

# *Idaho Cleanup Project Progress Citizens Advisory Board July FY 2012 Status*

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# *Idaho Cleanup Project Scope*

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- Transuranic Waste Disposition
- Advanced Mixed Waste Treatment Project
- CERCLA Remediation
  - Waste Area Group 1 – Test Area North
  - Waste Area Group 3 – Idaho Nuclear Technology and Engineering Center
  - Waste Area Group 7 – Radioactive Waste Management Complex
  - Waste Area Group 10 – Site-wide Miscellaneous Sites/Snake River Plain Aquifer
- Idaho CERCLA Disposal Facility



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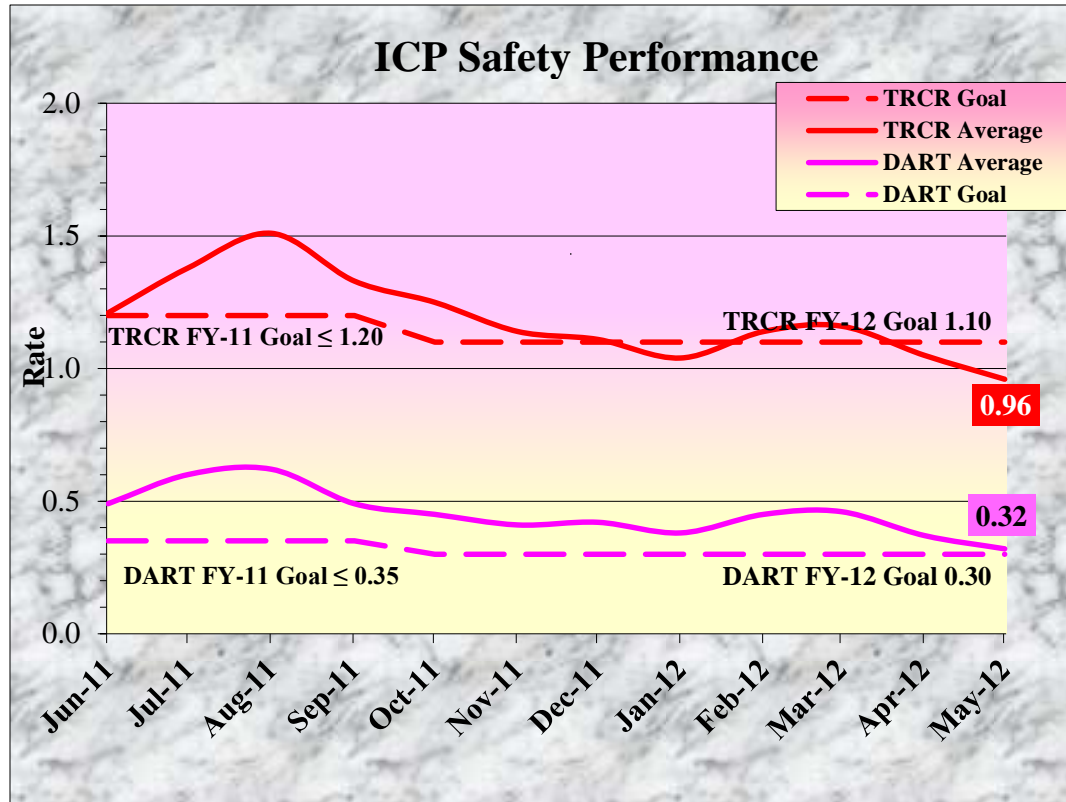
# *Idaho Cleanup Project Scope*

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



# ICP Safety Performance – May 2012



## April 2012

### Four First Aid Cases and Two Recordable Injuries:

- Employee pinched and cut thumb while disassembling and moving pump
- Employee fractured finger while placing metal plates into waste box

### Two ORPS Reportable Occurrences:

- Suspect Counterfeit Breaker discovered during receipt inspection
- Electrician cut energized 208 VAC conductor during D&D activities

