

Idaho Cleanup Project Progress

Citizens Advisory Board

November 19, 2014

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Idaho Operations Office



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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) 2 – Test Reactor Area (TRA)
 - Waste Area Group (WAG) 3 – Idaho Nuclear Technology and Engineering Center (INTEC)
 - Waste Area Group (WAG) 4 – Central Facilities Area (CFA)
 - Waste Area Group (WAG) 5 – Power Burst Facility (PBF)/Auxiliary Reactor Area (ARA)
 - Waste Area Group (WAG) 6 – Experimental Breeder Reactor No. I (EBR-I)
 - Waste Area Group (WAG) 7 – Radioactive Waste Management Complex (RWMC)
 - Waste Area Group (WAG) 9 – Argonne National Laboratory – West (ANL-W)
 - Waste Area Group (WAG) 10 – Site-wide Miscellaneous Sites/Snake River Plain Aquifer
- Idaho CERCLA Disposal Facility



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Idaho Cleanup Project Scope

- Sodium Bearing Waste Treatment
- INTEC Liquid Waste Treatment Facility (Tank Farm Closure)
- Calcine Disposition
- Decontamination & Decommissioning
 - MFC (Materials and Fuels Complex)

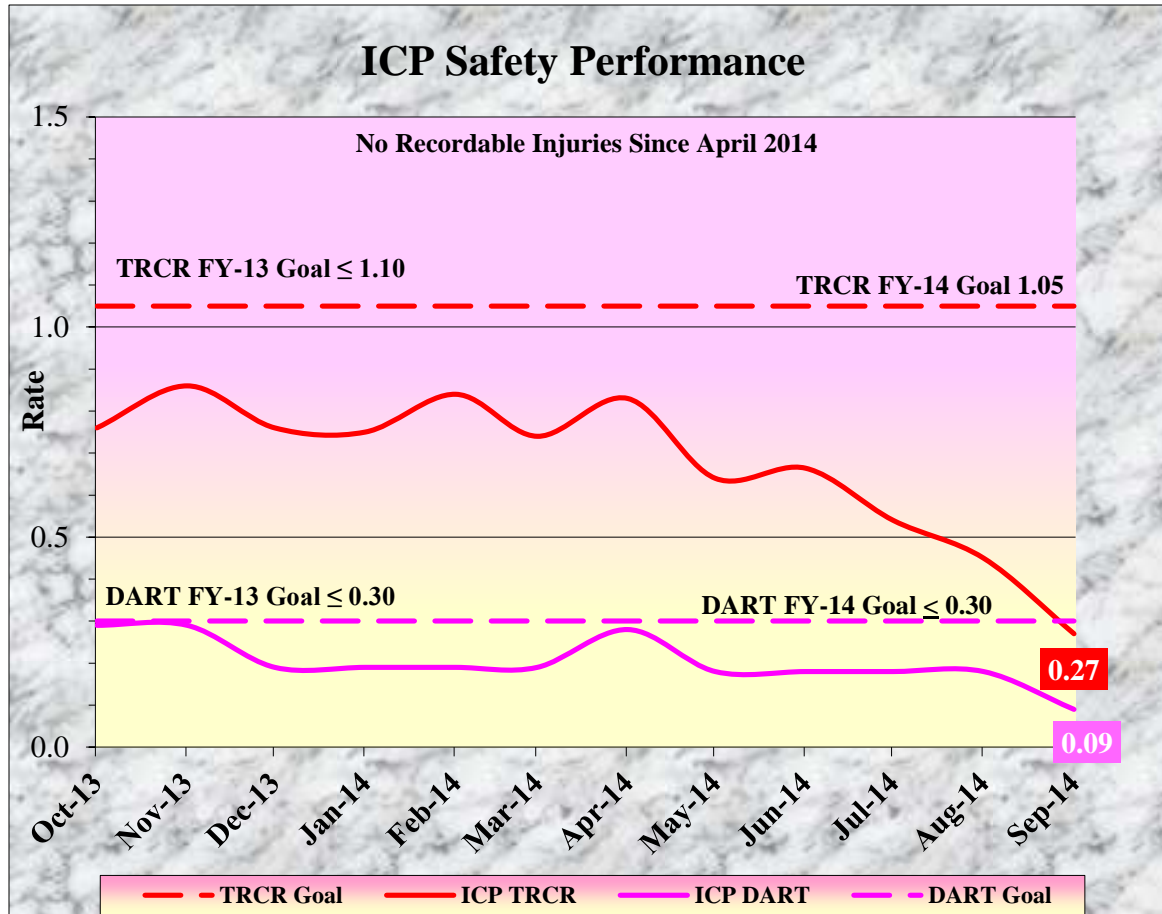


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ICP Safety Performance – Sept 2014

