



*Idaho Cleanup Project Progress  
Citizens Advisory Board  
March FY 2012 Status*

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



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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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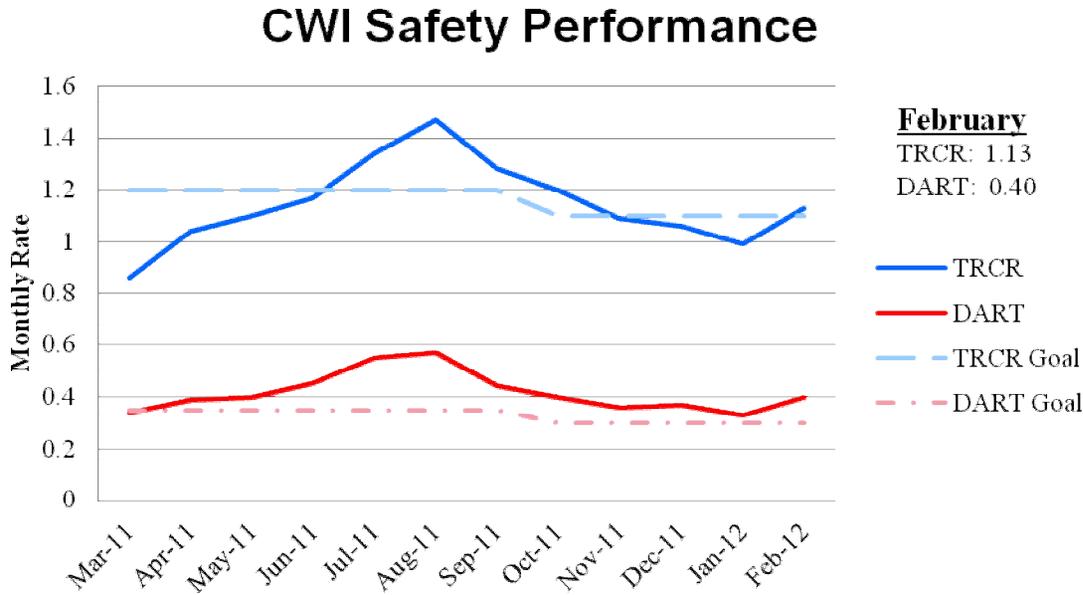
- Decontamination and Decommissioning
  - Test Area North (Completed)
  - Advanced Test Reactor (ATR) (Completed)
  - Idaho Nuclear Technology and Engineering Center (INTEC) (Completed)
  - Radioactive Waste Management Complex (RWMC) (Completed)
  - Power Burst Facility (ARRA) (Completed)
  - Materials and Fuels Complex (MFC) D&D
  - ARP I & II 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



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# CWI Safety Performance – February 2012



## January 2012

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

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

- Isolation Valve Locked and Tagged in Open Position Due to Incorrectly Installed Valve Actuator

## February 2012

**Eleven First Aid Cases and One Recordable Injury**

- Back strain due to a trip and fall

**No ORPS Reportable Occurrences**

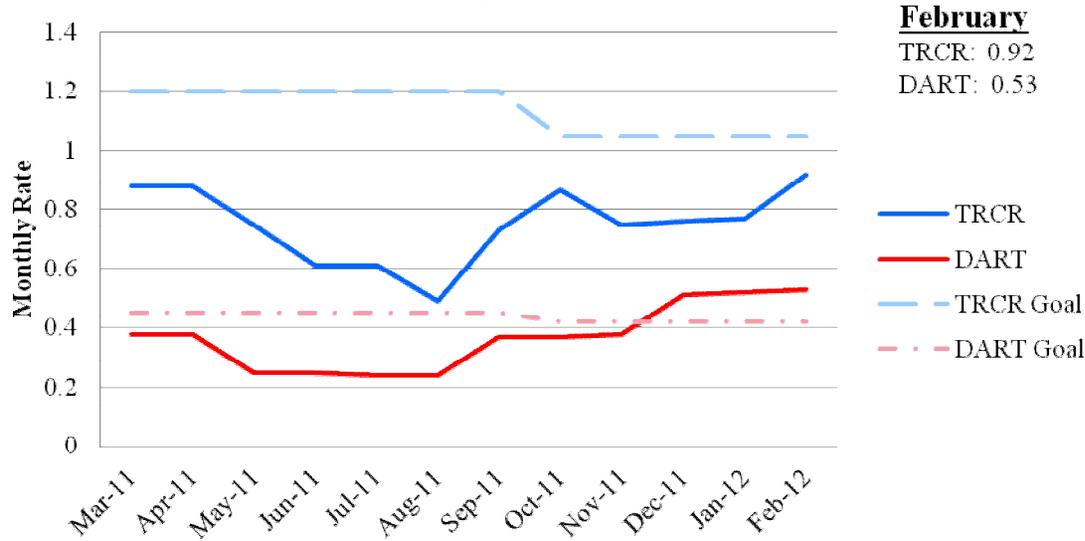


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# AMWTP Safety Performance – February 2012