## May 2012

### Four First Aid Cases and One Recordable Injury:

- Carpenter strained shoulder during fabrication of concrete forms

### Two ORPS Reportable Occurrences:

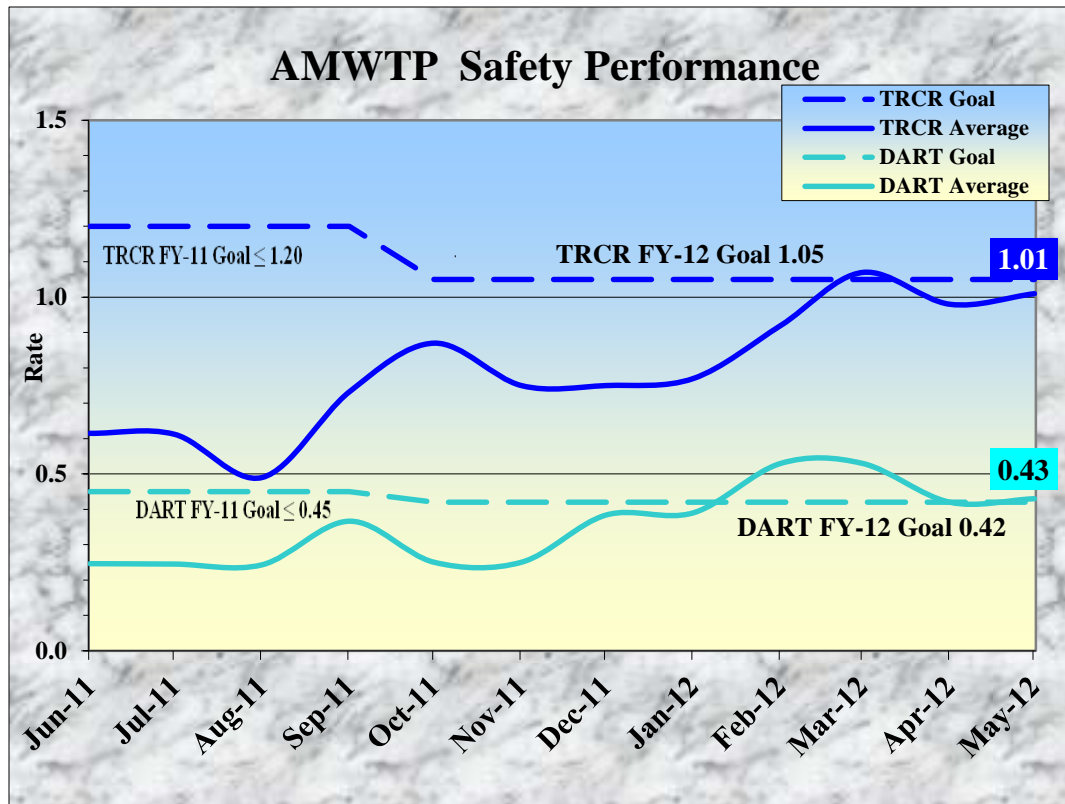
- Lockout/Tagout violation – loss of control of key to personal lock
- Positive Unreviewed Safety Question (USQ) related to inadequacies in the Documented Safety Analysis (DSA) and Technical Safety Requirements (TSR)



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# AMWTP Safety Performance – May 2012



## April 2012

**One First Aid Case and No Recordable Injuries**

### **One ORPS Reportable Occurrence:**

- Spread of radiological contamination results in contamination of personal clothing (shoe.)