(Information and Data through **September 30, 2014**)



August 2014

Four First Aid Cases and No Recordable Injuries

Three ORPS Reportable Occurrences:

- Small Fire In Remote Decon. Cell
- IWTU-Process Confinement SAC Noncompliance

September 2014

No First Aid Cases or Recordable Injuries

Three ORPS Reportable Occurrences:

- IWTU-Incorrectly Installed Flow Element During Maintenance
- IWTU PISA-Inadequate Process Confinement Area Access Controls
- Excavator Fire in ARP Airlock 8

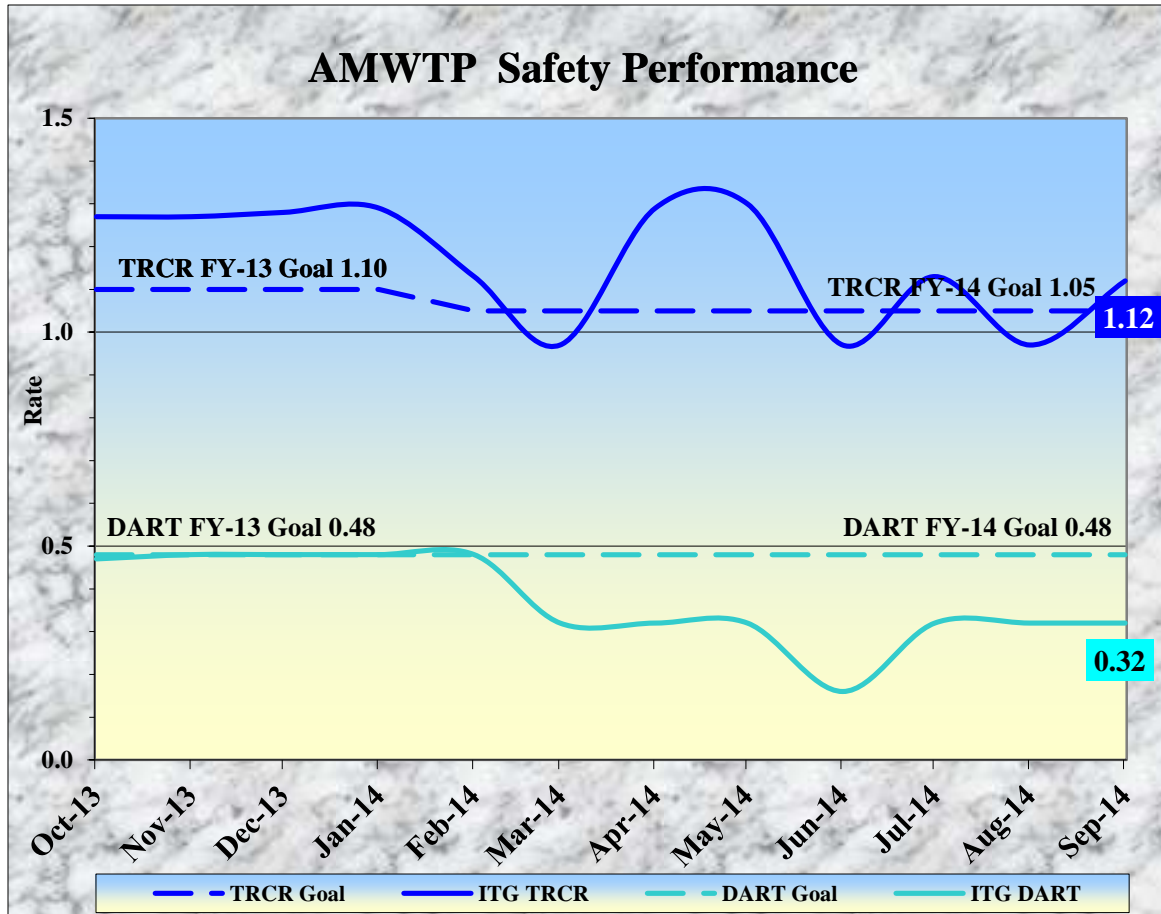


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AMWTP Safety Performance – June 2014

