

U.S. DEPARTMENT *of* ENERGY

Office of Environmental Management

New Mexico Legislature Radioactive & Hazardous Materials Committee Meeting

LEGACY CLEANUP AT LOS ALAMOS NATIONAL LABORATORY

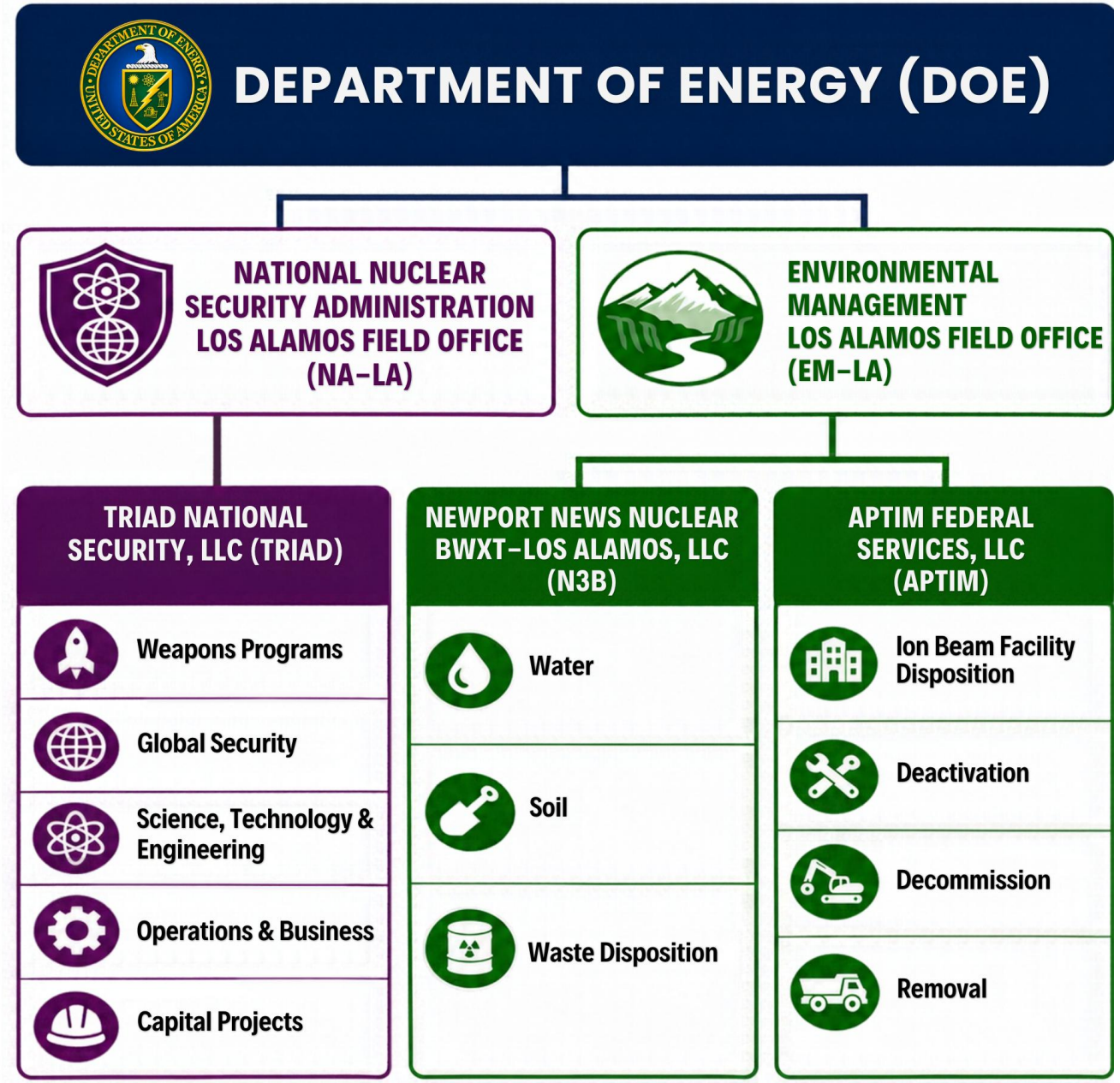
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Newport News Nuclear BWXT-Los Alamos, LLC (N3B)

