



U.S. DEPARTMENT OF
ENERGY

OFFICE OF
**ENVIRONMENTAL
MANAGEMENT**

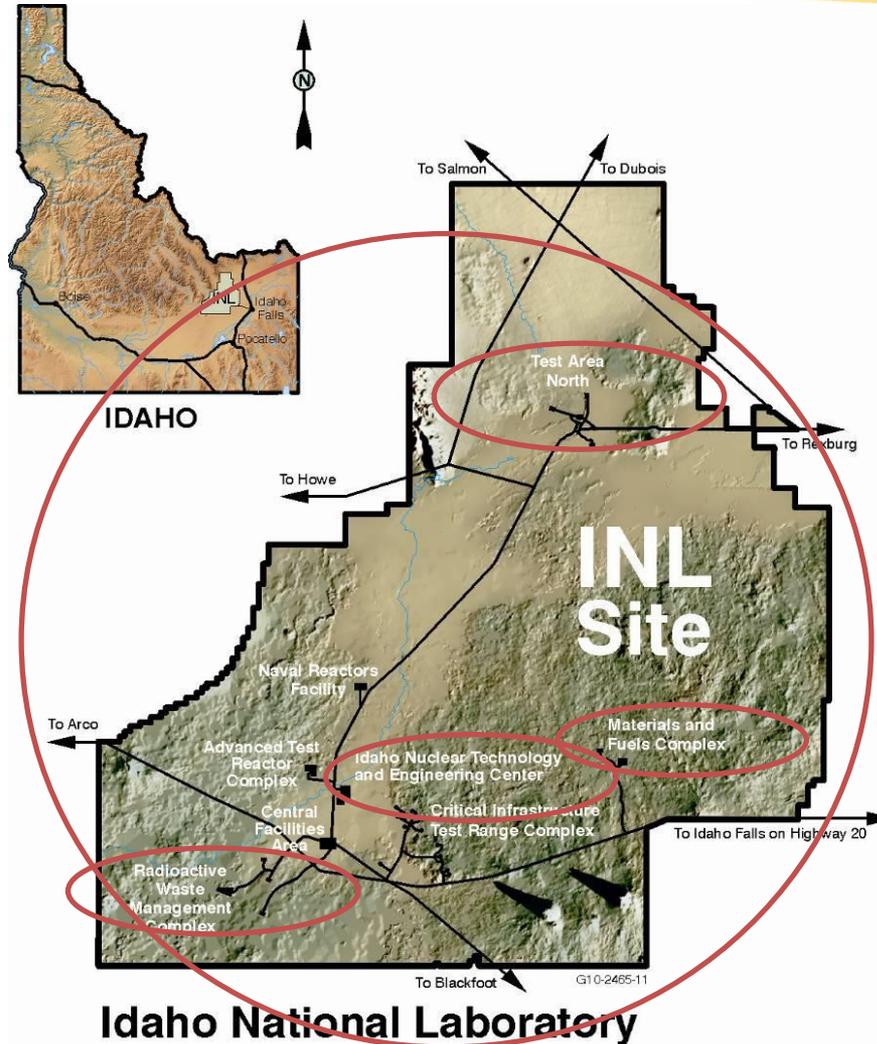
Idaho Cleanup Project (ICP) Environment

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December 4, 2013

Site Map



Idaho Settlement Agreement

- All TRU waste removed from Idaho by 2018
- All spent fuel placed in dry storage by 2023
- Remove all spent fuel from Idaho by 2035
- Treat and have all high-level waste road-ready to remove from Idaho by 2035
- Delay in Sodium-Bearing Waste Treatment resulted in hold on Spent Fuel receipts

RCRA - Site Treatment Plan

- Provides framework for mixed waste management at INL Site including Calcine

CERCLA - Federal Facility Agreement/Consent Order

- Governs environmental restoration activities
- Governs Sub-surface Disposal Area (SDA)/Accelerated Retrieval Project (ARP), Tank Farm capping, TAN Groundwater, and all CERCLA sites (<http://ar.inl.gov>)