## May 2012

**Three First Aid Cases and No Recordable Injuries**

### **One ORPS Reportable Occurrence:**

- Missed RCRA inspection due to ineffective shift turnover



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# Advanced Mixed Waste Treatment Project

## Key Activities/Actions:

- ITG employees have worked more than 880,000 hours (13.3 million hours over life of the project) without a lost time injury
- Began retrieval of final ~6,500 cubic meters of waste, April 2012
- Have met all AMWTP scheduled shipments of transuranic waste to WIPP
- Beginning new macroencapsulation shipping program, August 2012



Box Retrieval Photographs



ITG review the Ultra Tech macroencapsulation process



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# Transuranic Waste Disposition

## Key Activities/Actions :

- Shipped 5,110 m<sup>3</sup> (of 5,114 m<sup>3</sup>) of CH-TRU waste and mixed LLW from ARPs I - V
- Shipped 461 m<sup>3</sup> (of 463 m<sup>3</sup>) of CH-TRU and mixed LLW from ARP VI

Remaining Milestone(s)	Completed	Target Date
Complete Disposition of EM RWMC RH-TRU		3/31/2011
Complete Idaho Settlement Agreement RH-TRU Disposition		4Q FY2018
Complete Disposition of 65,000 m3 CH-TRU		Sep-15

## Upcoming Activities:

- Complete CH TRU shipments (July/August 2012)
- Completed 29 shipments (8 ARRA, 21 Navy) of RH-TRU to WIPP by 9/30/2012



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# *CERCLA Remediation Project Objectives*

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- WAG 1: Test Area North
  - TAN Groundwater Remediation
- WAG 3: INTEC
  - Complete the OU 3-14 Record of Decision for the Tank Farm
  - Operate the ICDF to compliantly disposition CERCLA waste
- WAG 7: Radioactive Waste Management Complex
  - Exhume 5.69 acres of buried waste
  - 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 site wide CERCLA Ecological Monitoring program
  - Maintain the New Site Identification Process for future CERCLA sites
  - Remediate Munitions and Explosives of Concern (MEC)



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# CERCLA Remediation Projects

## Key Activities/Actions:

- Detonated 1,700 pounds of propellant at the Mass Detonation Area
- Submitted the final WAG 10 annual report and OU 3-14 long-term monitoring plan to the agencies

## Upcoming Activities:

- Submit final WAG 4 annual report

Remaining Milestone(s)	Completed	Target Date
Complete 10-04 MDA Surficial Cleanup	(8/2011) ✓	9/2011
Complete INTEC Tank Farm Remedial Action Phase I	(8/2012) ✓	9/2011
Complete Phase II 90% Design	(02/2011) ✓	11/2011
Complete INTEC Tank Farm Remedial Action Phase III		FY 2020



MDA crater following propellant detonation



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# ***CERCLA Remediation Projects - ICDF***

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## **Key Activities/Actions:**

- Disposed of 1,807 cubic meters (3,228,807 pounds) of waste in the ICDF landfill
- Received 19,458 gallons of aqueous water into the ICDF Evaporation Ponds

## **Upcoming Activities:**

- Disposition debris and liquid from MFC D&D projects
- Disposition soil from NRF-43 CERCLA soil sites



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## *Waste Area Group (WAG) 7 Project Objectives*

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- 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 and V, VI (Completed)
  - ARP VII, ARP VIII & ARP IX
- 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:

- Exhumed 3.06 acres of the 5.69 acres required under the 2008 Record of Decision
- Exhumed 53% of ARP VII foot print
- Packaged ~27,043 drums of targeted waste

## Upcoming Activities:

- Continue exhumation on ARP VII
- Complete steel assembly and erection of ARP VIII

Metric	Actual (CTD)	Goal
Targeted Waste Packaged (m <sup>3</sup> )	5,626 m <sup>3</sup>	7,485 m <sup>3</sup>
Acres Remediated	3.06 acres	5.69 Acres

Remaining Milestone(s)	Completed	Target Date
Complete current contract WAG 7 Target Waste Retrieval volume	✓	9/2012
Continue Exhumations Bridge Scope		9/2012
Complete Cap Per ROD		Post 2012



