Mine reclamation slow in coming for Navajo Nation, Russians

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CHURCHROCK — Approximately 140,000 cubic yards of radium contaminated material have been cleaned up from the Red Water Pond Road community near Churchrock using what the U.S. Environmental Protection Agency calls "time critical removal actions." The big cleanup is yet to come.

"Everything's going backwards," Bertha Nez said. Her residence is one of three nearest United Nuclear Corp.'s Northeast Church Rock Mine site. Her yard was cleaned up in 2007.

"They should have cleaned up the tailings first and then cleaned around the residences. We're still waiting and they keep postponing it. Actually, they're waiting for the old ones to die off," she said.

On the morning of Oct. 29, Nez was up with the sun, patting out tortillas and peeling vegetables for the giant pot of mutton stew she planned to serve the Russian and Mongolian visitors who would be arriving around 10 a.m. for the annual sheep roast and community sharing opportunity coordinated by Paul Robinson of Southwest Research and Information Center.

"I think what they (EPA) want is for everybody to move out permanently," Edith Hood, also a member of the Red Water Pond Road community, said. "They haven't done squat. They started in 2007. It's become the 10-year plan."

In 2015, the EPA signed an enforcement agreement with United Nuclear Corp. and its parent company, General Electric, to complete the design for the long-term cleanup action. The design effort is currently underway.

"They were supposed to start in 2018," Nez said. "Now we're told it could be another eight to 12 years." The EPA stated Monday that construction is expected to be completed in the 2025-2028 time frame.

Mining impacts

Margarita Erbajeva, a geologist and paleoecologist with the Geological Institute at the Siberian Branch of the Russian Academy of Sciences, and Solonga Namsaraeva, a graduate student at East Siberian Technical University, were among the visitors to the Nez home.

Along with Mongolian visitors Narangerel Rinchin and Khatanbaatar Ravdan, Erbajeva and Namsaraeva observed firsthand the partial reclamation of the former Northeast Churchrock and Quivira uranium mines located near local residences, and pictures of a goat born near one of the abandoned mines. Unlike its mother, the baby was born without a trace of mohair and lived only 30 minutes.

"It is hard to find examples of reclamation that's successful in Russia," Robinson said. "A lot of what's been done has just been left to allow natural revegetation, so you can still see the mounds shaped from the waste piles, trees growing at strange angles, and the stream courses aren't rebuilt. So there's a return to nature, but not a sustainable land use in the way an organized reclamation project should lead to."

Erbajeva, whose specialty is the fossil record of rabbits, or Lagomophs, said environmental and climatic changes have a very big influence on living animals.

"Animals have reaction very fast. If grass is changed, and it became more cooler or more warmer, big changes (indicators). If sustainable conditions, of course, they survive and they live," she said. "If changed to some other environment, they can decrease until they decrease their quantity, and later they can become extinct or migrate to another territory. It depends on the territory, whether they survive."

Erbajeva noted that New Mexico has an abundance of jack rabbits. "I don't know if there are any investigations how this uranium influenced the animals," she said, but added that it is a needed ecological investigation.

Water challenges

Erbajeva and Namsaraeva, technical advisers for the Buryat Regional Organization on Baikal, or BRO-Baikal, work in Buryatia, an autonomous republic in southeastern Russia, between Lake Baikal and the Mongolian border.

"Lake Baikal is a protected area by law," Namsaraeva, 22, said. "They don't allow to build industry in that area, but we inherited one problem — Zakamensk, where a molybdenum mine that operated in the Soviet Union left behind piles of tailings. The mine closed in the 1990s. The government is thinking about cleaning it up.

There was one attempt, but they just moved the tailings from one place to another." In addition to past mining impacts, Lake Baikal, the world's most ancient freshwater lake, faces other challenges, Namsaraeva said, such as from global warming and construction of dams on the Selenga River.

For example, for the past two to three years they have experienced weather anomalies. Lake Baikal, which is more than 5,000 feet deep, usually freezes over from January until May or June.

"Now, the water warms and thaws in March or April," Namsaraeva said. "More than 20 percent of the fresh water of the world is in Lake Baikal. There are 336 rivers that flow into the lake. The last two years, the water level has been considerably lower," she said. Whether that is due to climate change or a dam on the Angara River, the only outlet from Lake Baikal, is not known.

"Lake Baikal is a wonderful place, really nice," Erbajeva said. "Water is very, very deep. The cleanest is only on the northern part because the southern part, too much of it was polluted." At the cleanest part it is possible to see objects 400 meters, or 130 feet below, she said. "Mongolia has proposed to build five power plants on Selenga River," Namsaraeva said, "so that, too, would affect the lake." The Selenga — or "Selenge" to Mongolians — is a 616-mile-long river in Mongolia and Buryatia that flows into Lake Baikal.

"There has been a drought in Buryatia for a number of years. If the plants are built, we will see less water in Lake Baikal, so we are very concerned," Namsaraeva said. "BRO-Baikal has been fighting against the power plants. We want alternative energy — solar and wind power. In Buryatia, all street lamps are from solar power."



Paleoecologist Margarita Erbajeva looks at a display documenting uranium cleanup during a meeting of the Red Water Pond Road Community Association Oct. 29 in Churchrock.

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