

# *Idaho Cleanup Project Progress Citizens Advisory Board January 2013 Status*

**James Cooper**  
**Department of Energy**  
**Idaho Operations Office**



**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) 3 – Idaho Nuclear Technology and Engineering Center (INTEC)
  - Waste Area Group (WAG) 7 – Radioactive Waste Management Complex (RWMC)
  - Waste Area Group (WAG) 10 – Site-wide Miscellaneous Sites/Snake River Plain Aquifer
- Idaho CERCLA Disposal Facility



## *Idaho Cleanup Project Scope*

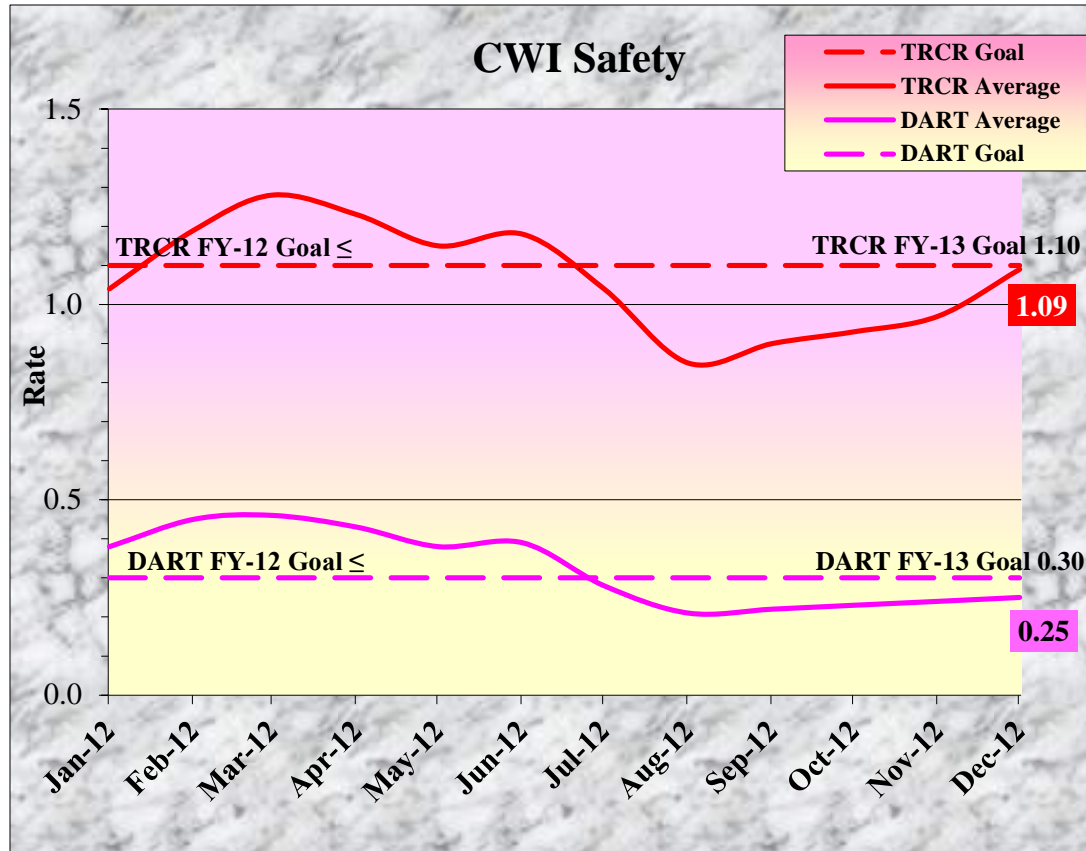
---

- Sodium Bearing Waste Treatment
- INTEC Liquid Waste Treatment Facility (Tank Farm Closure)
- Spent Nuclear Fuel Dry Storage (Completed)
- Calcine Disposition