November 5, 2026


DEPARTMENT OF ENERGY (DOE)
NATIONAL NUCLEAR SECURITY ADMINISTRATION LOS ALAMOS FIELD OFFICE (NA-LA)
ENVIRONMENTAL MANAGEMENT LOS ALAMOS FIELD OFFICE (EM-LA)
TRIAD NATIONAL SECURITY, LLC (TRIAD)
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NEWPORT NEWS NUCLEAR BWXT-LOS ALAMOS, LLC (N3B)
Water
Soil
Waste Disposition
APTIM FEDERAL SERVICES, LLC (APTIM)
Ion Beam Facility Disposition
Deactivation
Decommission
Removal

EM-LA Mission



SHIP WASTE OFF-SITE — TRANSURANIC, LOW-LEVEL, & MIXED LOW-LEVEL RADIOACTIVE WASTE

CLEAN UP THE LAND — CONTAMINATED SOIL, LEGACY LANDFILLS

PROTECT WATER QUALITY — GROUNDWATER, SURFACE WATER, STORM WATER

D&D EXCESS FACILITIES — REPURPOSE FOR LANL MISSION

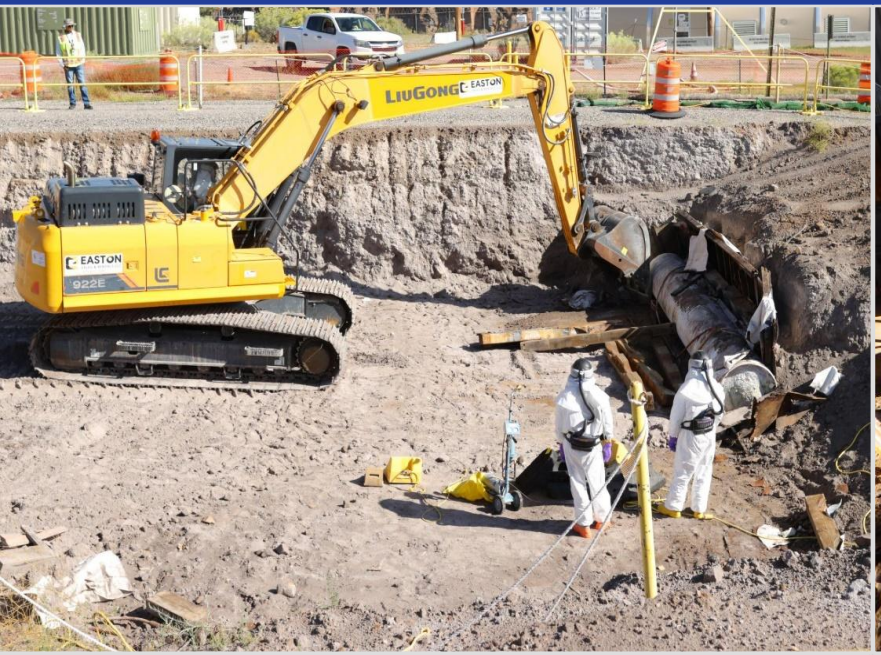
Safely, effectively, efficiently, and transparently complete the cleanup of legacy contamination and waste (pre-1999) resulting from nuclear weapons development and government-sponsored nuclear research during the Manhattan Project and Cold War era at LANL

EM-LA Priorities

- Execute legacy cleanup mission safely
- Continue to engage transparently with State of New Mexico, pueblos, stakeholders, and public
- Advance Hexavalent Chromium Campaign and restart interim measures (IM)
- Process and ship legacy waste off-site
- Conduct water, soil, sediment, and vapor sampling on and off LANL property to evaluate, monitor, and address environmental contamination
- Continue Ion Beam Facility demolition



Environmental Cleanup



Reduce legacy waste footprint at LANL: retrieval of corrugated metal pipes at Technical Area 54, Area G



Investigate and remediate legacy sites at LANL: excavation of PCB contamination at Twomile Canyon



Dispose excess NNSA facilities: removal of horizontal accelerator prior to Ion Beam Facility demolition

EM-LA/N3B supports both DOE missions in New Mexico to safely complete EM legacy cleanup at LANL and advance NNSA national nuclear security and scientific discovery