## ITG Safety Performance



### January 2012

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

### **Five ORPS Reportable Occurrences:**

- Electrical fire from an uninterruptable power supply
- Three Technical Safety Requirement (TSR) violations, including a report of recurring TSR violations

### February 2012

**One First Aid Case and One Recordable Injury**

- Twisted knee

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

- Excavation ruptures heat-traced water line
- Two Lock and Tag violation reports



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# Transuranic Waste Disposition

## Key Activities/Actions in FY 2012:

- Completed shipment of CH-TRU to WIPP (ARP I-V)
- Complete shipment of ARP VI CH-TRU to WIPP – projected April 2012
- Initiate characterization and shipment of ARP VII CH-TRU to WIPP
- Began immersion of Lot 2 “fuel-like pieces (RH-TRU)

## Upcoming Activities:

- Continue processing RH-TRU for disposition at WIPP
- Continue Design/Development of Sodium Treatment System to process remainder of INL RH-TRU

| 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      |



Large canister processing at CPP-666



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# *Transuranic Waste Disposition (con't)*

## **Key Activities/Actions:**

- AMWTP Employees have worked more than 12.9 million hours – more than 8 years -- without a lost time injury
- Successfully passed Nevada National Security Site audit required to commence shipping mixed low-level waste to NNSS and resumed shipments out of Idaho
- Readiness preparations for restart of retrieval operations are on schedule
- Completed Procurement Information event, Dec. 14 informing small businesses of opportunities with ITG; representative from 35 companies attended



*Remediation of south boxline required numerous cell entries by employees in Type "B" bubble suits.*



*Interested vendors hear about ITG's operating plans at the Dec. 14 Procurement Information Event.*



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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:

- Completed OU 3-14 Phase II Design - February 2012.
- CERCLA Planning – Tank Farm Cap Acceleration
- Treated 37.5 million gallons at the Test Area North New Pump and Treat Facility in CY 2011.
- Continued In-situ Bioremediation (ISB) at Test Area North with a whey injection in February.

## Upcoming Activities:

- Begin TAN groundwater rebound test – within one year.

| 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 2019     |



Test Area North TSF-05 injection well



Test Area North whey injection well



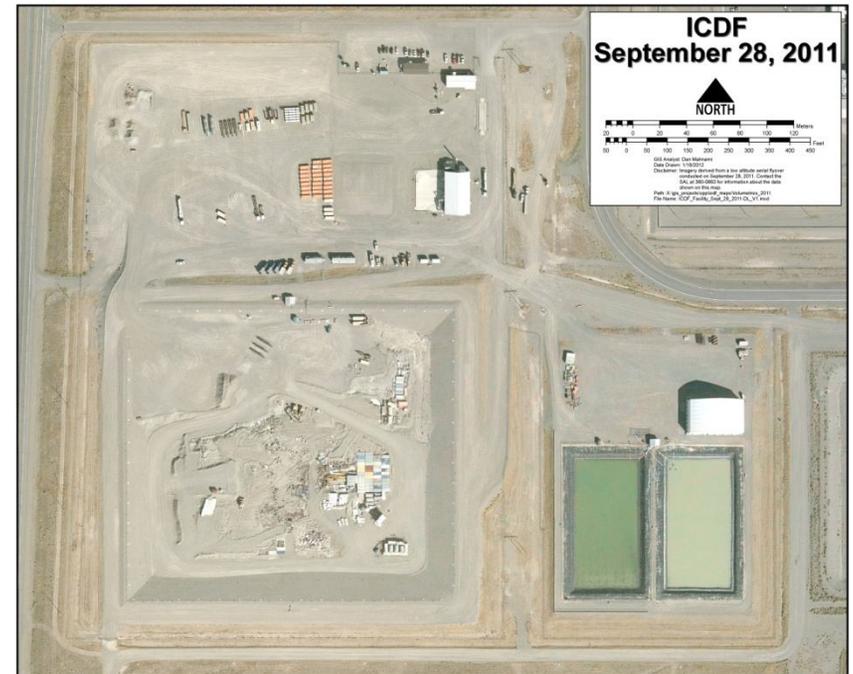
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# CERCLA Remediation Projects - ICDF

