

## Protect our home

Written by By Elizabeth Miller New Mexico In Depth  
Friday, 14 January 2022 03:32

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### **‘Like a demon that’s always behind us,’ the Jackpile Mine toxic legacy continues’**

In the village of Paguate as June Lorenzo’s grandmother knew it growing up, orchards and fields of wheat and corn carpeted nearby hillsides. Streams traversed a verdant valley where people hunted and grazed sheep near the small farming community in Laguna Pueblo. This was before a massive mine cratered the nearby land and altered the skyline. Lorenzo has looked for old photos of that landscape, but they’re hard to find. That place exists now only in stories from elders.

For a significant stretch of its 30 years in operation from 1953 to 1982, the Jackpile Mine was one of the world’s largest open-pit uranium mines.

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Nearly half of the uranium supply used by the United States for nuclear weapons in the Cold War came from New Mexico thanks to the Grants Mineral Belt, a rich deposit of uranium ore that runs through the northwest corner of New Mexico. The mining started before regulations were in place to protect the surrounding air, water, and public health.

The Pueblo has fought for decades to undo that damage.

These days, only clean-up crews work there, like those Lorenzo sees drilling groundwater monitoring wells, as she drives to her job as a judge with the Pueblo of Zia.

“□□ People grew up not even thinking about the mine because it wasn’t in their lifetime,” Lorenzo said. “They don’t even realize it’s a concern.”

But Lorenzo does. She’s noticed the effects on the tribe’s traditional practices, and water sources and the lingering health problems, like cancer, respiratory illnesses, and kidney diseases, though decades later, the Pueblo still waits for a thorough health analysis.

The U.S. Bureau of Indian Affairs and Bureau of Land Management had approved a clean-up plan for Jackpile in 1986 and declared work complete in 1995. But now, it’s a Superfund site, joining the list of the nation’s most heavily polluted places and a priority for remediation work to protect public health and the environment.

The U.S. Environmental Protection Agency is just now drilling groundwater monitoring wells, 40 years after the mine closed, as the agency assesses the extent of the contamination and how best to address it. Meanwhile, community members live with polluted land, water, and air they worry is slowly killing them.

Jackpile is just one of hundreds of former mines and mill sites. Many fall under the oversight of the federal Office of Legacy Management, which monitors former uranium mines and mills tied to nuclear weapons and energy programs when clean-up work is declared completed.

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The agency faces the prospect of some of those sites needing additional work to protect public health. The task ahead means planning for waste that will remain hazardous for hundreds, if not thousands of years, through a sea of unknowns, while financial limitations mean prioritizing which risks merit the fastest response.

“When you look at the hills, you can see they’re crumbling, and you can see the water that’s re-emerged in the pit,” Paul Robinson, who has watch-dogged the Jackpile mine for decades as part of his work with the Southwest Research and Information Center, said. “That’s damage left from something the company made a good profit on and the country built its nuclear weapon stockpile on. It made the country great, but it left the community with damaged lands that may or may not be cleaned up.”

## ‘A PLAN FOR FAILURE’

Three Laguna Pueblo villages edge the mine, and are home to about 1,800 people, who call themselves Kawaika. The Laguna Pueblo sits about 40 miles west of Albuquerque along Interstate-40, its settlements established in the 14th century near a beaver dam-created lake along the Rio San Jose, Lorenzo wrote in a 2006 article published by the Indigenous Environmental Network.

While the mine operated, blasting rattled and cracked walls in their adobe or rock and mortar houses and clouds of uranium-laden dust billowed into the air, drifting over villages where people dried venison and fruit outside. The arrival of an industry that only employed men upended a matrilineal culture in which duties split evenly between husbands and wives, Lorenzo’s research has also found, and triggered persistent problems with alcoholism, drug abuse, and family breakdowns. Families sold off livestock, left fields untended, and missed

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traditional events and ceremonies to accommodate mine work schedules.

None of that has been set right since the mine closed, she said. Neither has the ground itself.

The Anaconda Copper Mining Company (which later merged with Atlantic Richfield, or ARCO) leased 7,868 acres beginning in 1953, and dug three open pits, moving 400 million tons of rock to produce 25 million tons of ore. When mining ceased, the company left literal holes in the ground, one about 625 feet deep, some lying just hundreds of feet from the village. Initial environmental reviews by federal agencies cautioned without cleanup the mine site would present a public health hazard, including increasing radiation-induced cancer deaths.

What should have happened, but didn't, would have been to bury the leftover uranium-laden ore with clean soil deeply enough to protect nearby water sources from it and other contaminants found with the uranium, like chromium, cobalt, manganese, vanadium, and zinc. That work would have also preserved a Goldilocks-level of soil moisture: If soil is too dry or too wet, it releases radon, which is linked to lung cancer.

"From the plan that was proposed at the time, it didn't seem like there was much attention to the thickness and the material in the cover," Chris Shuey, who co-authored comments criticizing the cleanup plan in 1985, said. "We said, 'If you simply backfill the pits, eventually groundwater is going to recover through that material, and it would appear at the surface, and when it appears at the surface, it's going to be contaminated.' They said, 'Well, that's too expensive, that's not part of the plan.' ... So I think we thought, at the time, it was a plan for failure."

Documents from 1985 show researchers tracking uranium and arsenic from the Grants Mineral Belt as far downstream in the Rio Grande as Elephant Butte Reservoir, affecting drinking water and irrigation sources for roughly 200 miles through New Mexico.

In 1986, Atlantic Richfield negotiated a cash settlement with Laguna Pueblo for \$45 million to complete the remediation work. The tribe was eager to address an unemployment rate that had soared above 80 percent following the mine's closure, and so created the Laguna Construction Company to complete the remediation.

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The company employed about 60 people, nearly all tribal members, many of them former mineworkers. They followed the plans and reclamation standards set by the BLM and BIA. The focus: remove risks from mine waste piles that contained traces of uranium by filling pits in the mine higher than the water table to prevent ponds from forming in them, contour waste piles to reduce erosion, and scatter native grass seeds.

Some remediation was better than nothing, at least for a while.

Today the mine is visible for miles, its surfaces shedding dust with tiny particles of uranium, small enough to inhale and damage the lungs.

“We will look back and say, you know, environmentally, that was really not the best plan for reclaiming the land, because what happened was, it rained, and a lot of the cover came undone, and contaminated the water that runs through the Pueblo,” Lorenzo said. “The design—which, you know, they did when there were no standards in existence, right?—was the best they could have, and now, we know that environmentally, it could have been better.”

***Next: The conclusion of the Jackpile Toxic Mine Legacy***

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