

Los Alamos National Laboratory



Building 257, the last building at Technical Area 21, is being prepped for demolition in FY 2020.

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Overview

The EM Los Alamos Field Office (EM-LA) is dedicated to cleanup of legacy contamination of radioactive and chemical materials and waste resulting from operations during the Manhattan Project and Cold War-era at LANL in New Mexico. EM-LA's cleanup scope includes legacy waste remediation and disposition, soil and groundwater remediation, and demolition, deactivation, and disposition of excess buildings and facilities. Newly generated waste (waste post-1999) at LANL is the responsibility of NNSA.

Of the more than 2,100 contaminated sites at LANL originally identified for remediation, more than half (approximately 1,100) have been cleaned up and closed, ranging from small spill sites with a few cubic feet of contaminated soil to large landfills encompassing several acres. There are two legacy contamination plumes that are being characterized and managed by EM-LA using subsurface control techniques. One plume has chromium contamination and is being actively managed by a pump-and-treat system with reinjection, while the second plume has chemical constituents related to early explosives work, and is undergoing characterization to determine potential remediation alternatives.

Approximately 400,000 cubic meters (m³) of legacy radioactive waste is located at LANL. The majority of this waste was buried at 26 different Material Disposal Areas (MDAs) dispersed throughout the lab. Eight of these MDAs have been excavated and closed. There is approximately 3,500 m³ of legacy TRU waste stored at Technical Area (TA)-54's

Area G destined for disposal at WIPP. The waste is stored in a configuration that is protective of the environment, workers and the public.

Cleanup accomplishments include:

- **Completed 31 sites located in or adjacent to the Los Alamos town-site.**
- **Implemented an interim pump-and-treat approach to address chromium groundwater contamination.**
- **Completed 16 TRU waste shipments to WIPP in 2019.**
- **Completed shipment of 300 m³ of LLW and MLLW for offsite disposal.**

Cleanup Highlights 2020-2030

Over the coming decade, DOE intends to focus on addressing the groundwater contamination plumes, processing above-ground-stored TRU waste and retrieval of below-ground-stored TRU waste for off-site disposal. DOE will also work to complete the disposition of the remaining TRU waste from Los Alamos currently in storage at the Waste Control Specialists (WCS) commercial disposal site in Texas. Depending on the disposition approach chosen, the TRU containers at WCS could be shipped to WIPP in the 2020-2025 timeframe.

By the end of 2020, DOE will complete the Historical Properties Campaign, and finish demolition of the last building at TA-21. By 2022, the final remedy for the Royal Demolition Explosives plume will be determined and implemented and the remaining building slabs, basements, utility tunnels and vaults, and other below-grade structures will be removed at TA-21. Contaminated soil will be removed from

the site and transported for offsite disposal with sampling conducted to confirm compliant cleanup. In 2022, a final remedy for the chromium plume will be implemented and will likely operate for several years.

Aggregate Area campaigns, including the Southern External Boundary, Pajarito Watershed, and Upper Watershed, will be completed in succession, beginning in 2023 and finishing in 2026, and will involve the removal of a variety of materials. The latter part of the decade will see considerable focus on completing the cleanup of MDAs H, C, AB, A and T.

Over the next decade, work at TA-54 will center on processing of above-ground waste inventories,

