Material Disposal Areas (MDAs) are Cold War-era waste disposal sites. Burial of wastes in trenches or pits complied with waste disposal standards of the time based on known hazards. LANL originally had 26 material disposal areas, but most have been characterized and many have been remediated, which usually involved digging up the buried waste and shipping it to approved waste disposal facilities. Others did not require remediation.

**MDAs under the Consent Order:** The Consent Order between New Mexico Environment Department (NMED) and the Department of Energy (DOE) identifies seven MDAs that warrant additional investigation and remedial action. All MDAs are designated Solid Waste Management Units under the federal Resource Conservation and Recovery Act (RCRA).

**MDA C:** MDA C, which operated from 1948-1974, is an 11-acre site within Technical Area (TA) 50. MDA C contains 115 subsurface disposal units (seven pits and 108 shafts), with a volatile organic compound vapor plume preset in the vadose zone (the area between the surface and underlying groundwater). Wastes include hazardous constituents that are regulated by NMED and radionuclides that are regulated by DOE.

**MDA AB:** MDA AB, which lies near LANL’s eastern boundary in TA-49, is an underground, former explosive test site composed of three distinct areas, each with a series of deep shafts used for explosive testing. The area is about a half-acre radiological waste disposal site classified as a hazard category 2 nuclear facility due to the radiological inventory in the disposal shafts. The main contaminants are plutonium, uranium, lead, and beryllium.

**Definition: Solid Waste Management Unit:**
“Solid Waste Management Unit” or “SWMU” means any discernible unit at which solid waste has been placed at any time, and from which NMED determines there may be a risk of a release of hazardous waste or hazardous waste constituents, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at which solid wastes have been routinely and systematically released; they do not include one-time spills.
Technical Area 21: MDA A & MDA T

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. There are two MDAs still to be remediated – MDA A and MDA T.

MDA A: MDA A is an inactive 1.25-acre subsurface disposal site. Portions 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.

MDA T: Located immediately west of MDA A, MDA T 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.

Technical Area 54: MDA H, MDA G & MDA L

TA-54 is LANL’s transuranic (TRU) and low-level waste storage, characterization, and remediation area. The area is located one mile from the community of White Rock and about one-eighth of a mile from the boundary between Pueblo de San Ildefonso and LANL. MDAs H, G and L lie within TA-54.

MDA H: MDA H is a 0.3-acre site composed of nine inactive subsurface shafts used for the disposal of lithium hydride, high-explosives, metals, radionuclides, classified materials and volatile organic compounds. The waste, which was disposed of over a 26-year period, may be sensitive to sparks, friction, heat, physical impact, pinching, air and/or moisture.

MDA G: Opened in 1957, MDA G (commonly known as “Area G”) is a 63-acre, mostly inactive waste disposal site. It contains 32 pits, 194 shafts, and four trenches with depths ranging from 10 to 65 feet below the original ground surface. MDA G is now dedicated to storing, characterizing, and remediating LANL’s TRU and low-level waste to ship it offsite for permanent disposal.

MDA L: MDA L is about 2.58 acres and was used to dispose of nonradioactive liquid chemical waste. MDA L contains one inactive subsurface disposal pit and 34 inactive disposal shafts. The shafts range from 15 - 65 feet deep and vary in diameter from 3 feet to 8 feet. They were used to dispose of containerized and bulk liquid chemical wastes. When filled, the shafts were covered with concrete about three feet thick. The disposal units at MDA L are covered with asphalt to allow for RCRA–permitted chemical waste storage and mixed-waste storage activities.
RESOURCES

The Consent Order can be found at https://www.energy.gov/em-la/2016-consent-order and hard copies are available in the DOE public reading room, 94 Cities of Gold Road, Santa Fe, NM, 87506.

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