Highlights of Accomplishments

- Completed fiscal year (FY) 2026 Consent Order Milestones on time or ahead of schedule
- Legacy cleanup contractor N3B attained best safety record in FY 2026
- Achieved strongest year for legacy waste shipments to Waste Isolation Pilot Plant (WIPP) in FY 2026
- Installed new groundwater monitoring well; currently installing additional monitoring well
- Completed investigation and needed remediation for 602 of 1,405 total Consent Order sites
- Collected ~7,000 environmental samples annually to inform cleanup activities and confirm corrective actions are effective
- Implemented Documented Safety Analysis (DSA) to further minimize operational risks at Technical Area 54 (TA-54), Area G, the primary legacy waste storage facility

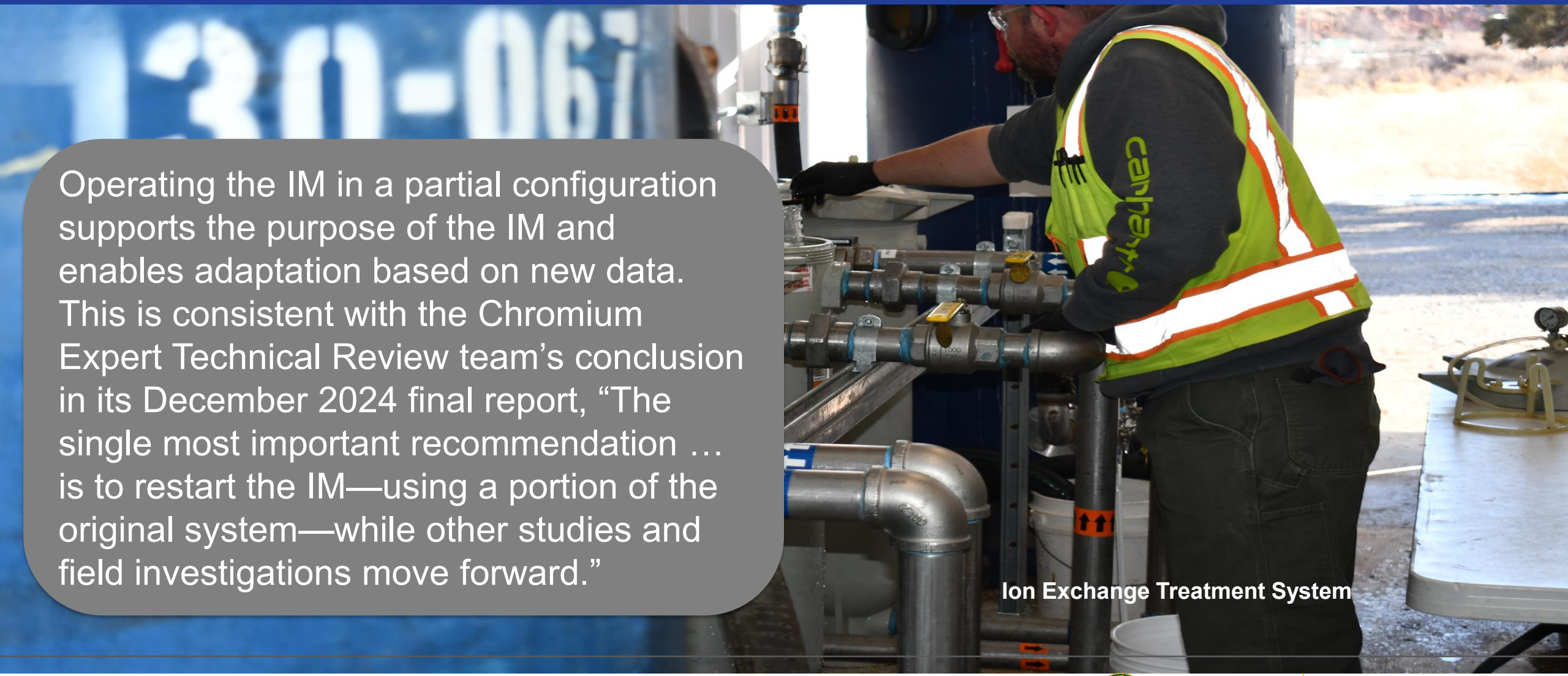


TRU waste shipment enroute to WIPP


Drilling for groundwater monitoring well R-80

Operation of Chromium IM is Essential

Operating the IM in a partial configuration supports the purpose of the IM and enables adaptation based on new data. This is consistent with the Chromium Expert Technical Review team's conclusion in its December 2024 final report, "The single most important recommendation … is to restart the IM—using a portion of the original system—while other studies and field investigations move forward."