ARP VIII construction

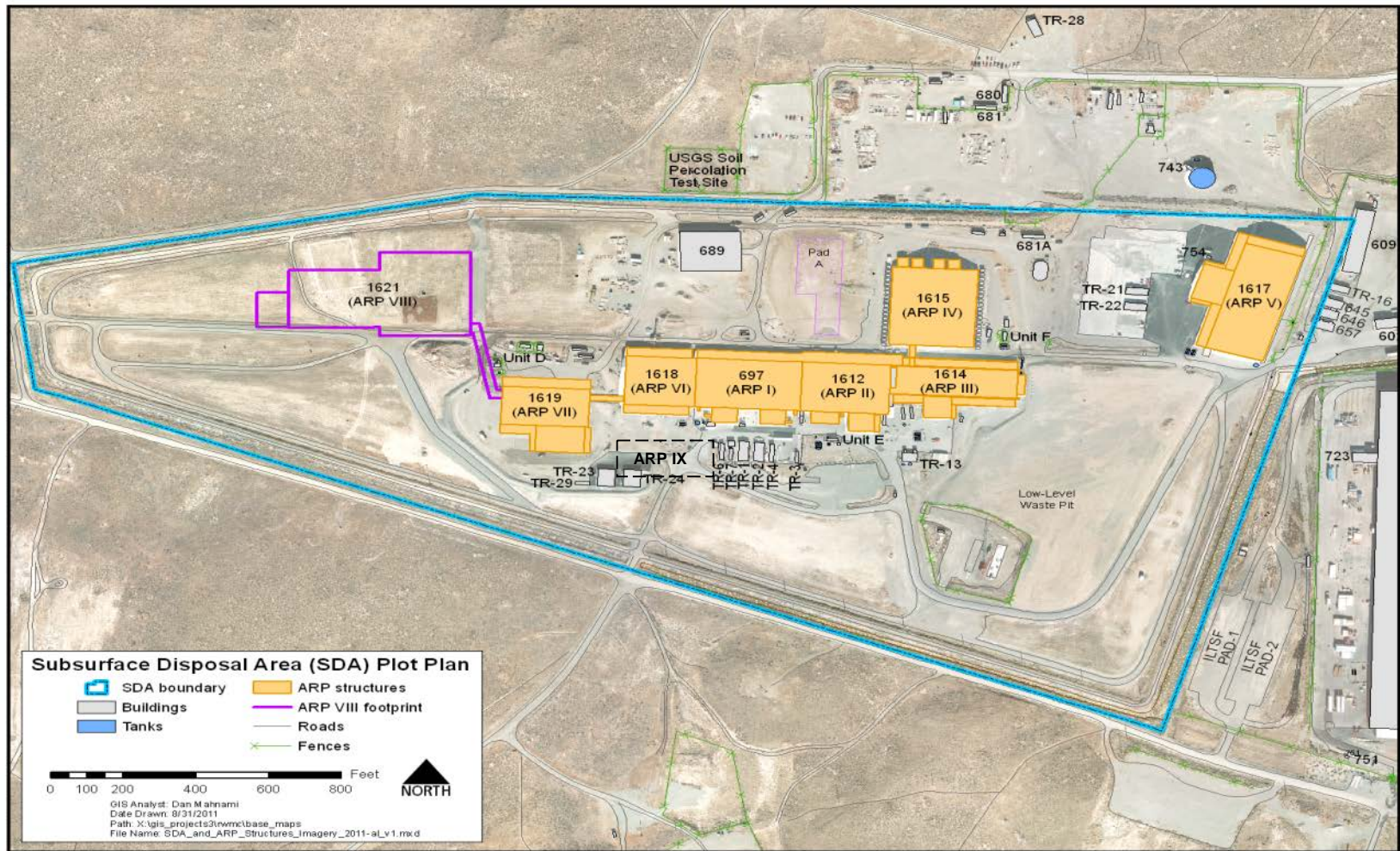


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# WAG 7 Project (cont'd)



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# D&D Objectives

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ARP VI to VII Vestibule D&D

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# ***D&D – RTC/RWMC Project***

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## **Key Activities/Actions:**

- Demolished tunnel between ARPs VI and VII
- Applied fixative in ARP VI and opened to heavy equipment for placement of clean soil
- Demolished ARP VI