## Key Activities/Actions FY2012 to date:

- Disposed of 1,554 cubic meters (2,707,624 pounds) of waste in the ICDF landfill
- Received 6,718 gallons of purge water into the ICDF Evaporation Ponds
- Completed disposal of all debris from ATR D&D baseline activities



## Upcoming Activities:

- Disposition debris and liquid from MFC D&D projects
- Disposition soil from NRF 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:

- Began structural steel erection for the ARP-VIII airlock and waste exhumation facility - airlock fabric is attached
- Completed a contractor readiness assessment and began waste exhumation in ARP VII on 2/9/2012
- Completed Phase I of modifications to ARP II & III to allow exhumation of remaining 0.06 acres (10 grids)
- Decontaminated ARP I Drum Packaging Station (DPS) units and transferred operations to Idaho Technology Group for reuse

## Upcoming Activities:

- Continue exhumation on ARP VII
- Continue ARP-VIII erection

| Metric                                    | Actual (CTD)         | Goal                 |
|---|----------------------|----------------------|
| Targeted Waste Packaged (m <sup>3</sup> ) | 5,526 m <sup>3</sup> | 7,485 m <sup>3</sup> |
| Acres Remediated                          | 2.96 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   |



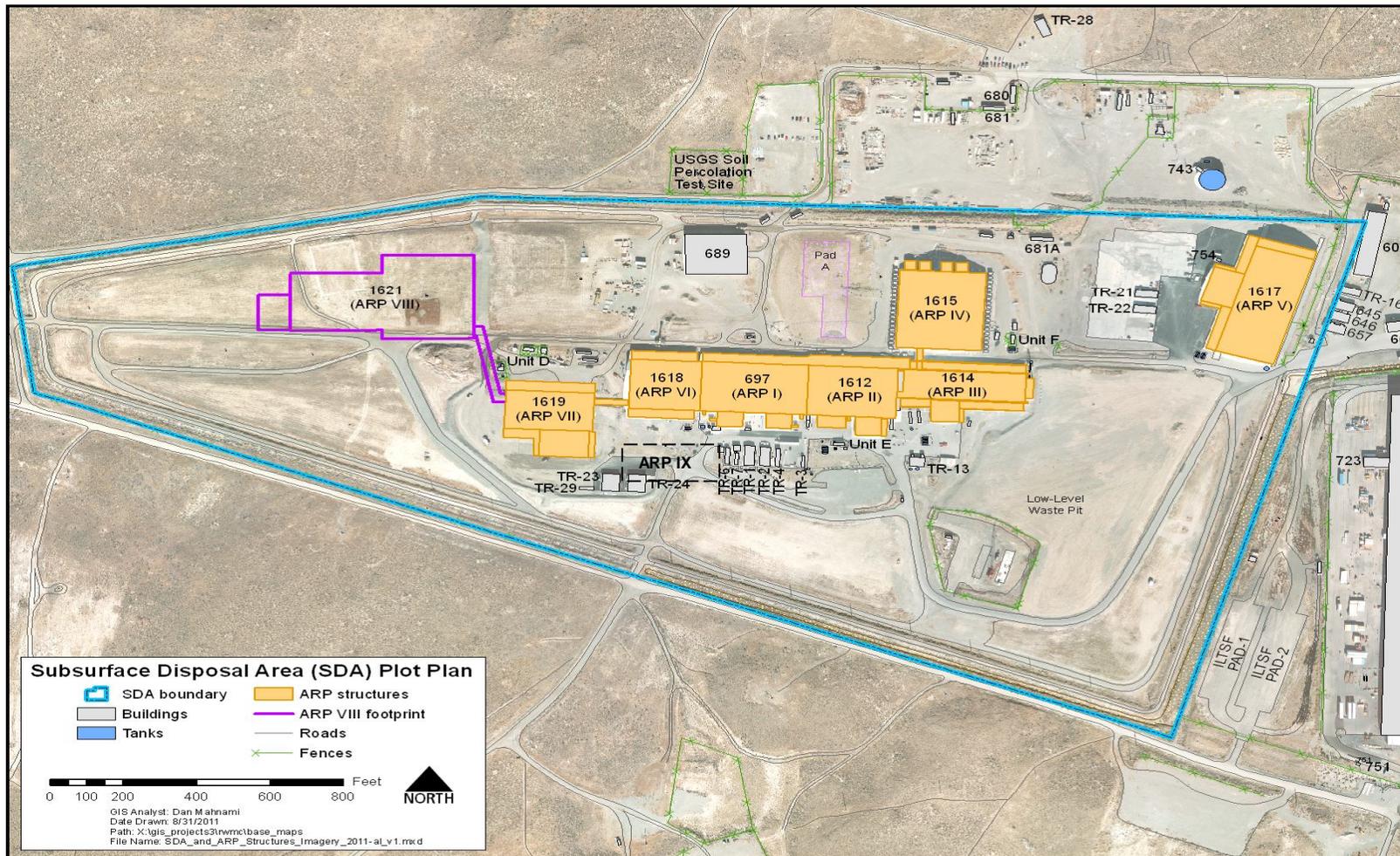
ARP Waste Exhumation



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# WAG 7 Project (cont'd)