Ion Exchange Treatment System

Chromium Expert Technical Review Recommendations

EM-LA is committed to following December 2024 report recommendations:

Achieved

- ✓ Restarted chromium IM in alignment with NMED and Expert Technical Review; NMED directed EM-LA to cease injection in November 2025
- ✓ Completed monitoring well San Ildefonso Mortandad Regional 3 (SIMR-3)
- ✓ Utilized dual-screened wells
- ✓ Increased regular collaboration with NMED, Office of the State Engineer (OSE), Pueblo de San Ildefonso, and Los Alamos County

In Progress

- ❑ Completing installation of monitoring well R-80 to further characterize plume in northeastern area
- ❑ Evaluating locations and design for new injection well
- ❑ Updating chromium plume conceptual site model as part of adaptive site management and to identify data needs in support of NMED's remedy selection
- ❑ Transitioning groundwater modeling software from Finite Element Heat and Mass transfer model (FEHM) to USGS Modular Flow (MODFLOW) Model—more widely accepted and transparent to third parties

Chromium IM Key Takeaways

- EM-LA is actively working to have all key stakeholders (NMED, OSE, Pueblo de San Ildefonso, and Los Alamos County) engaged in technical discussions to move decisions forward
- Operation of the IM reduces migration of the hexavalent chromium plume
- 100% land application (up to 100 million gallons per year—the equivalent of 150 Olympic-sized swimming pools) is not a practical solution or responsible use of groundwater
- The plume does not pose an immediate threat to public or private drinking water wells

Ion Beam Facility Disposition

NNSA Facility

- Built in 1951, housed two of the largest Van de Graaff accelerators
- 60,000 sq ft, decommissioned in 1999

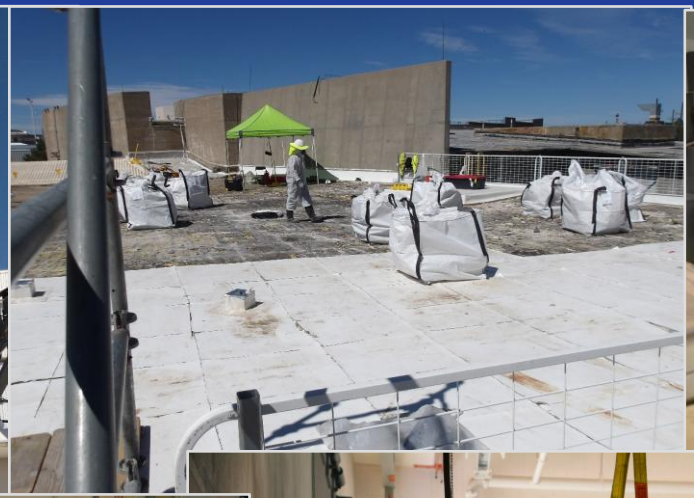
Project

- Supports LANL modernization activities
- Remediated mixed/low-level waste from administrative area shipped safely off-site to licensed disposal facilities
- Demolition of administrative and horizontal accelerator buildings began in October 2026