RCRA Notice of NonCompliance/Consent Order

- Requires closure of final four of 11 large Tank Farm Tanks
- Tank grouting will remain after FY2015

General Compliance Drivers

- Laws, Regulations, DOE Orders
- Permits
- Closure plans
- Implementing documents for CERCLA Records of Decision

CERCLA – General Background

- INL Site listed on CERCLA (Superfund) Nation Priorities List – 1989
- FFA/CO agreement with EPA and Idaho DEQ – 1991
 - Site was divided into 10 Waste Area Groups (WAGs), Operable Units (OUs), and individual release sites.
- Investigations resulted in decisions on how to address release sites. Decisions documented in Records of Decision (RODs) and implementing documents (<http://ar.inl.gov>).
- All RODs are completed and are now being implemented.

Test Area North = WAG 1

- Several release sites were addressed including ponds, tanks, and piping systems.
- Currently, the only significant effort is focused on groundwater contamination related to the old injection well.
 - Currently in a rebound test to assess the degree of success of groundwater remediation at the injection well. Rebound test will continue another couple of years.
 - Pump and treat facility being operated as a best management practice 4 days per week.

TAN Groundwater



New Pump and Treat Facility

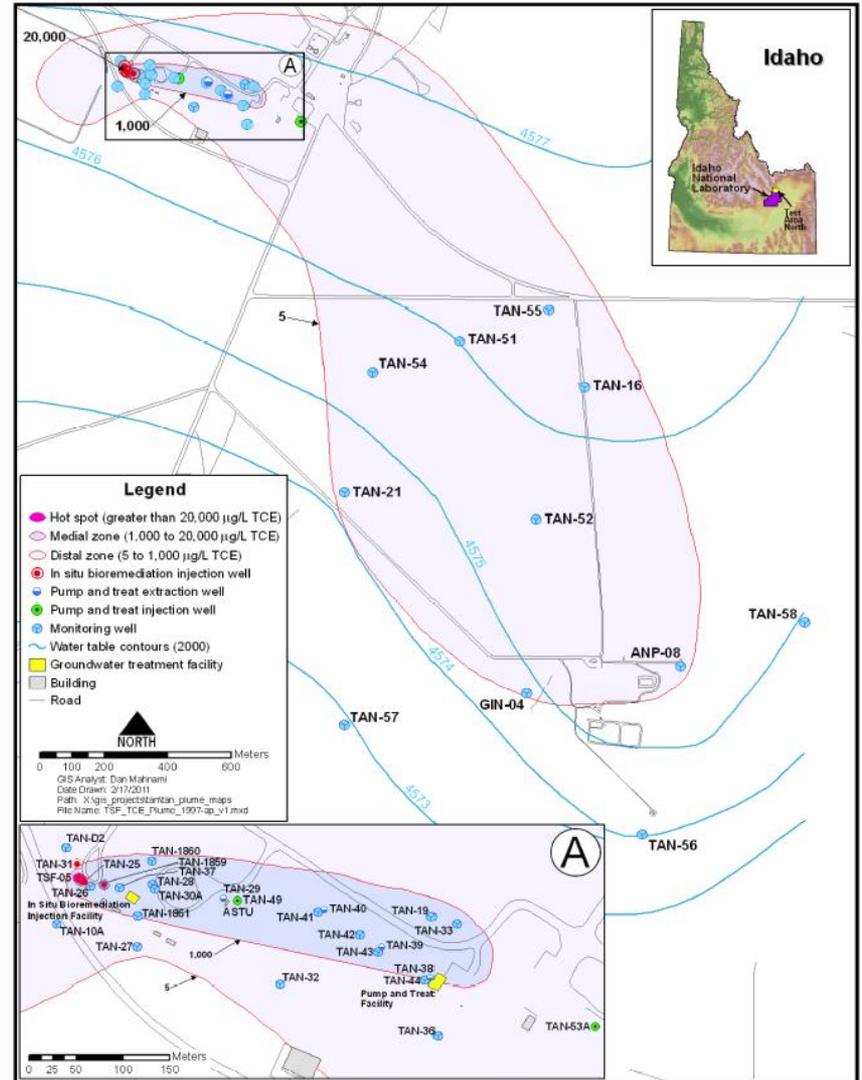


Figure 1. Map of zones in the trichloroethene plume at Test Area North in 1997.

WAG 2 = Advanced Test Reactor Complex

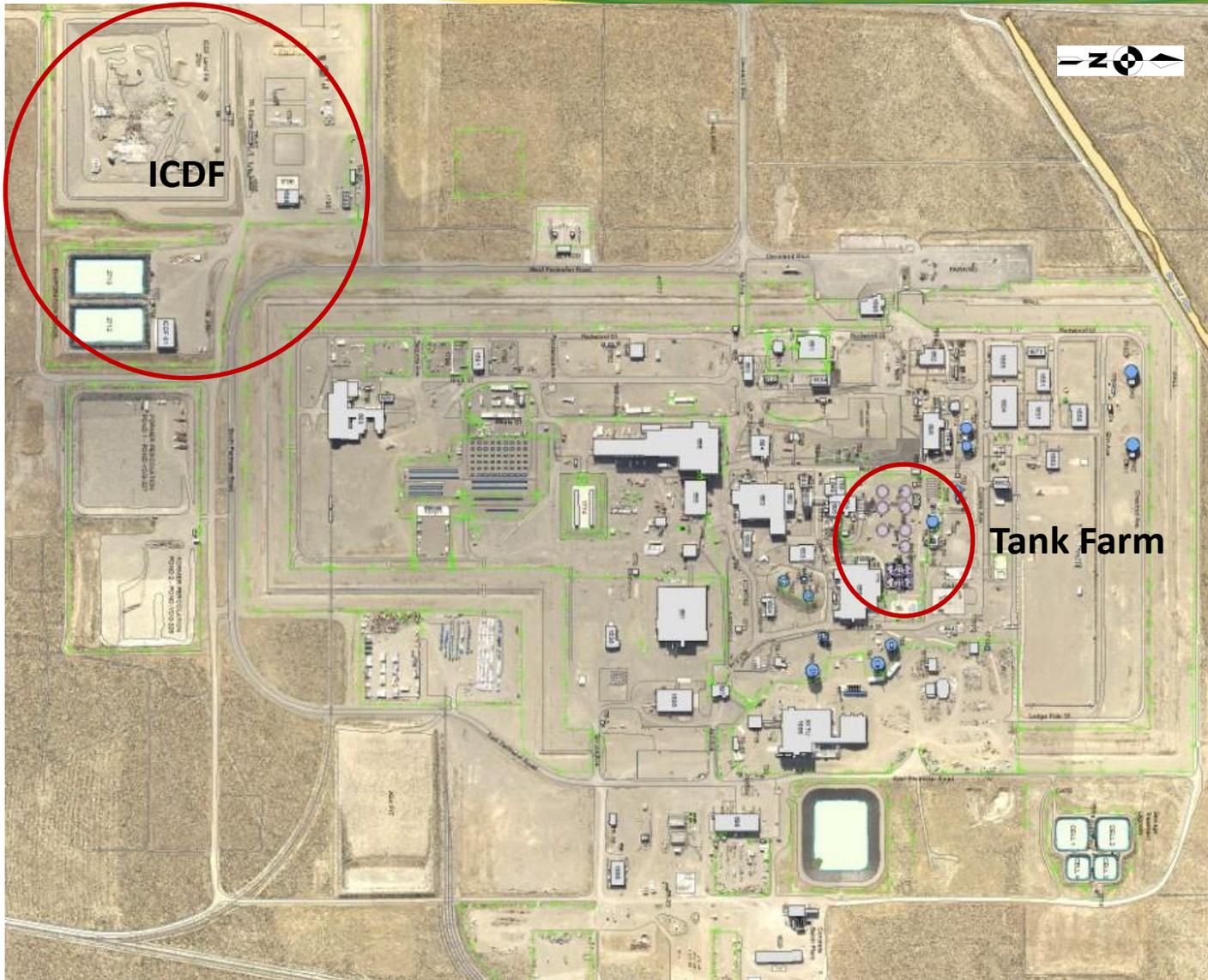
- Evaluated and cleaned up several soil contamination sites, including covers over old infiltration ponds (Chemical Waste pond, Sewage Pond, Warm Waste Pond).
- Remaining:
 - Monitor groundwater plume trends related to old injection well and infiltration ponds (old warm waste pond).
 - Address potential new sites