## **Upcoming Activities:**

- Complete demolition of ARP-VI
- Begin demolition of ARP I (September)



ARP VI demolition



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# *D&D – INTEC Project*

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## **Key Activities/Actions:**

- Suspended the WL-102 sampling project

## **Upcoming Activities:**

- The final RCRA closure of WL-102 will be part of the eventual D&D of the Process Equipment Waste Evaporator facility



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

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## **Key Activities/Actions:**

- Closed Experimental Breeder Reactor- (EBR) II reactor storage area
- Grouted EBR-II primary tank annulus



Grouting primary tank annulus

## **Upcoming Activities:**

- Grout the EBR-II reactor primary vessel (July)



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

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



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# *Integrated Waste Treatment Unit (Sodium-Bearing Waste) Project*

## **Key Activities/Actions:**

- Initiated startup activities
  - A pressure event on June 16 forced the shutdown of the facility
  - An investigation team began a review of the incident on June 25
- Resolved blower seal issue
- Initiated a plan to resolve a coal feed issue

## **Upcoming Activities:**

- Initiate hot startup activities and begin processing sodium-bearing waste

Remaining	Milestone(s)	Completed	Target Date
	Systems Turnover Complete	✓	2/20/2012
	Commence Operations of treatment facility		4/23/2012
	Complete SBW Treatment		12/31/2012



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# ***INTEC Liquid Waste Facility (Tank Farm) Closure Project***

## **Key Activities/Actions:**

- Constructed 25 of 35 tents
- Fabricated 3 of 4 new jet assemblies
- Completed engineering design to support washing of remaining tanks

Remaining Milestone(s)	Completed	Target Date
West Side of Tank Farm Ready for D&D and closure	✓	9/30/2014
Complete Tank Farm Grouting		(Post - 2012)

## **Upcoming Activities:**

- Continue design work for closure of last four tanks (grouting and washing)
- Continue to refurbish and test equipment and erect remaining 10 tents



Tents being erected at the Tank Farm



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# *Spent Nuclear Fuel Disposition Project Objectives*

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- **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 SNM 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

## Key Activities/Actions:

- Completed closure of Mexico TRIGA fuel receipts
- Initiated long-lead preparations and customer meetings/planning for Austria TRIGA fuel loading
- Completed initial FY12 EBR-II fuel cask transfers to Materials and Fuels Complex

## Upcoming Activities:

- Complete inspection and loading of TRIGA fuel for shipment to Austria
- Transfer EBR-II casks to MFC
- Receive Advanced Test Reactor casks from Reactor Technology Complex

Remaining Milestone(s)	Completed	Target Date
Complete receipt of ATR fuel to CPP-666		(9/30/12)



EBR-II fuel cask being transported on the new haul road



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# Idaho Project Milestones

## Idaho Cleanup Project Major Milestones

✓ Indicates completed milestone



INTEC tank farm  
interim cap complete



MTR  
demolished

PBF  
demolition  
complete

CPP-601,  
CPP-640  
disposition  
complete

100%  
HLW  
Tanks  
Closed

Tank Farm  
cover  
installed  
(east side)

ICP Tank  
Farm  
Closure  
Complete



Complete CH-TRU  
disposition



OU 7-13/14  
targeted waste  
retrievals complete



SDA cap installed



IWTU operational SBW  
treatment begins (12/2011)

FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23	FY24	FY25	FY26	FY27
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ARR✓  
Milestone  
2011

All excess  
facilities  
demolished

100% HLW  
tanks closed

100% SBW  
treatment  
complete

Complete RH-TRU  
disposition

UXO remediation  
complete

Calcine  
construction  
complete



TAN ready for  
legacy mgmt.

EBR-II  
D&D  
Complete



G11-2430-08



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## *Items of Potential Interest*

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- CWI's Contract Extension
- IWTU Recovery Plan
- FY13 Economic Impacts



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