***EM*** *Environmental Management*

# ICP Safety Performance – January 2013



## November 2012

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

**No ORPS Reportable Occurrences**

## December 2012

**No First Aid Cases or Recordable Injuries**

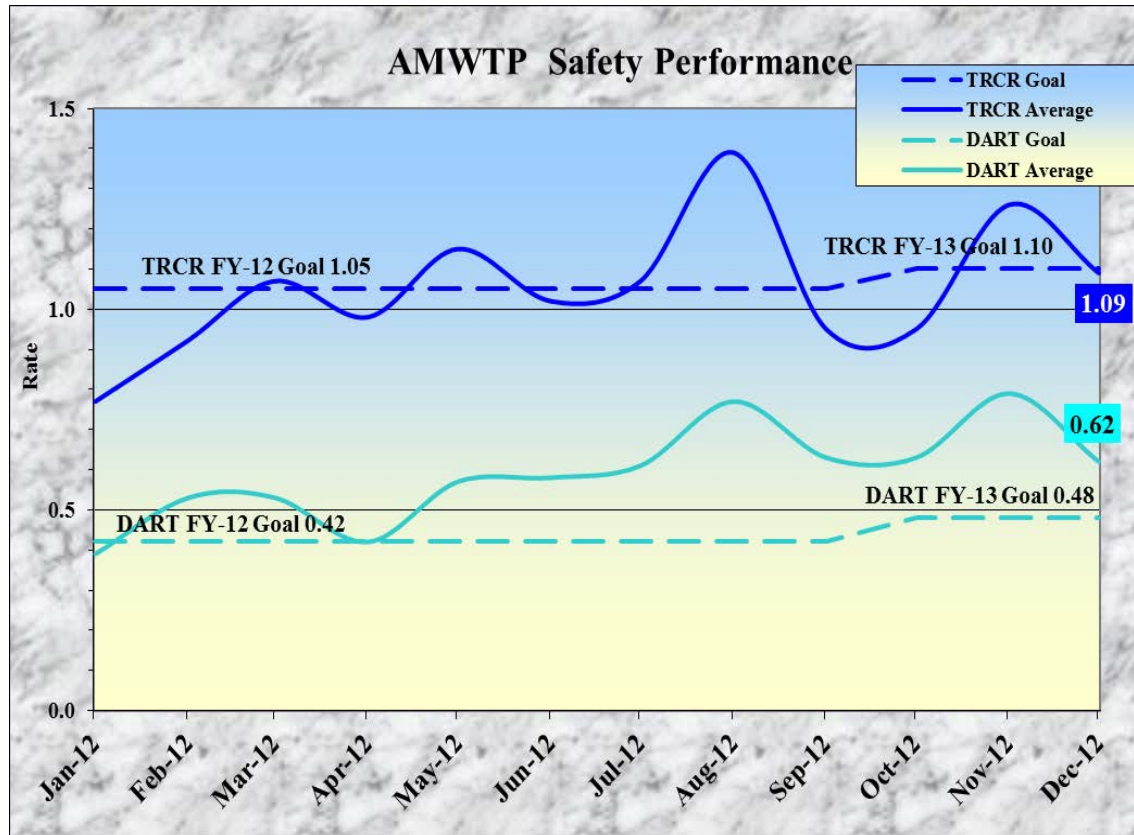
**One ORPS Reportable Occurrence:**

- IWTU – Positive Unreviewed Safety Question (USQ) associated with rupture disk performance during facility heatup.



**EM** Environmental Management

# AMWTP Safety Performance – January 2013



## November 2012

### **No First Aid Cases and Two Recordable Injuries:**

- Worker's foot was pinched under the wheel of a forklift
- Worker cut his finger on sharp edge of metal banding

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

- Employee's foot injured from contact with forklift

## December 2012

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

### **Three ORPS Reportable Occurrences:**

- Ineffective Issues Management and Performance Improvement Processes
- Positive USQ from discovery of duplicate bar code labels
- Inadequate hazardous energy control during equipment maintenance



# *Advanced Mixed Waste Treatment Project*

## **Key Activities/Actions:**

- ITG employees have worked more than 1.5 million hours (13.9 million hours over life of the project) without a lost-time injury
- Continued to ship transuranic waste to WIPP
- Began transferring sludge waste to CWI's Accelerated Retrieval Project V. Cooperative work between ITG and CWI saves taxpayer dollars from building new Resource Conservation Recovery Act (RCRA) treatment facility and preserves jobs.
- Began transferring AMWTP U-235 Suspect Remote-Handled Transuranic waste to CWI
- Ahead of baseline shipping goals



The first transfer of drums containing sludge waste was made by ITG team members. The drums will be emptied, examined, and repackaged by CWI personnel, then returned to AMWTP for characterization and shipping to WIPP.