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# *D&D Objectives : ARRA & Base Project Objectives*

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Take Down of Air Recirculation Building at ARP I



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# *ARRA D&D – RTC/PBF/RWMC Project*

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## **Key Activities/Actions:**

- Completed RTC field work
- Completed RTC Demobilization
- Initiated D&D at ARPs I & IV

## **Upcoming Activities:**

- Reactor Technology Complex (RTC) formerly Test Reactor Area (TRA) Closure documentation
- RWMC ARP's I & IV Demolition



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# *D&D – INTEC Project*

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## **Key Activities/Actions:**

- Initiated WL-102 Sampling project

## **Upcoming Activities:**

- Complete INTEC D&D project close-out documents
- Complete WL-102 sampling
- Submit RCRA Closure Plan for WL-102 Tank System



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

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## **Key Activities/Actions:**

- Place MFC-766 in safe standby for future completion of sodium treatment
- Implement corrective actions from water hammer investigation team
- Submitted revised closure schedule by February 29, 2012

## **Upcoming Activities:**

- Complete closure of EBR-II container storage area
- Continue deactivation activities in the reactor facility
- Grout EBR-II primary tank upon achieving closure performance standards



**MFC-766 East side after cleanup of caustic solids**



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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:**

- Completed MSA
- Facility undergoing preparations for Operational Readiness Review
- Complete Contractor Operational Readiness Review (ORR)

## **Upcoming Activities:**

- Complete DOE Operational Readiness Review
- Hot startup begins processing

| 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  |



Receipt and storage of empty waste canisters prior to operational startup of IWTU



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

## Key Activities/Actions:

- Erected 11 of 35 new tents on the Tank Farm including one that will be used to repair and refurbish equipment used on the previous 11 tanks
- Completed Load Study for the closure of the last four tanks

## Upcoming Activities:

- Continue design work for closure of last four tanks (grouting and washing)
- Continue to refurbish and test equipment and erect remaining 24 tents.

| Remaining Milestone(s)                           | Completed | Target Date   |
|--|-----------|---------------|
| West Side of Tank Farm Ready for D&D and closure | ✓         | 7/2011        |
| Complete Tank Farm Grouting                      |           | (Post - 2012) |



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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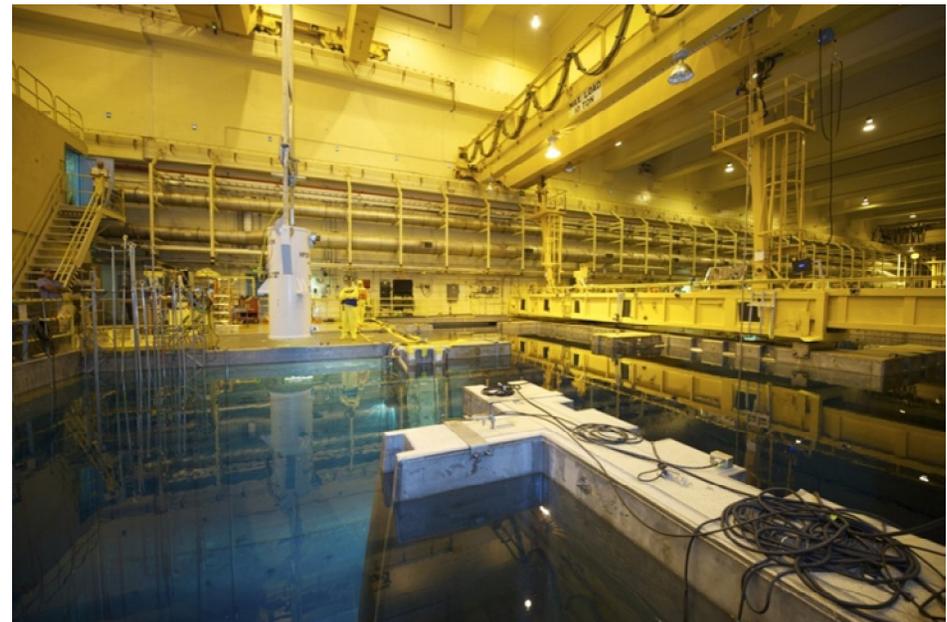
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# Spent Nuclear Fuel Disposition Project