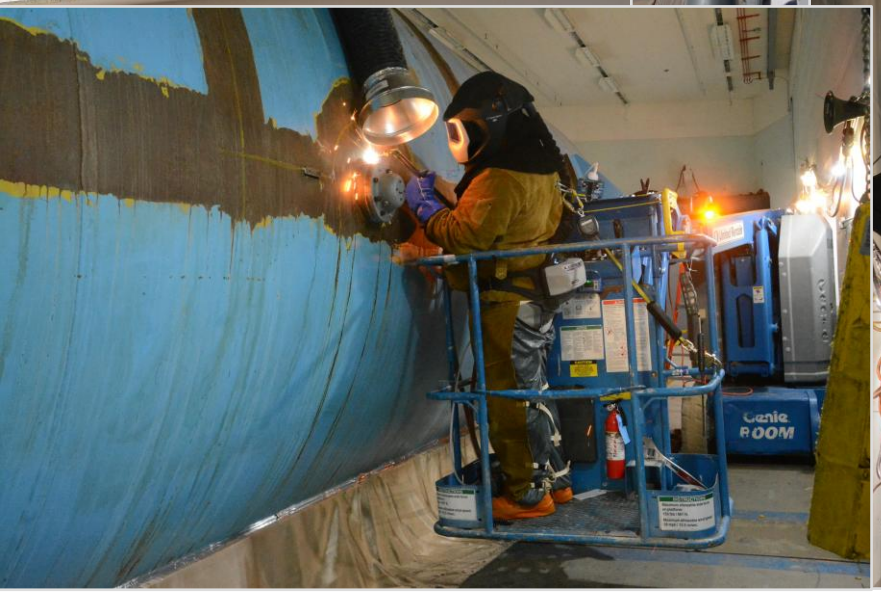
Demolition Work at Ion Beam Facility















Best Safety Record in FY 2026

- N3B's safety rates track approximately 60% better than the national average for the environmental remediation industry, based on the latest data from the Bureau of Labor Statistics
- In fiscal year 2026, 99.93% of hours worked by N3B were not impacted by Days Away, Restricted or Transferred (DART) cases
- Safety culture advanced with launch of OSHA-30 training initiative—designed to provide practical skills for immediate field application



N3B Safety Action Team

Area G Documented Safety Analysis

DSA Implementation and Operational Impact

- Strengthened Safety Posture: critical optimizations enhance operational rigor and baseline nuclear safety across the site
- Adaptive Framework: living safety basis designed to evolve with future remediation activities and ongoing mission to ship waste off the hill



Waste Shipments in FY 2026

Transuranic (TRU) Radioactive Waste

- 89 TRU waste shipments to WIPP - 107% increase over FY25
- 403.22 cubic meters of TRU waste - 108% increase over FY25
  - Equivalent of ~54 standard-sized dump trucks

Low-Level Radioactive and Mixed Hazardous Waste

- 1,082 cubic meters shipped to off-site disposal facilities in Texas and Utah
  - Equivalent of ~141 standard-sized dump trucks



TRU waste departs for WIPP

Above-Ground Waste Inventory & Future Activities

Over 90% of above-ground TRU waste inventory shipped to WIPP

- Remaining 10% of above-ground legacy waste:

Number of Containers	Above-Ground Waste Inventory
485 (307 shipped to date)	Corrugated Metal Pipes (CMPs)
872	Containers with significant voids
271	Sludge drums with high moisture content
611 Requires new, more robust waste processing facility at TA-54, Area G	Containers consisting of multiple other difficult waste streams (potentially flammable liquids, oversized items, hazardous waste concerns)



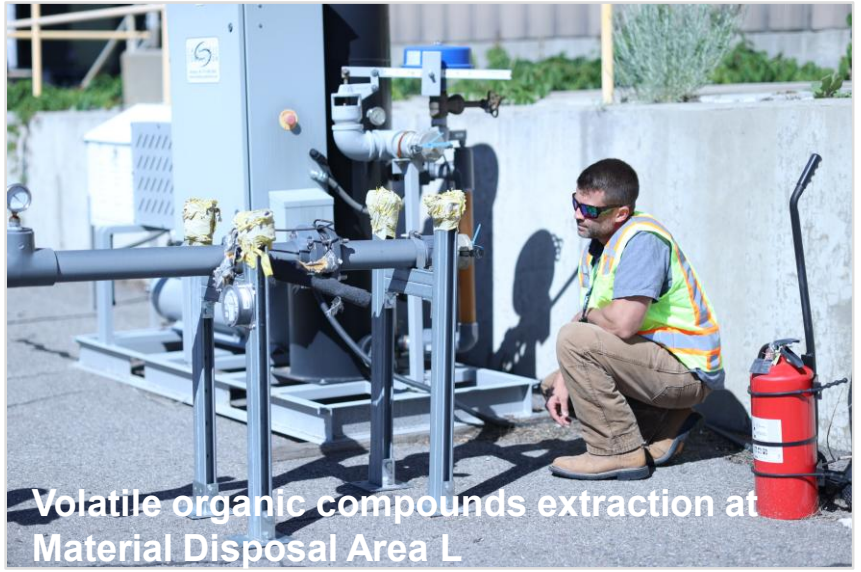
Waste operations at TA-54, Area G

Environmental Remediation Accomplishments in FY 2026

- 100% of Consent Order Appendix B Milestones completed (10/10)
- Accelerated soil excavation and off-site disposal of polychlorinated biphenyls (PCB)-contaminated soil at Twomile Canyon Aggregate Area, reducing environmental risk ahead of schedule
- Extracted approximately 255 pounds of volatile organic compounds from the subsurface plume at Material Disposal Area L
- Collected 323 environmental samples across two Aggregate Areas to inform future cleanups