***EM*** *Environmental Management*

# Transuranic Waste Disposition

## Key Activities/Actions:

- Continue progress on making Remote Handled Transuranic Waste (RH-TRU) shipments to Waste Isolation Pilot Plant (WIPP) during FY-13
  - Average 2 shipments/week in FY13
- Began Accelerated Retrieval Project (ARP) V sludge repack
- Submit Sodium Treatment System Resource Conservation Recovery Act (RCRA) permit by 3/31/2013 per Site Treatment Plan

## Upcoming Activities:

- Continue design and submit RCRA permit for remote-handled TRU and Sodium Treatment System
- Continue ARP V sludge repack

Metric	Actual (FYTD)	Goal (9/30/15)
Remote-handled transuranic waste offsite (shipments)	31	187
Ship contact-handled & LLW transuranic waste offsite	1,297 m <sup>3</sup>	22,150 m <sup>3</sup>
Disposition sludge drums		6,000 drums



Work on RH-TRU waste



# ***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
  - 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:**

- Submitted seven New Site Identification forms to the agencies for approval
- Submitted the draft Operational Unit (OU) 3-14 Phase I Remedial Action Report to the agencies

## **Upcoming Activities:**

- Submit draft IC/O&M annual report to the agencies
- Submit draft OU 1-07B annual report to the agencies
- Submit draft WAG 4 annual groundwater monitoring report to the agencies
- Submit draft OU 3-14 annual report to the agencies
- Submit draft OU 10-04 Phase I remedial action report to the agencies
- Prepare OU 7-13/14 Remedial Design Work Plan Phase III



Groundwater sampling at Test Area North



# ***CERCLA Remediation Projects – Idaho CERCLA Disposal Facility (ICDF)***

---

## **Key Activities/Actions:**

- Received 6,897 gallons of aqueous waste into the ICDF Evaporation Ponds
- Performed routine operations and maintenance of ICDF Complex processes and facilities

## **Upcoming Activities:**

- Continue receipt and disposal of aqueous wastes in ICDF Evaporation Ponds
- Continue operation and maintenance of ICDF Complex processes and facilities



