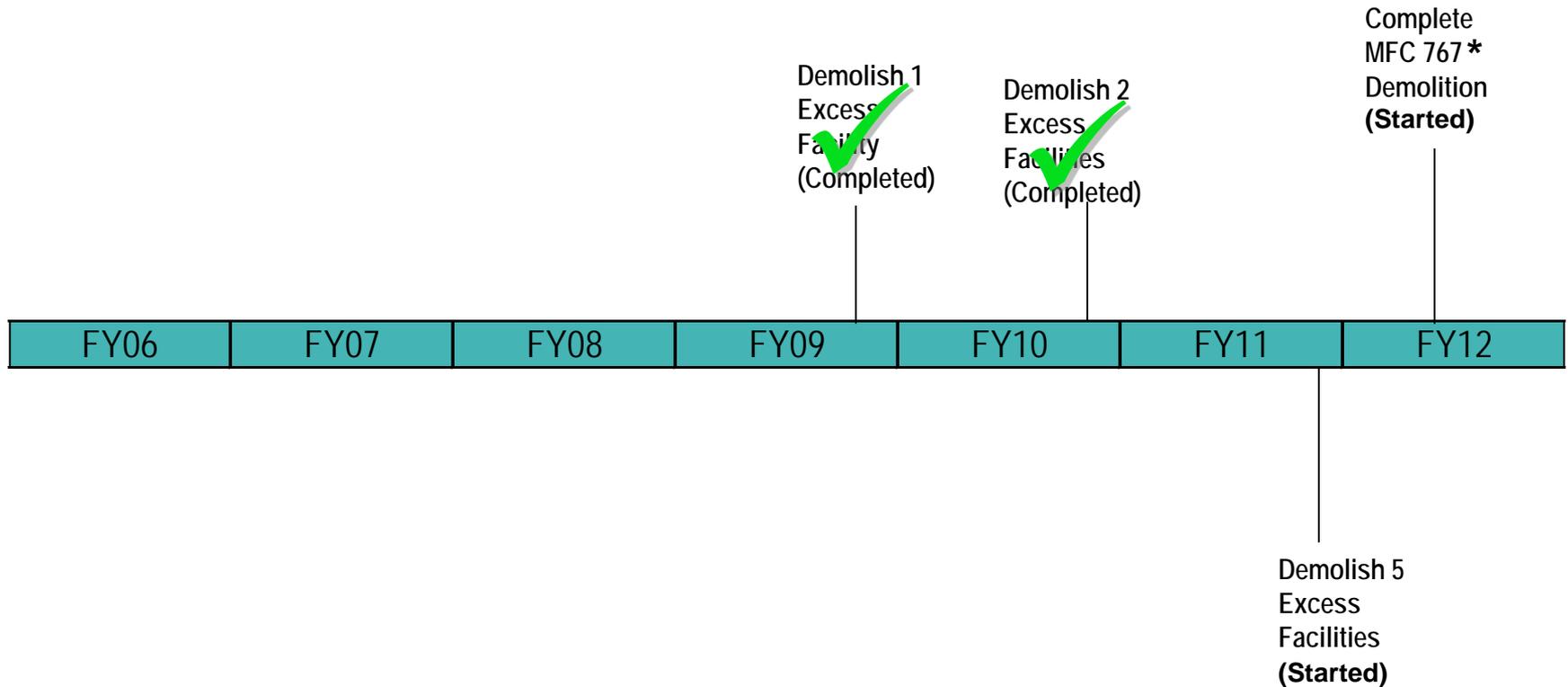
ARRA D&D – Materials and Fuels Complex (MFC) Project Objectives

- 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 January

- Began preparations for steam & condensate isolations in MFC-768
- Completed disassembly and removal of sodium from the M2 primary coolant pump
- Completed removal and disassembly of the M1 Primary coolant pump
- Completed tank internal video inspections, electrical isolations, and characterization sampling of 2 MFC-793A alcohol tanks
- Completed Preps for passivated sodium treatment in MFC-766/767
- Began MFC yard-piping sodium processing



