



Los Alamos National Laboratory Technical Area 21 Fact Sheet



CAMPAIGNS: *Technical Area 21 D&D and Cleanup; Material Disposal Areas A & T Remedy*

LOCATION: *On DP Mesa, south of the Los Alamos County Airport*

CAMPAIGN DESCRIPTION: *Decontaminate and remove the existing structures, waste lines and tanks, debris and obsolete equipment, and implement the final remedy*

CAMPAIGN GOAL: *Clean up to environmental standards while making land available for transfer to Los Alamos County*

SITE HISTORY

Los Alamos National Laboratory's (LANL) Technical Area 21 (TA-21) was the Manhattan Project and Cold War-era complex of buildings that housed the plutonium processing facility, and where groundbreaking tritium research for energy, environment and weapons defense research took place. At the height of operations, TA-21 contained 125 buildings.

NOVEMBER 2020 STATUS

Unexpected radiological conditions were discovered in Building 257 and in piping leading away from the building. Field work has been halted until the completion of an assessment

CLEANUP ACTIVITIES TO DATE

- ✓ All buildings (except Building 257, the Radiological Liquid Waste Facility), water tanks, and a sewage treatment facility were decommissioned, decontaminated and demolished
- ✓ Material Disposal Area B (MDA B), LANL's oldest waste disposal site, was excavated, and, after confirmation sampling, was transferred to Los Alamos County
- ✓ Waste was shipped off-site and scrap metal was recycled
- ✓ MDA V was closed and transferred to Los Alamos County
- ✓ MDA U was closed, but has not yet been transferred to Los Alamos County

KEY FUTURE ACTIVITIES

2022: Submit to NMED a summary report describing the installation and instrumentation of the vadose moisture monitoring system and completion of moisture monitoring characterization sampling at MDA T.

2022: Submit to NMED a report documenting completion of R-65, a monitoring well planned for the north edge of DP Mesa between MDA A and MDA T. The well will be drilled in accordance with the NMED-approved work plan.

2021-2025: Define potential final remedies for MDAs A and T and begin the process for public review and final selection by NMED, implement the final remedy, complete site remediation, and complete all documentation necessary to allow transfer of the property to Los Alamos County for beneficial community use.

MDA A OVERVIEW

MDA A is an inactive 1.25-acre subsurface legacy disposal site situated at TA-21. Portions of MDA A are managed as a nuclear facility due to the contamination levels. Combustible and non-combustible radioactive solid wastes were disposed in the central pit and in the two eastern trenches. There is very little documentation detailing the types of chemicals and quantities of radionuclides in the pit and trenches. Radioactive liquid wastes were stored in two 50,000-gallon underground tanks (dubbed the General's Tanks). From 1975-1981, much of the liquid fraction of the waste was pumped from the tanks, leaving residual liquid and sludge at the bottom of each tank.

CONSENT ORDER CAMPAIGNS

Under the Compliance Order on Consent (Consent Order) between the Department of Energy (DOE) and the New Mexico Environment Department (NMED), cleanup at TA-21 is divided into two campaigns: (1) TA-21 D&D and Cleanup and (2) Material Disposal Areas A & T Remedy.

MDA T OVERVIEW

MDA T, located immediately west of MDA A, is a 2.2-acre radiological waste disposal site. It consists of four plutonium-contaminated absorption beds used to dispose of liquid wastes from 1945-1952; a retrievable waste storage area; a series of disposal shafts containing radioactive elements; an acid holding tank and acid sump; a caisson built in 1959 at the northwest corner of absorption bed 1; an inactive container storage area for alcohol, acetone, and freon; and two surface spills of radioactive waste.

FINAL REMEDY

The goal for both campaigns is two-fold: clean up to environmental standards while making land available for transfer to Los Alamos County. The goal requires the DOE's Environmental Management Los Alamos Field Office (EM-LA), DOE's National Nuclear Security Administration (NNSA), and NMED, with public input, to agree to final cleanup levels, and to secure the support of Los Alamos County on the cleanup levels and final site condition. After completion of the final remedy, DOE anticipates that land at TA-21 will be acceptable for reuse by Los Alamos County.