ATR Complex



Idaho Nuclear Technology and Engineering Center = WAG 3

- Addressed several soil contamination sites and old injection well
- Established INL CERCLA Disposal Facility (ICDF) for CERCLA waste
 - D&D typically performed as a CERCLA Removal Actions to establish CERCLA pedigree for D&D waste to allow ICDF disposal
- Key remaining issues include:
 - Tank Farm Soils
 - Reducing contaminated perched water by stopping anthropogenic sources (water system leaks) and by recharge control
- Path forward
 - Interim Tank Farm asphalt cover in 2017 (regulatory milestone)
 - Close and cap ICDF
 - Final soil cap after INTEC closure and removal of buildings structures within the footprint of the final cap
 - Continue to monitor groundwater (aquifer and perched water)
 - Recharge/runoff control

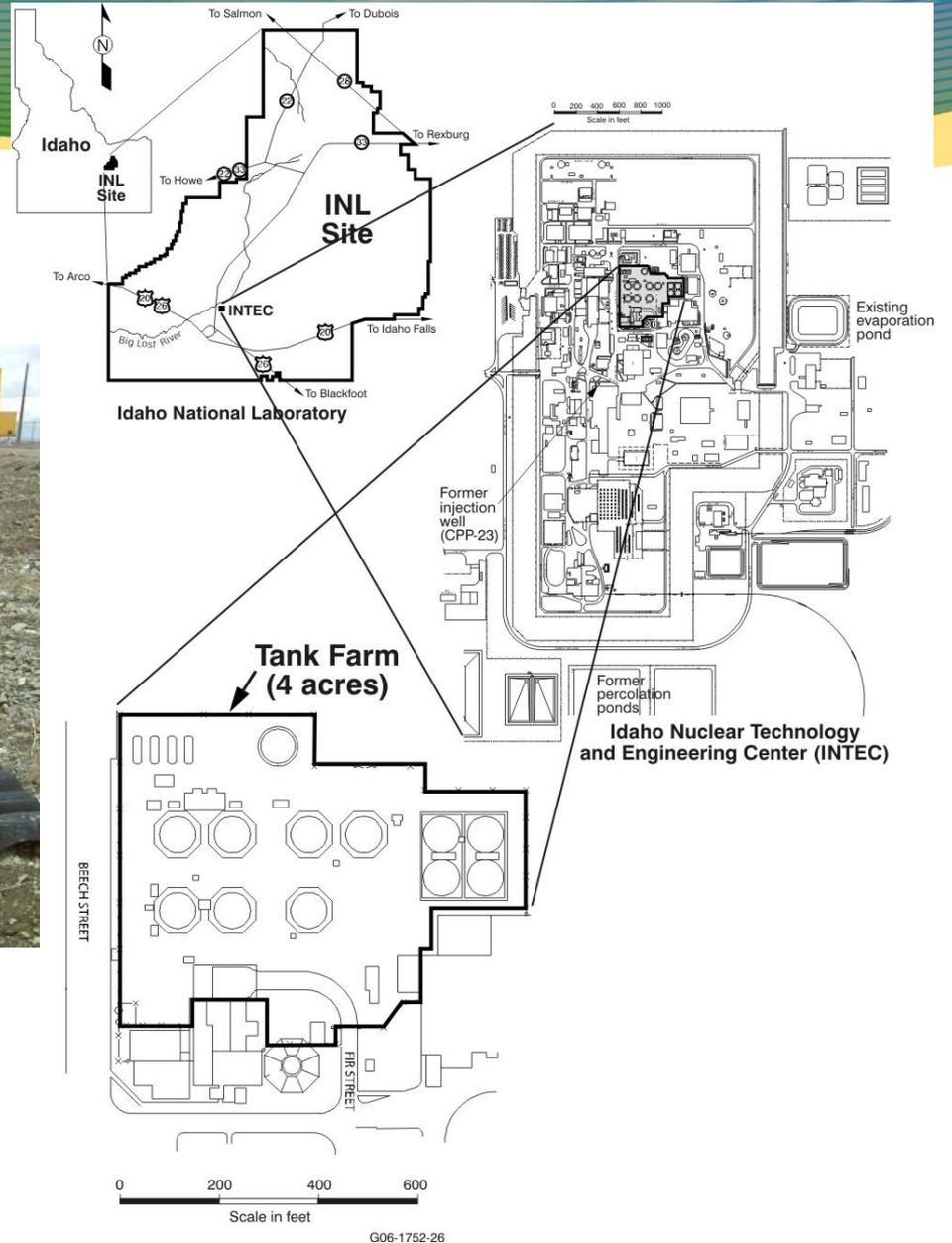


ICDF

Tank Farm



Lined ditches reduce infiltration of anthropogenic water near the Tank Farm



WAG 4 = CFA

- Addressed several soil contamination sites
- Continue to monitor nitrate groundwater plume