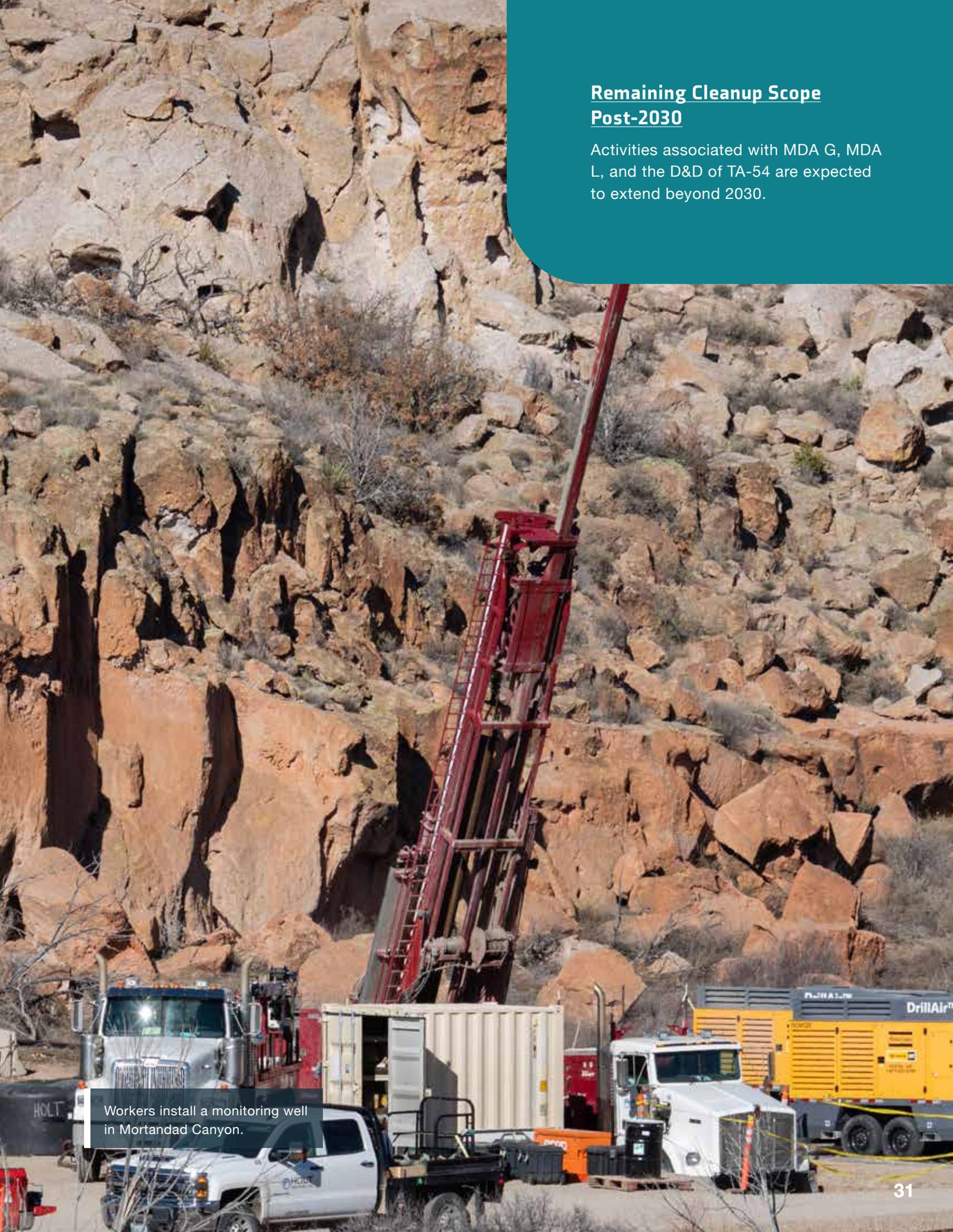
retrieval of waste placed in below ground configuration for long term storage for processing, and disposition of inventory to offsite disposal facilities. Inventory reduction is essential to allow demolition of structures within MDA G, and will allow permanent demolition and closure of the disposal area. Process lines to treat the waste to meet offsite disposal facility requirements are active, but will be modified to address the range of materials requiring treatment. Retrieval of legacy waste from subsurface storage will also evolve over the decade to exhume waste containers of various sizes and content. In some cases, waste items will require size reduction so they can be packaged for transport.



Several TRU shipments were made from Area G at LANL to WIPP.

Remaining Cleanup Scope Post-2030

Activities associated with MDA G, MDA L, and the D&D of TA-54 are expected to extend beyond 2030.



Workers install a monitoring well in Mortandad Canyon.