(Information and Data through September 30, 2014)



August 2014

One First Aid Case and No Recordable Injuries:

No ORPS Reportable Occurrences

September 2014

Two First Aid Cases and Two Recordable Injuries

- A finger strain that required a rigid splint to immobilize the finger
- A knee strain requiring prescription medication

Two ORPS Reportable Occurrences

- Overloaded Telescopic Boom Forklift
- Inadequate Work Authorization Leads to Possible Personnel Exposure



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Remote-Handled Transuranic Waste Disposition

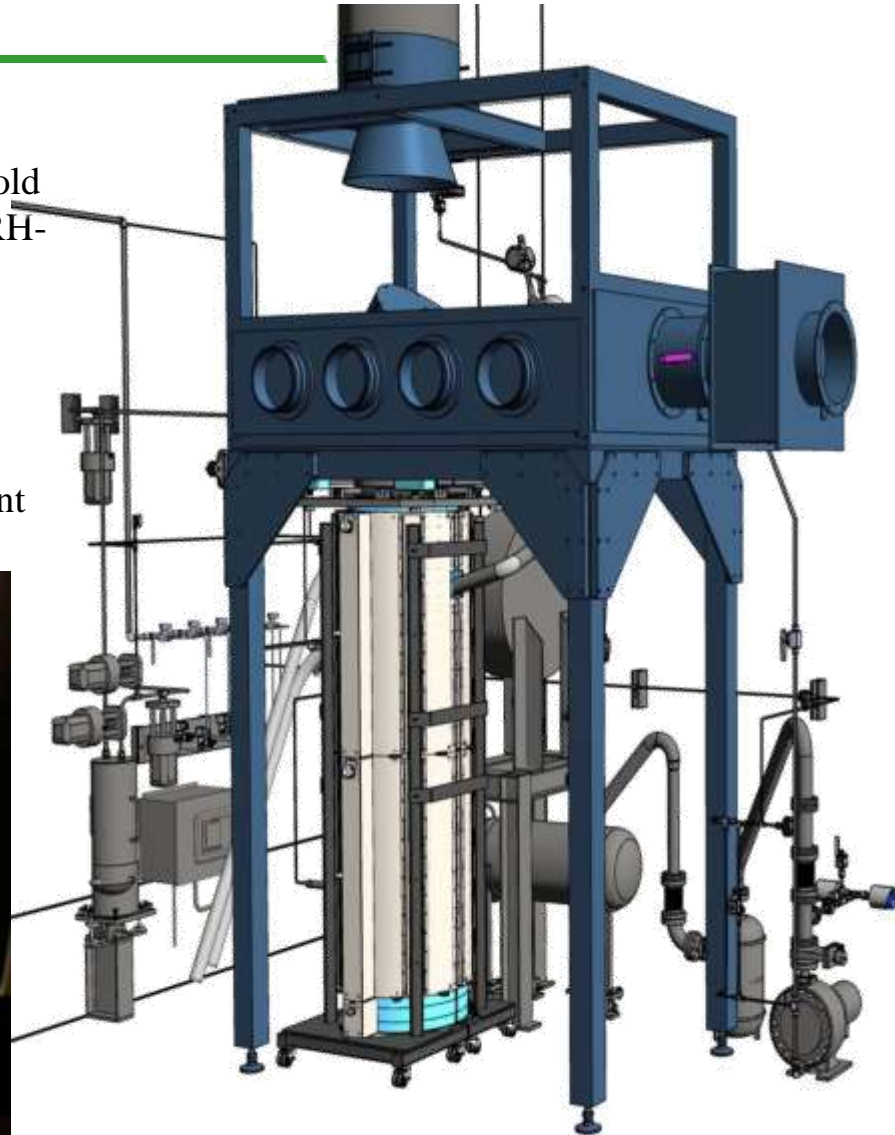
Key Activities/Actions:

- Remote-handled transuranic waste shipments are on hold until WIPP re-opens. 6 shipments of WIPP certified RH-TRU in backlog
- Continued operation of the sodium distillation system (SDS) in the CPP-666 facility

Upcoming Activities:

- Complete processing of all Idaho Settlement Agreement RH-TRU by 9/30/2015

Distillation
Bucket after
Processing
through SDS



Sodium distillation equipment at INTEC



Advanced Mixed Waste Treatment Project



**Empty Cargo
Container Disposal
at ICDF**



**Removal of Soil Fire
Break Between Cells 1 & 2**

Key Activities/Actions:

- ITG was awarded the VPP star of excellence for its safety performance.
- Through October, 2014, AMWTP operations have shipped over 54,500 cubic meters of legacy waste out of Idaho.
- Shipped nearly 3,000 cubic meters of process generated waste.
- Completed contract modification and new baseline due to WIPP impacts.
- Contact-handled transuranic waste shipments are on hold until WIPP re-opens. 406 shipments of WIPP certified TRU waste in backlog

Upcoming Activities:

- Complete removal of soil fire break and entry into Cell 1.
- Startup of Cargo Container Unloading.



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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 ([Completed 3.56 acres as of 11/1/2014](#))
 - 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)



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CERCLA Remediation Projects

Key Activities/Actions:

- After completion of a 20-year-long ordnance investigation, walking over 1,100 miles, the OU10-04 ROD implementation is complete and the Mass Detonation Area will be closed and transitioned to long-term institutional control program.
- The initial 2 years of the TAN In-Situ Bioremediation Rebound Test is now at completion.

Upcoming Activities:

- New scope was added to CWI's contract to develop Field Sampling Plans for several New Sites in preparation for remediation.
- Analyze the TAN rebound information to determine future actions.



Mass Detonation Area Disposal Crater



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CERCLA Remediation Projects – Idaho CERCLA Disposal Facility (ICDF)

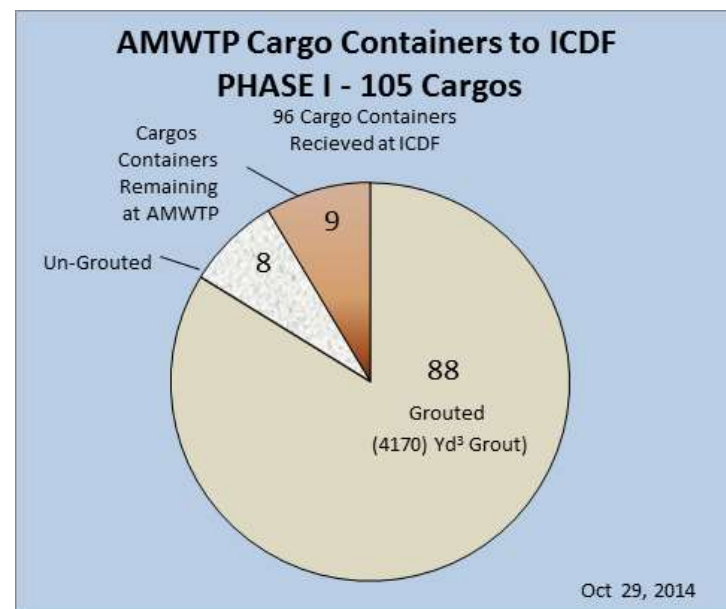
Key Activities/Actions:

- FY 14 Received 18,294 gallons of liquid for disposal to evaporation ponds
- FY 14 Received a total of 2,960 m³ of solid waste for landfill disposal, including 96 of 105 Phase I cargo containers from AMWTP



Upcoming Activities:

- Continue receipt and disposal of aqueous wastes in Evaporation Ponds
- Dispose of solid waste from environmental restoration actions, including completing first phase of AMWTP cargo containers
- Continue operation and maintenance of ICDF complex processes and facilities



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CERCLA Remediation Projects – INL Site-Wide Five-Year Review

Purpose:

- Evaluate implementation and performance of multiple remedies at the INL Site
- Determine if remedies remain protective of human health and the environment

Period of review:

- Covers 5 years from Fiscal Year 2010 (October 2009) to Fiscal Year 2014 (September 2014)

Five-Year Review Schedule:

- November 2014 – Publish public announcement
- October 2014 to July 2015 – Prepare draft
- Citizen's Advisory Board briefings
- December 2015 – Publish final report and public announcement



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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: 0.27 acres out of 0.27 acres has been exhumed (Completed)
 - ARP VIII: 0.28 acres out of 1.72 acres have been exhumed
 - ARP I & VI D&D (Completed)
- Complete in situ grouting of 21 locations (completed)
- Subsurface solvent vapor extraction (OCVZ)
- Environmental monitoring and institutional controls