## Key Activities/Actions:

- Completed 12 ATR receipts
- Initiated transfer of EBR-II fuel
- 2<sup>nd</sup> & 3<sup>rd</sup> Qtr FY12:
  - Continue ATR receipts
  - Continue EBR-II cask shipments (March planned)
  - Receive FRR from Mexico

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



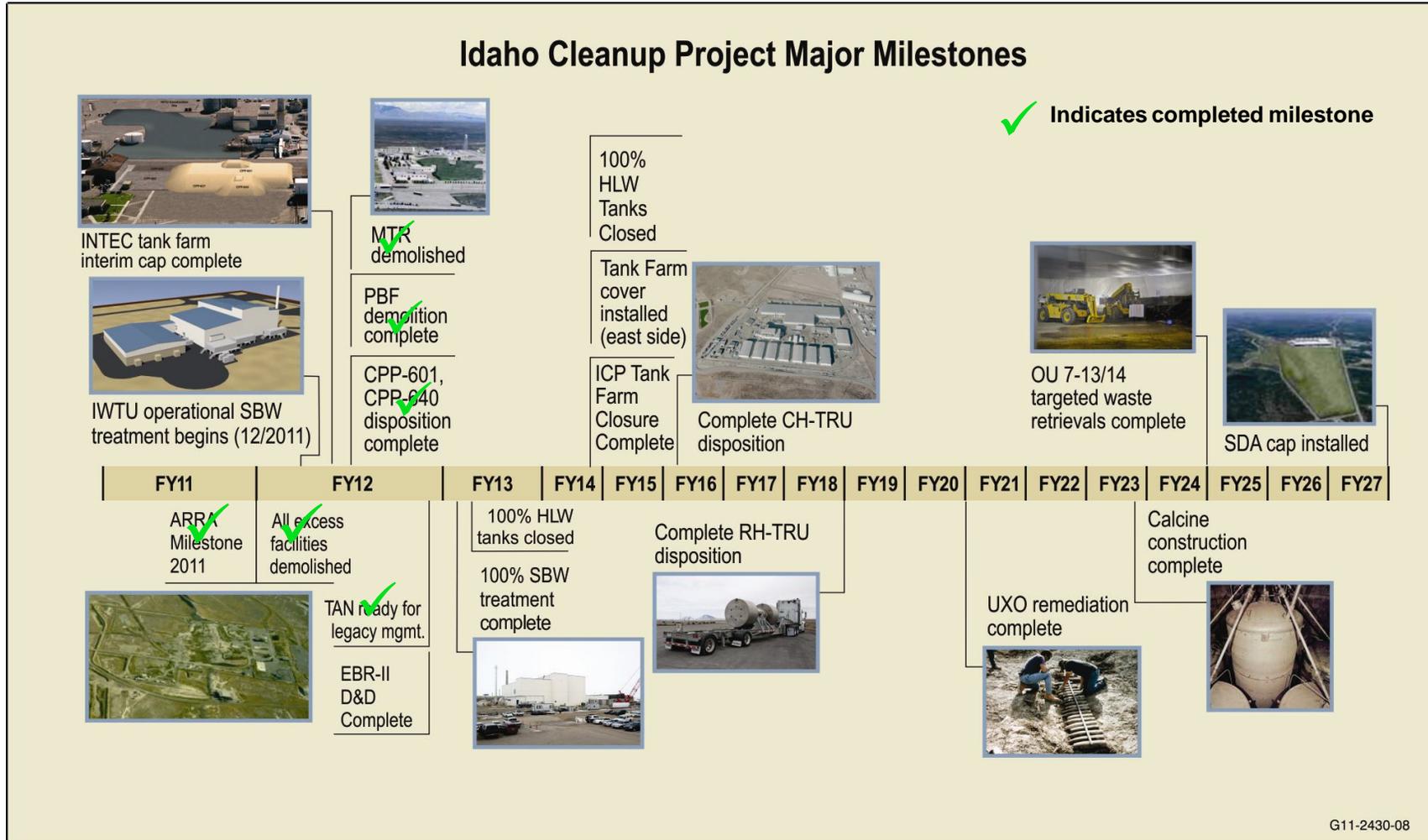
Fuel Storage Pool CPP-666



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# Idaho Project Milestones



G11-2430-08



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## *Items of Potential Interest*

- Cleanup Caucus Presentation - March 28
- Sodium Bearing Waste Lessons Learned
- Restart of Retrieval Actions at Advanced Mixed Waste Treatment Project



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