Presumed Remedy: TA-21 D&D and Cleanup Campaign – This campaign includes the removal and remediation of buried waste lines and contaminated soils. Demolition of facilities and slabs are not part of the Consent Order and will be executed under DOE requirements; the structures to be demolished include the DP West slabs and the Radiological Liquid Waste Treatment Facility, enabling access to contaminated soils.

Presumed Remedy: MDAs A and T Remedy Campaign – This campaign will result in long-term isolation of contamination to prevent release to the environment and subsequent exposure to humans. The General's Tanks, two 50,000-gallon underground storage tanks containing the remnants of aqueous plutonium residues, are expected to be exhumed from MDA A, and the final remedy for both MDAs is expected to include construction of an engineered cover and long-term performance.

WHAT REMAINS: Above-ground

- Debris left over from previous cleanup operations
- A radioactive materials processing facility
- Several above-ground tanks
- Two mobile buildings
- Obsolete equipment, and unused fencing and utility poles

WHAT REMAINS: Below-ground or At-grade

- Two large underground tanks containing radioactive effluent from material processing
- Underground waste transfer lines between buildings
- Buried waste
- Building slabs and roadways

TRANSFER OF LAND AT TA-21

In November 1997, Congress authorized and directed DOE to transfer certain land tracts at LANL for other uses. At TA-21, in 2000 DOE transferred 20 acres to Los Alamos County. The law also allows for an additional 245 acres at TA-21 to be transferred to Los Alamos County upon completion of environmental cleanup activities.

SITE TRANSFER PROCESS

After TA-21 is cleaned to regulatory standards, EM-LA will transfer authority to NNSA, the federal landlord, who in turn will transfer it to Los Alamos County.

PROTECTING BUSINESSES WHILE COMPLETING CLEANUP

To protect businesses along DP Road during remediation activities, N3B will continue to:

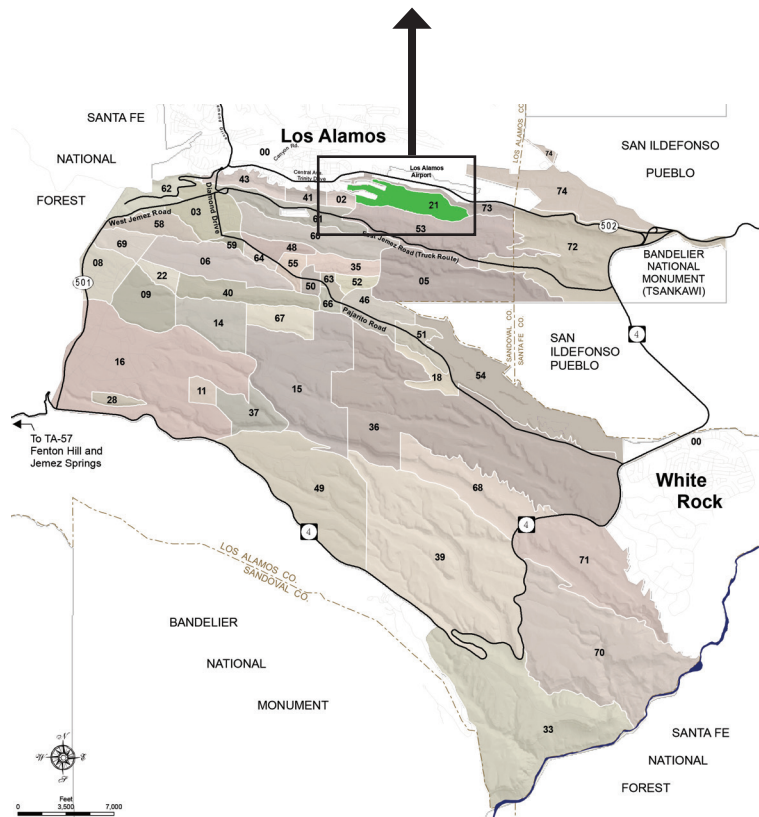
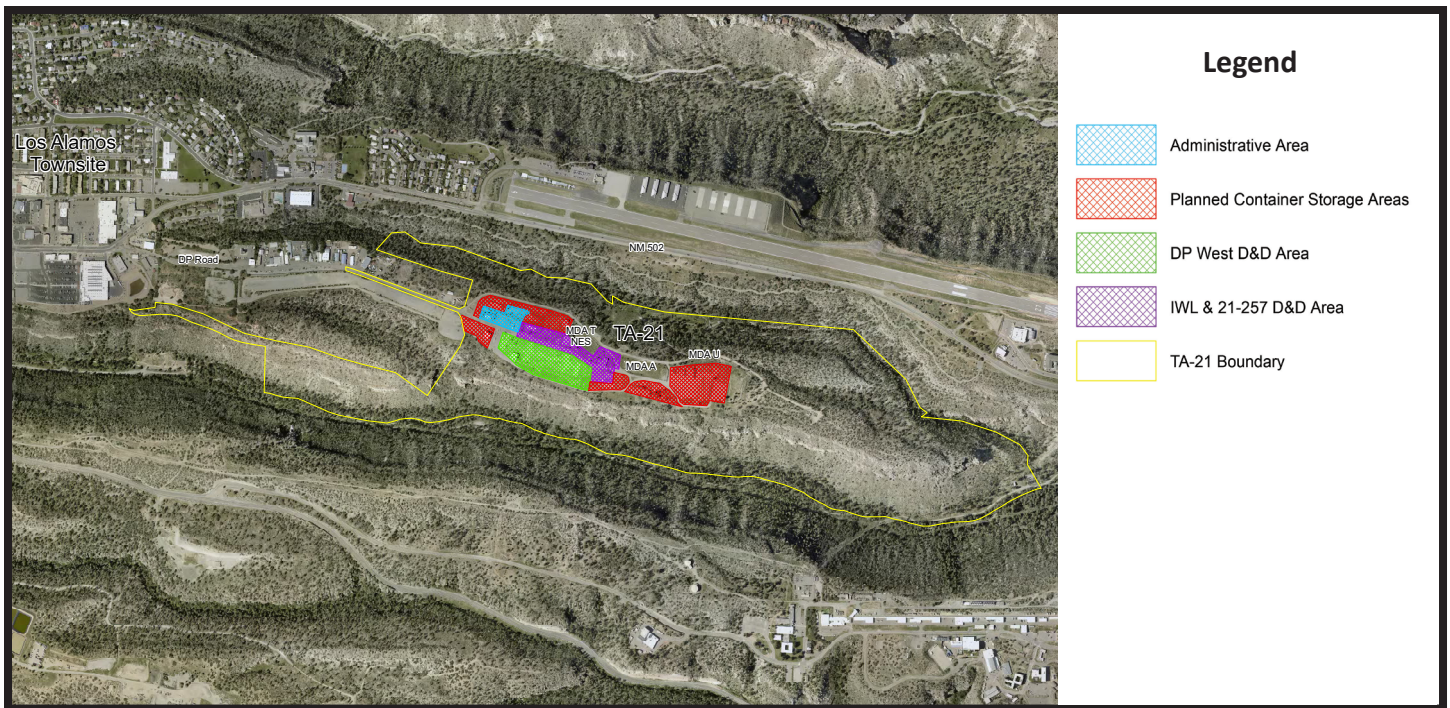
- Operate with the highest safety standards necessary to protect the workers and the public
- Communicate with key stakeholders about the project status and related issues
- Strive to minimize disruption while safely maintaining schedule commitments

Additionally,

- All remediation is conducted within the TA-21 fence line
- Workers park within the TA-21 fence line
- Contact information is posted at the TA-21 gate
- Dust suppression is used
- Most truck traffic enters LANL via the truck route and Trinity Drive, and exits via the hill road
- Working hours are 7 a.m.-5 p.m., Monday-Friday



During operating years



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