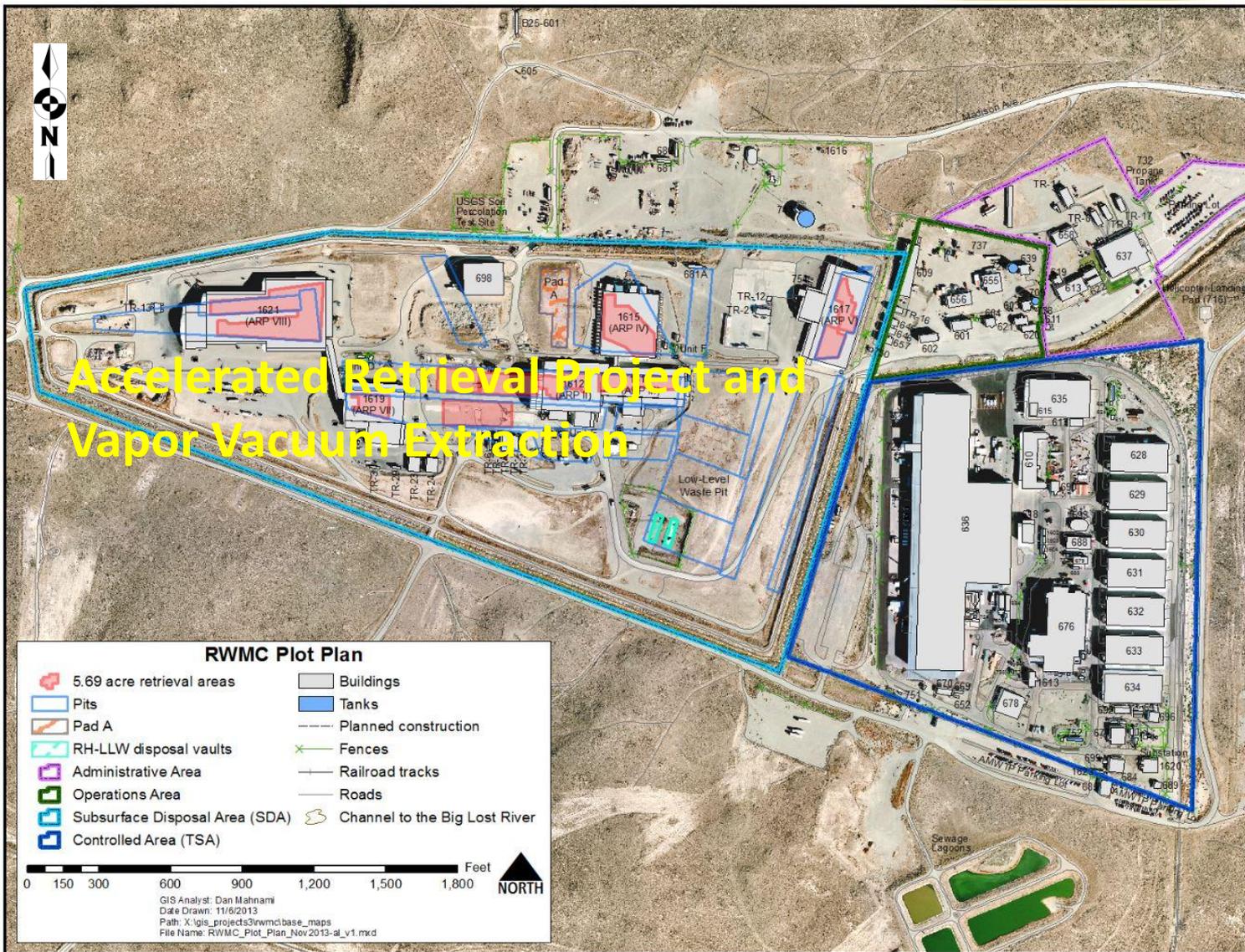
In addition to WAGs 2 and 4, active remediation is completed and only monitoring and institutional controls remain at the following WAGs:

- WAG 5 – Auxiliary Reactor Area
- WAG 6 – BORAX area
- WAG 9 – MFC (formerly ANL-W)

(Note that WAG 8 is managed by Naval Reactors Facility)

WAG 7 = Radioactive Waste Management Complex = Buried Waste

- Main drivers:
 - OU 7-13/14 ROD
 - Agreement to Implement (Court Order)
- Ground water monitoring
- Organic Contamination in the Vadose Zone Project (OCVZ) ongoing
 - Approaching 240,000 lbs TVOC removed by vacuum extraction, since 1996.
- Buried Waste Accelerated Retrieval Project (ARP)
 - Regulatory milestones require completion of exhumation of 5.69 acres by 2023 and completion of the final cap over the Subsurface Disposal Area (SDA) by 2028.
 - The 90% Design of the SDA cap is due 9/30/2020
 - Less than 2.07 acres expected to remain after FY 2015



INL Site Non-facility-specific Area = WAG 10

- Addresses site-wide issues:
 - Site-wide groundwater
 - Long-term stewardship and Institutional Controls, including Munitions and Explosives of Concern (MEC)
 - New site evaluation and remediation as required
- Formal CERCLA Five-year Review submittal required by September 2015. The Five-year review will be finalized in early FY2016.

RCRA Permits are in place for EM work at:

- RWMC - AMWTP Legacy waste processing; sludge processing at ARP V
- INTEC
 - Storage of waste for ongoing operations
 - Processing RH-TRU waste
 - Liquid Waste treatment
 - IWTU – treatment of Sodium-Bearing waste and product storage
 - Calcine storage
 - Post closure care of two facilities closed as landfills
 - Closure of final four Tank Farm tanks
- MFC – MFC-766 (Sodium Boiler Building)