M2 Primary coolant pump removal

Upcoming Activities

- Complete preparation of MFC-767 for sodium processing
- Complete preparation of MFC-767 shut down coolers for sodium/NaK processing



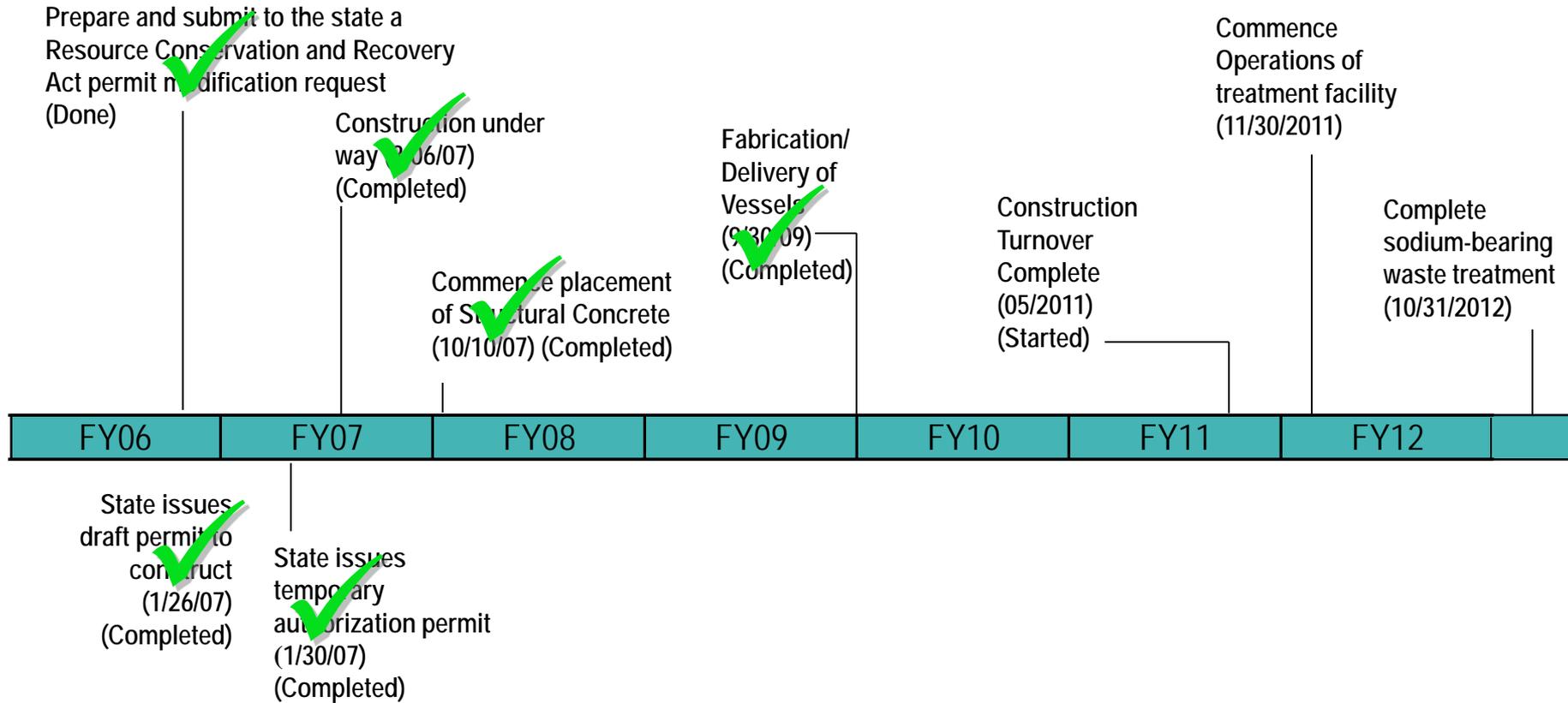
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Integrated Waste Treatment Unit (Sodium-Bearing Waste) Project Objectives