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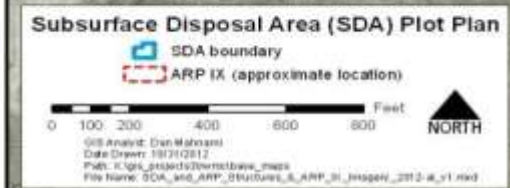
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WAG 7 Project

Key Activities/Actions:

- Completed ARP VII waste exhumation
- Continued ARP VIII waste exhumation using two crews
- Completed sludge drum treatment in ARP V (6,000 drums opened/treated as of mid June)
- CWI baseline is to exhume 0.51 acres by 9/30/2015, completed nearly 0.453 (89%) acres as of 11/1/14
- Placed ARP V in RCRA compliant standby after completion of 6,000-drum Sludge Repackaging Project.

Upcoming Activities:

- Continue to exhume targeted buried waste from ARP VIII

Metric	Baseline
Exhume targeted buried waste	0.51 acres by 9/2015



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Integrated Waste Treatment Unit (SBW) Project

Key Activities/Actions:

- Demonstrated steam fluidization
- Initiated water feed (precursor to simulant feed)
- Shutdown to address equipment challenges and modifications
- Restarted facility on 11/6/14
- Introduced surrogate waste (simulant)

Upcoming Activities:

- Complete initial simulant run
- Conduct confirmatory outage (inspection of equipment)
- Complete schedule maintenance

Metric	Baseline
Treat sodium-bearing waste	~ 850,000 gallons to loss of suction
Package SBW Waste	704 canisters filled
Process tank “heels”	360,000 gallons



Integrated Waste Treatment Unit Facility



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INTEC Liquid Waste Facility Closure Project

Key Activities/Actions:

- Completed Contractor and DOE Tank Washing Closure Readiness Assessments
- Continuing with draining of the cooling coil underground line headers in preparation of flushing the system

Upcoming Activities:

- Start tank washing activities

Metric	Baseline
Close liquid waste tanks	4 tanks by 9/2015



Prepping for tank farm work



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Spent Nuclear Fuel Disposition Project

Key Activities/Actions:

- Twelve cask shipments of SNF received from the Advanced Test Reactor (ATR) in FY 14
- Six Experimental Breeder Reactor (EBR) II shipments made to the Materials and Fuels Complex in FY 14
- Complete transfer of West Valley Casks from rail cars to cask storage pad (CPP-2707)

Upcoming Activities:

- Replace CPP-666 ion exchange column resins. Spent resins shipped to Nevada National Security Site as low level waste for disposal
- Continue ATR and EBR-II SNF fuel transfers
- Continue to prepare Three Mile Island's NRC license renewal application

Metric	FY 14 Baseline
Ship Advanced Test Reactor fuel Ship EBR-II	15 ATR 6 EBR II



Fuel movement in CPP-666



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

Completed Activities/Actions:

- Obtained Regulator approval of treatment process for MFC-766 superheaters and heat exchangers. Initiated welding of drain nozzles.
- Initiated preparations for grouting the MFC-767, EBR-II reactor building basement by cutting holes in piping and ductwork.

Upcoming Activities:

- Begin grouting of MFC-767 basement on November 3rd. Grouting will continue up to EBR-II reactor main floor. Estimated 300 truck load delivery to complete in early December. Contractor review (MSA) to assess readiness for steam treatment of MFC-766 heat exchangers and superheaters. Anticipate start of treatment in January 2015.



Preparatory actions to grout EBR-II Reactor Basement. View looking into the basement and removal of ancillary equipment



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Idaho Completion Project Milestones



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Dashboard Summary for ICP Program

Key Questions	Dashboard Indicator	Comments
Budget Concerns and Issues		The current budget status is a continuing resolution through December 11, 2014. However, there are strong indications that some type of bill will be passed providing funding for the remainder of the year. Both the House and Senate marks are at the President's request level or greater.
Employment/Economic Conditions		Employment/Economic conditions should remain consistent.
Affect on Agreements		Will miss Consent Order for IWTU of 31 Dec 2014. No impact on meeting other current agreements
Safety and Environment		CWI Safety record is exceptional ITG safety record is at targets and improving
ICP Cleanup Condition		ICP continues to support WIPP – Meet scheduled TRU shipments



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