PCB-contaminated soil shipment from Twomile Canyon



Volatile organic compounds extraction at Material Disposal Area L

Environmental Remediation Accomplishments in FY 2026

- Performed 4,132 surface water and stormwater inspections
- Collected 3,102 groundwater samples
- Treated 87,900 gallons of purge water through the Chromium Treatment Unit B, part of the Chromium Interim Measures Treatment System
- Completed drilling of the R-80 borehole to a total depth of 1,030 feet below ground surface, 93 days ahead of schedule

Chromium IM Treatment in Mortandad Canyon





Sampling along Rio Grande

Monitoring Well R-80, April 2026



Leveraging Innovative Technology





Integrated Ground-based Autonomous Agent for Radiological Tracking (iGART)

- Remote-control robot detects radiological contamination in large, complex structures and outdoor environments
- Strengthens ability to reduce risk, protects workers, and the environment

Satellite-based telemetry across surface water monitoring network at LANL

- Installed at 117 of 193 planned monitoring locations as of the end of FY 2026
- Anticipate reducing ~3,600 annual exposure hours, reducing personnel safety risks
- Enables real-time data capture



Leveraging Super Intelligence (SI)

Engineering and Nuclear Safety (ENS) Program

- Reduced review and approval cycle times on Management Level Determinations (MLD) by 60% utilizing SI automated workflows

TRU Waste Management

- SI helped write a technical justification to utilize head space sampling to make a Boolean determination on whether a drum with unknown liquids may be accessed for processing safely
- SI also used to assist in authoring a technical paper for use of grout as a viable Resource Conservation and Recovery Act (RCRA) treatment process that will be evaluated for potential RCRA permit modification


ENS MLD Super Intelligence Team

Future Workforce – 2026 Summer Interns

- N3B hosted seven interns this summer
- Provided three scholarships to Northern New Mexico College and University of New Mexico Los Alamos students, with internship offer; 21 scholarships awarded to date

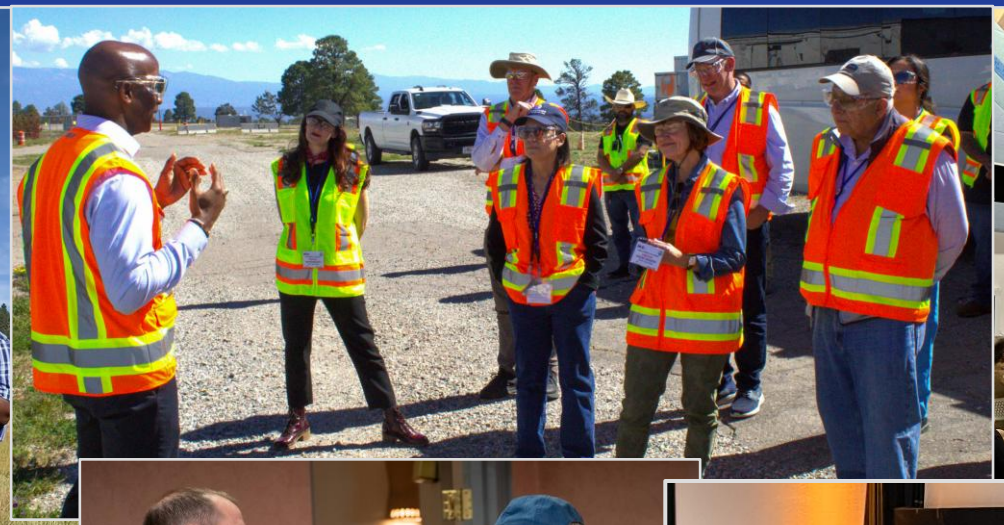






Pueblo, Stakeholder, & Public Engagement







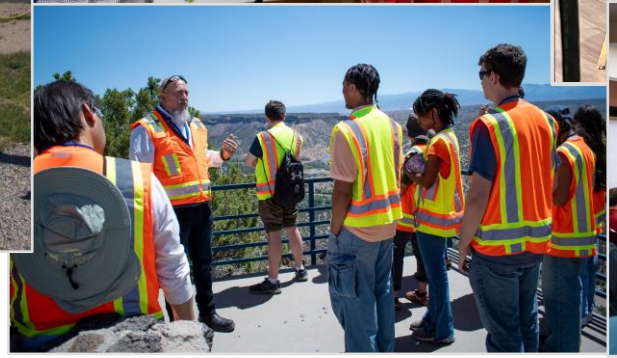














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