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



Integrated Waste Treatment Unit (Sodium-Bearing Waste) Project



Integrated Waste Treatment Unit (Sodium-Bearing Waste) Project

Accomplishments Since January

- Construction completed on 33 of 33 systems needed for integrated plant testing
- Physical completion: 94%
- Project completion: 94%

Process equipment in the IWTU



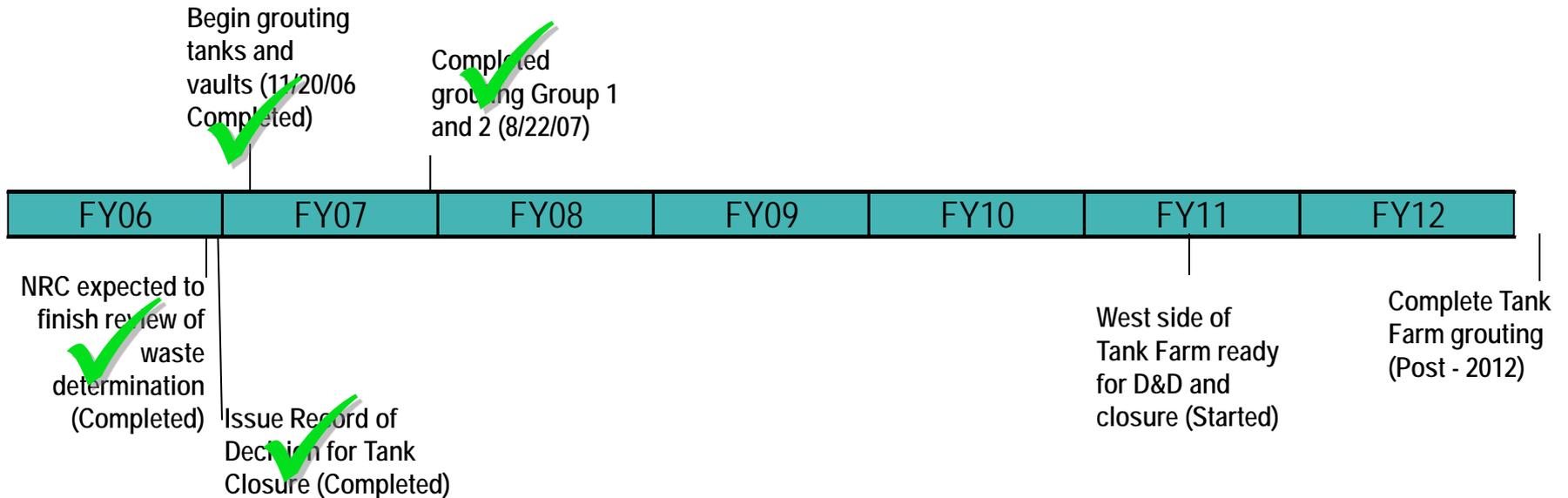
Upcoming Activities

- Complete remaining construction items in process and off-gas buildings
- Systems testing
- Achieve CD-4



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INTEC Liquid Waste Facility (Tank Farm) Closure Project

