

NATIONAL PRIORITIES LIST (NPL)

NPL Site

March 2024

LUKACHUKAI MOUNTAINS | **Cove, Navajo Nation, Arizona**
MINING DISTRICT | *Apache County*** Site Location:**

The Lukachukai Mountains Mining District (LMMD) site is located in the Cove, Lukachukai, and Round Rock Chapters of the Navajo Nation in Apache County in northeast Arizona. The Lukachukai Mountains comprise the northern portion of the Chuska Mountain Range.

 Site History:

The LMMD is comprised of contamination associated with post-World War II and Cold War uranium and vanadium mining in the Lukachukai Mountains conducted by a series of mining companies under numerous mine claims and leases between 1949 and 1968. Ore-bearing rock in the Morrison Formation was mined throughout the mining district for uranium and vanadium. Ore was mined using both surface and underground extraction processes, resulting in waste overburden, protore, and other contaminated material. More than 800,000 cubic yards of mine waste remains in mine piles scattered at and downgradient of mining impacted areas throughout the LMMD.

 Site Contamination/Contaminants:

Waste piles and other areas of contamination are situated on finger-like mesas in the Lukachukai Mountains and in the Cove community which have impacted downgradient surface water bodies with elevated gamma radiation levels, uranium, radium, and other mining byproduct contaminants such as lead and arsenic.

 Potential Impacts on Surrounding Community/Environment:

The Lukachukai Mountains are a uniquely situated ecological oasis on the Navajo Nation used by Navajo People from across the Navajo Nation for ceremonial and medicinal plant gathering, hunting, and livestock grazing. It also provides habitat for several sensitive species, including the federally threatened Mexican spotted owl and other Navajo designated endangered and threatened species. The Lukachukai Mountains contain many cultural resource areas sacred to the Navajo People. Intermittent streams draining the Lukachukai Mountains, particularly the Cove Wash watershed, are extensively contaminated by eroded waste from the mines. Wetlands support unique biological communities in isolated pockets within the Lukachukai Mountains and in waterways downstream. The Cove community has a year-round residential population of approximately 400 and over 40 children who attend the Cove Day School located adjacent to a former ore transfer station.

 Response Activities (to date):

The EPA, in coordination with the Navajo Nation Environmental Protection Agency (NNEPA), has undertaken removal site assessments at many of the mine waste piles to evaluate the extent of contamination. Using EPA's removal authority under CERCLA, engineering evaluation and cost analysis (EE/CA) reports are under development to identify and compare cleanup alternatives for some of the mine waste piles.

 Need for NPL Listing:

The complexity of the geology, hydrology, and terrain and comingled contamination in the Lukachukai Mountains presents uniquely challenging cleanup considerations to address the contamination. Other federal and state cleanup programs were evaluated but are not viable at this time. The EPA received a letter of support for listing the site on the NPL from the Navajo Nation.

[The description of the site (release) is based on information available at the time the site was evaluated with the HRS. The description may change as additional information is gathered on the sources and extent of contamination. See 56 FR 5600, February 11, 1991, or subsequent FR notices.]

For more information about the hazardous substances identified in this narrative summary, including general information regarding the effects of exposure to these substances on human health, please see the Agency for Toxic Substances and Disease Registry (ATSDR) ToxFAQs. [ATSDR ToxFAQs](https://www.atsdr.cdc.gov/toxfaq/index.asp) can be found on the Internet at <https://www.atsdr.cdc.gov/toxfaq/index.asp> or by telephone at 1-800-CDC-INFO or 1-800-232-4636.