ICDF landfill



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

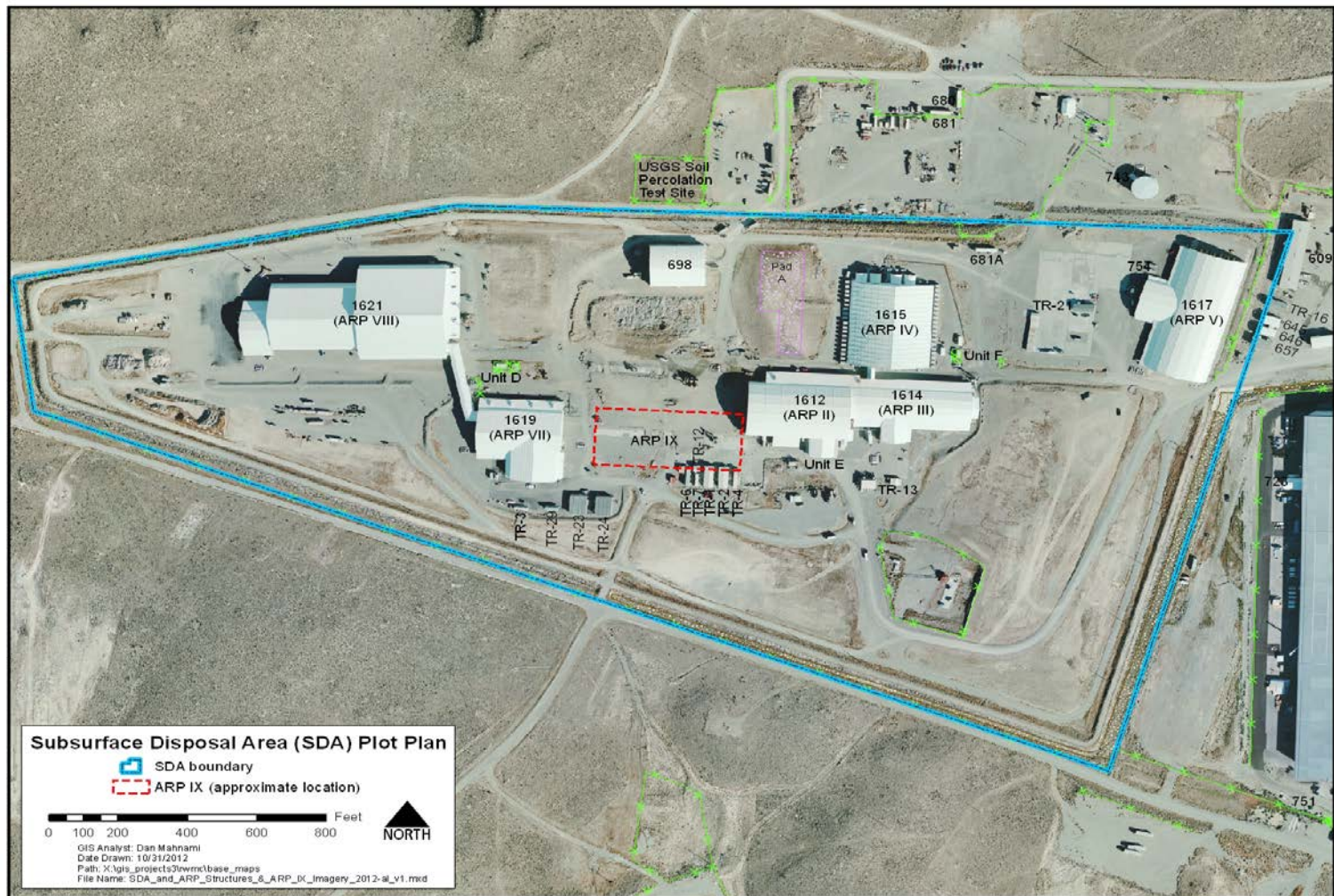
---

- 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) 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 construction is near completion
  - ARP I & VI D&D (Completed)
- Complete in situ grouting of 21 locations (completed)
- Subsurface solvent vapor extraction (OCVZ)
- Environmental monitoring and institutional controls



***EM*** *Environmental Management*

# WAG 7 Project (cont'd)



**EM** Environmental Management

# WAG 7 Project

## Key Activities/Actions:

- Packaged a total of 27,749 drums of targeted waste
- Received a Class II RCRA permit modification for ARP V sludge repackaging operations
- Began repackaging of RCRA sludge waste inside the ARP V Waste Exhumation Facility
- Installed lighting, cameras, and the ventilation system for the ARP VIII Waste Exhumation Facility

## Upcoming Activities:

- Complete construction of ARP VIII
- Conduct ARP VIII system operability testing.

Metric	Actual (CTD)	Goal (9/30/15)
Exhume targeted buried waste	-	0.46 acres



ARP V sludge drum repackaging



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

---

## **Key Activities/Actions:**

- Maintain RCRA compliance of MFC-766
- Deactivate MFC-793 and MFC-799

## **Upcoming Activities:**

- Conduct Sodium Treatment System Design Review



Grouting of EBR-II last summer



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

---

- Design, construct and test the Sodium Bearing Waste Treatment Facility (Completed)
- Operate the Sodium Bearing Waste Treatment Facility
- Drain sodium-bearing waste material from tanks



***EM*** *Environmental Management*

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

## **Key Activities/Actions:**

- Received Temporary Authorization from IDEQ to proceed with facility modifications
- Held Permit Modification Request public meeting on Jan. 10 in Idaho Falls

## **Upcoming Activities:**

- Complete modifications and resume facility heat-up testing

Metric	Actual (CTD)	Goal (9/30/15)
Treat sodium-bearing waste	-	820,000 gallons to loss of suction
Package sodium-bearing waste	-	700 canisters filled
Process tank "heels"	-	360.000 gallons



Welding a filter housing



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

## **Key Activities/Actions:**

- Performed sampling of WM-190 tank
- Installed a tent over valve box C-37 for upcoming mods to separate active systems from inactive systems

## **Upcoming Activities:**

- Analyze sampling of WM-190
- Install a tent over valve box C-12 in preparation of draining the underground cooling coil supply and return headers.

Metric	Actual (CTD)	Goal (9/30/15)
Close liquid waste tanks	-	4 tanks



Tank Farm tents in October



# *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*

## **Key Activities/Actions:**

- Completed receipt and storage of fuel from Austria
- Suspended FRR/DRR receipts Jan. 1, 2013 per Idaho Settlement Agreement

## **Upcoming Activities:**

- Continue EBR-II fuel transfers, pending funding
- Continue ATR receipts

Metric	Actual (CTD)	Goal (9/30/15)
Receive, unload, and store Advanced Test Reactor fuel	-	45 casks



FRR fuel preparations from early last year



# ***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, paragraph C.3)**

- 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:**

- Submitted certified RCRA Part B Permit Application to the State of Idaho.