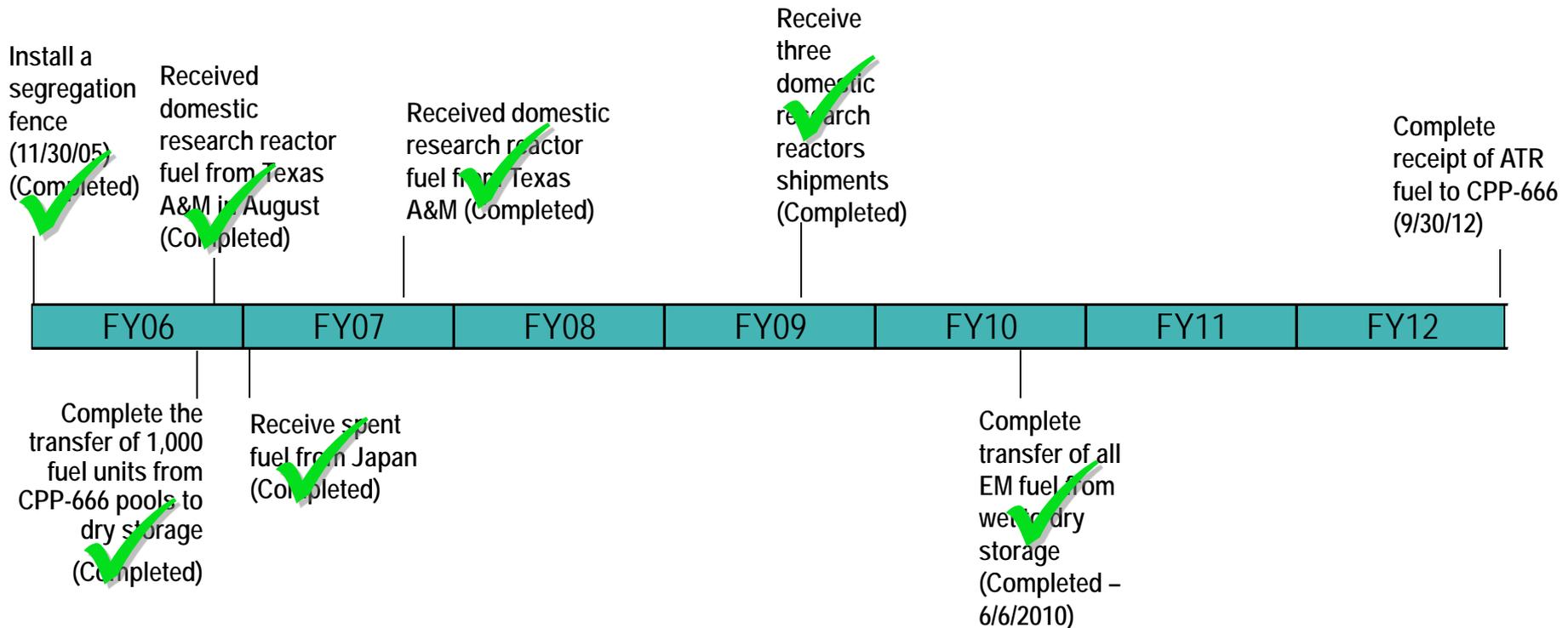


Spent Nuclear Fuel Disposition Project Objectives

- 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



Spent Nuclear Fuel Disposition Project



Spent Nuclear Fuel Disposition Project

Accomplishments Since January

- Initiated planning for relocation of two 125B NuPac casks from CPP-666 to CPP-603
- Initiated planning for receipt of a DRR shipment from Reed College in FY 2011.