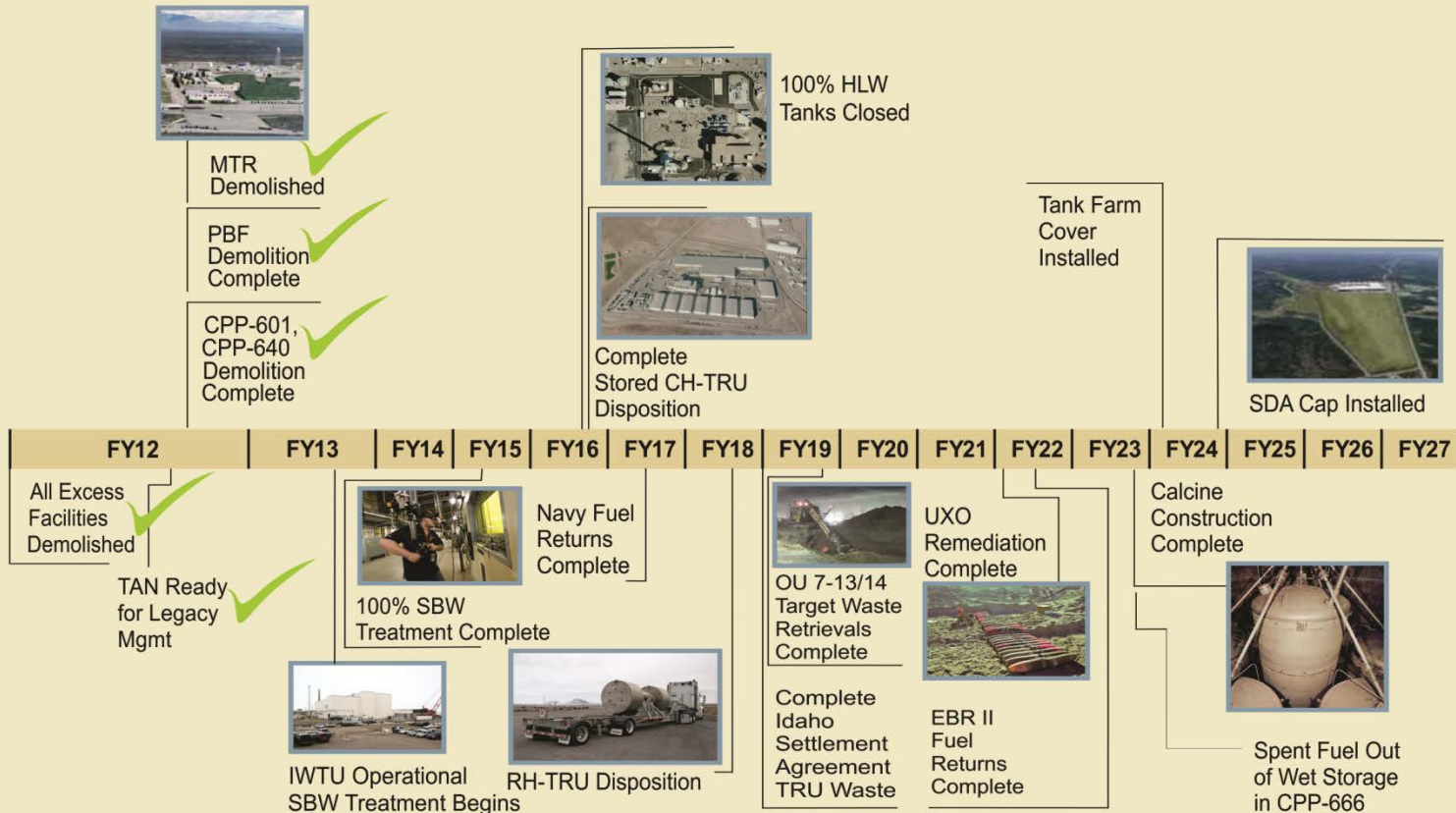
## **Upcoming Activities:**

- Support State review of RCRA Part B Permit.



# Idaho Completion Project Milestones

## Idaho Cleanup Project Major Milestones



G11-2430-11



**EM** Environmental Management