CPP-603 SNF Activities

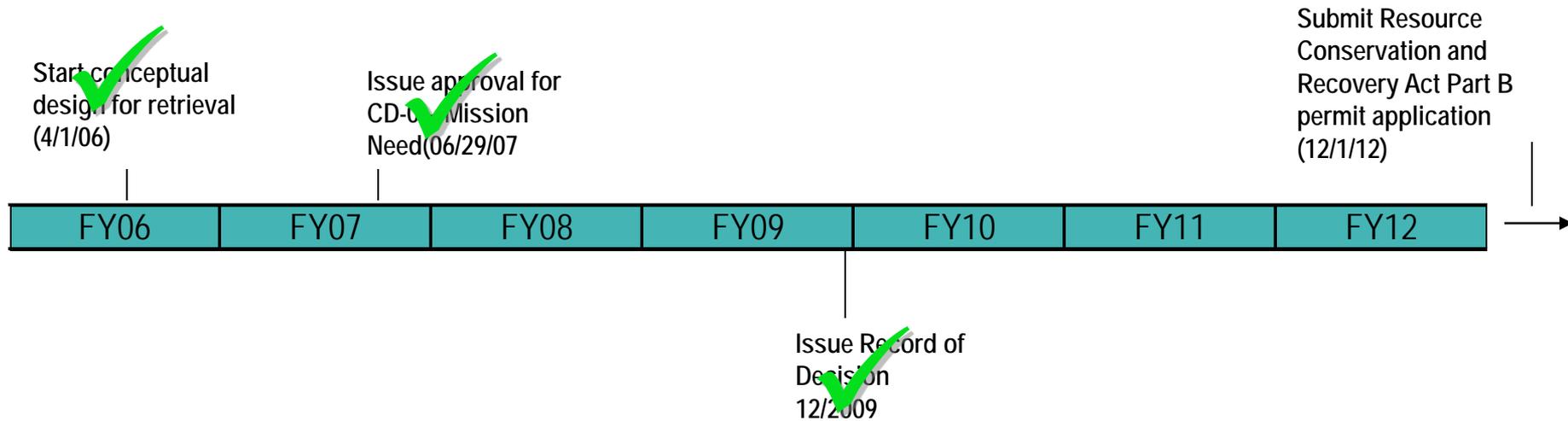


Calcine Disposition Project Objectives

- 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 interim in-state storage of calcine
 - 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



Calcline Disposition Project



Calcine Disposition Project

Accomplishments Since January

- Completed the Site Treatment Plan P-1 milestone to identify Calcine Disposition Project (CDP) funding.
- Contracted the services of HIP vendors for waste-form and equipment development.
- Underwent Independent Technology Readiness Assessment (TRA)
- Completed the *CDP Technology Maturation Plan* describing activities, cost, and schedule necessary to mature HIP technologies.

Upcoming Activities

- Conduct waste-form and HIP Can tests.
- Continue engineering evaluations and design in support of the RCRA Part B Permit Modification.



Graphic depicting the interior of a calcine bin set



ARRA Buy-Back Scope

ID-0030B.R1.4 – Soil & Groundwater Buy-Back **Buy Back Scope Initiated**

- Approximately 8 months of targeted waste exhumation from ARP V (Pit 9). 0.25 acres to be exhumed.
- Project started 2/7/11



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ARRA Buy-Back Scope

ID-0040B.R1.4 – Idaho D&D Buy –Back

Buy Back Scope Initiated

- Completed demolition of CPP-694 (~850 sq.ft)
- Completed demolition of TRA-730 A, B, C, and D Tanks (~800 sqft.)

Buy Back Scope Contemplated

- TAN CERCLA site remediation.
- ARP-IV Demo.
- Lines under hot cell D&D (VCO)
- CPP-659 Acid Tank Demo.
- CPP-621 Pipe Trench Demo.



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ARRA Buy-Back Scope

Buyback scope from ID-0040B.R1.4 may be reduced as a result of being required to pay for ARRA workforce restructuring from ARRA funding. Initial estimates show that if this is the case, only the TAN CERCLA site remediation will become affordable.



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ARRA Performance Measures

Metrics Through: FEBRUARY 2011

PBS	Performance Metric	Unit	Life-Cycle Target	Prior Year Actuals	Current Year Actuals	Cum Actual	CY Targets to Date	Cum Target	Percentage Cum Actual vs. Cum Target
ID-0013.R1	LLW Disposed	meters 3	650	2,096	-	2,096	-	2,000	105%
ID-0013.R1	MLLW Disposed	meters 3	1,095	1,231	-	1,231	-	1,195	103%
ID-0013.NEW.R1 TRU Waste	D&D Debris Disposed	meters 3	24,643	15,293	8,224	23,517	4,500	18,326	128%
ID-0013.NEW.R1 TRU Waste	RH-TRU Certification Ready	meters 3	22.60	16.43	3.40	20	2.4	10.30	193%
ID-0030B.R1.2	Holes Grouted	holes	2,168	2,168	-	2,168	328	2,168.00	100%
ID-0030B.R1.3 Soil and Ground Water Operations	Buried Waste Exhumed	acres	0.71	0.77	0.30	1.07	0.08	0.50	214%



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ARRA Performance Measures Con't

PBS	Performance Metric	Unit	Life-Cycle Target	Previous Year Actuals	Current Year Actuals	Cum Actual	CY Total Targets	Cum Target	Percentage Cum Actual vs. Cum Target
ID-0040B.R1.1 - Nuclear Facility Completions	Nuclear Facilities Demolished	count	11	11	-	11	-	10.0	110%
ID-0040B.R1.1 - Radioactive Facility Completions	Radioactive Facilities Demolished	count	16	15	-	15	-	14.0	107%
ID-0040B.R1.1 - Industrial Facility Completions	Industrial Facilities Demolished	count	12	6	1	7	1	7.0	100%
ID-0040B.R1.1 - Facility Square Footage Demolished	Gross Square Footage Demolished	gross square footage	258,222	141,914	2,476	144,390	10,773	152,703	95%
ID-0040B.R1.2 - Nuclear Facility Completions	Nuclear Facilities Demolished	count	5	3	-	3	-	2.0	150%
ID-0040B.R1.2 - Radioactive Facility Completions	Radioactive Facilities Demolished	count	7	6	-	6	-	5.0	120%
ID-0040B.R1.2 - Industrial Facility Completions	Industrial Facilities Demolished	count	20	16	3	19	-	17.0	112%
ID-0040B.R1.2 - Square Footage Demolished	Gross Square Footage Demolished	gross square footage	466,430	276,668	34,537	311,205	-	255,627	122%



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ARRA Performance Measures Con't

Metrics Through: FEBRUARY 2011

PBS	Performance Metric	Unit	Life-Cycle Target	Previous Year Actuals	Current Year Actuals	Cum Actual	CY Total Targets	Cum Target	Percentage Cum Actual vs. Cum Target
ID-0040B.NEW.R1.3 - Nuclear Facility Completions	Nuclear Facilities Demolished	count	13	5	-	5	-	5.0	100%
ID-0040B.NEW.R1.3 - Radioactive Facility Completions	Radioactive Facilities Demolished	count	5	2	-	2	-	2.0	100%
ID-0040B.NEW.R1.3 - Industrial Facility Completions	Industrial Facilities Demolished	count	1	1	-	1	-	1.0	100%
ID-0040B.NEW.R1.3 - Square Footage Demolished	Gross Square Footage Demolished	gross square footage	87,625	20,987	-	20,987	1,000	21,987.0	95%



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Key Activities/Completion Dates



Idaho Project Milestones – Post 2012

Idaho Cleanup Project Major Milestones, Post 2012



INTEC Tank Farm Closure Complete



Temp Tank Farm Cover Installed (East Side)



Complete CH-TRU Disposition



ISFF Const/Mod Complete



OU 7-13/14 Targeted Waste Retrievals Complete

FY 12 | FY 13 | FY 14 | FY 15 | FY 16 | FY 17 | FY 18 | FY 19 | FY 20 | FY 21 | FY 22 | FY 23 | FY 24 | FY 25 | FY 26 | FY 27

EBR-II D&D Complete



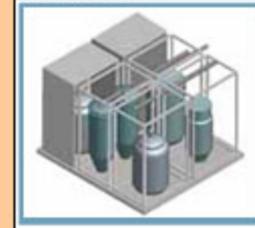
Complete RH-TRU Disposition



UXO Remediation Complete



Calcine Construction Complete



SDA Cap Installed



Items of Potential Interest

- Continuing resolution



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