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Uranium Mining on the Diné Bikeyah

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Abstract

This article explores the human rights implications of uranium mining on Navajo land. With the outbreak of World War II, some Navajo joined the U.S. armed forces as code talkers to help their white brothers, and others stayed on the reservation to help out in a different way – mining uranium. In a few decades, uranium mining destroyed the Navajo's land and harmed their people. Their land was polluted even though the United States government knew the consequences of uranium mining. Cancer rates skyrocketed and a new disease, Navajo Neuropathy, developed. This article illustrates how the Navajo's human rights were violated through U.S. government-sanctioned uranium mining that destroyed their land and resources, and created lasting health problems.

The United Nations Declaration on the Rights of Indigenous Peoples is the most important modern guide on how to address the rights of indigenous peoples. It was adopted by an overwhelming majority in 2007, with the United States eventually declaring its support in late 2010 (Anaya, 2012). Although this was a major victory for indigenous peoples worldwide, it has come much too late for many members of tribal nations such as the Navajo. Had this Declaration been around during the uranium mining boom of the twentieth century, many Navajo lives could have been protected by the international human rights framework. Today, these rights include provision of the highest attainable

standard of physical and mental health, involvement in decision-making on matters that affect their lives, and special rights to their traditional lands and resources (United Nations, 2007).

In the Navajo language, *Diné Bikeyah* means "the Home of the People" (Pasternak, 2010). It is from this *Diné Bikeyah* that uranium mining took a foothold and helped destroy a peoples' land. The Navajo Nation of Arizona, New Mexico, and Utah have the world's largest Indian nation with more than 16 million acres of land and 255,000 enrolled members (Yazzie-Lewis & Zion, 2006). Of those members, 160,000 live in the Navajo Nation, with the majority of the population centered on the Four Corners. World War II marked a turning point for the Navajo. They felt the call to help their white brothers, with some becoming code talkers in the military, while others helped out at home. The world witnessed the first atrocities of atomic energy at Hiroshima and Nagasaki in Japan. This created an urgent need for the United States government to build an arsenal of these deadly weapons; uranium was one of the components that the government desperately needed.

The Navajo's special relationship to the land, which is based on give and take, is particularly poignant given the history of uranium mining on tribal lands. Traditionally, if something is taken from the land, something is given back to it in return. A mining boom was initiated in 1948 after the U.S. Atomic Energy Commission announced it would purchase all uranium ore that was mined in the United States (Brugge & Goble, 2006). Uranium can be extracted from radium and vanadium, which are found in the *leetso* (yellow dirt) throughout *diné* (land). Mining companies found a large concentration of *leetso* on the Navajo nation, which began a mining boom that spurned deadly consequences. About a quarter of all recoverable uranium sits on Navajo land (Johansen, 2007).

Uranium mining carried negative consequences for the Navajo people, including a range of human rights violations. Navajo workers were exposed to harsh conditions and salaries at or below the minimum wage at the time (Brugge & Goble, 2006). These conditions included being exposed to

radioactive material day after day. They brought it home to their families on their clothes, and people who did not work inside the mines were exposed when the wind carried radioactive dust and particles through the air. Ultimately, the Navajo were manipulated into letting mining companies onto their land, and the detrimental results of that mining are still being felt today. The effects of uranium mining in Navajo country destroyed indigenous land and resources, and created lasting health problems. These consequences are the direct result of human rights violations by the U.S. government, which prioritized uranium mining over the well-being of its indigenous citizens.

The Beginning of Uranium Mining and a Land Destroyed

In August 1942, a young Navajo man named Luke Yazzie made a mistake he regretted every day of his life thereafter. Harry Goulding owned a trading post on the reservation, and he asked Luke if he knew about these special rocks that could make cars and planes. Yazzie said nothing about it at first, but came back later after thinking about it since he had a family to support. He showed Goulding and another man, Denny Viles from the Vanadium Corporation of America (VCA), the special yellow rocks his father had instructed him to never show any white man. Yazzie took them to Cane Valley, where some of the special yellow rocks were. This marked the start of the mining industry on Navajo land.

The Kerr-McGee company beat the VCA to become the first corporation to mine uranium on Navajo land, beginning in 1948, but the company was soon actively mining in the region. There were no taxes on mining at that time, nor were there health, safety, or pollution laws. “Labor was cheap, and uranium, in demand for stockpiles on nuclear armaments, was expensive” (Johansen, 2007, p. 296). Under the VCA’s lease with the Navajo Tribal Government, the VCA was permitted to extract carnotite and related minerals from the earth for ten years and any time thereafter, as long as there was still a need. The lease also stated that the company had to pay ten percent of the value to the tribal

government (Pasternak, 2010). The most important part of the lease, to the Navajo at least, were the preservation steps. The VCA had promised “to take appropriate steps for the preservation of the property and the health and safety of work men,” and would “commit no waste on the said land” and return the property “in as good condition as received” (Pasternak**,** 2010, p. 49).

Harry Goulding was given a position overseeing the mining at Cane Valley, which was the same area in which Luke Yazzie showed the white men the *leetso*. Whenever a Navajo miner complained about hurting Mother Earth, Goulding would scold them and say that the yellow rocks were the same color as the corn and could not be told apart. The yellow in the dirt was helping make bullets in the war effort, as well (Pasternak, 2010). There were four centers of mining during this period: Shiprock and Church Rock in New Mexico, Monument Valley in Utah, and Kayenta in Arizona (Brugge & Goble, 2006). Between 1945 and 1988, Navajo lands contributed 13 million tons of uranium ore (Yazzie-Lewis & Zion, 2006).

Many Navajo did not know that the uranium they were extracting from their land would be used for the Manhattan Project and for atomic weapons that would kill thousands, but their actions nonetheless left a mark in history. The Cold War created an even bigger need for uranium, and mining occurred at sites such as Monument No. 2 in Monument Valley. In 1952, everyone knew that something was happening at this mine because the workers were working double shifts six days a week. Neighboring men from surrounding Navajo areas were hired to keep up the production. The health effects of uranium mining were known by this time, but the standards for keeping the dust out of Navajo lungs was not monitored because of growing production demands. If any of the workers spoke up about the amount of work, they were fired on the spot (Pasternak, 2010).

Uranium mining had a devastating effect on the land, as well. In the mid-1950s when mining was at its peak, there were about 750 mines in operation. Today there are an estimated 1,000

abandoned uranium mine shafts on Navajo land (Brugge & Goble, 2006). These mine shafts were not cleaned up, and radioactive waste was left exposed. Large deposits of radioactive waste were dumped to form large, rocky deposits, which the Navajo used for their homes. Some of these mine shafts filled up with polluted water, which was used by animals and people (Pasternak, 2010).

Uranium Mining and the Depletion of Vital Resources

Uranium mining has altered the Navajo's special relationship to the land, which previously meant that all resources could be used to sustain life. The Navajo had lived off of the same land for centuries, and continued to do so even though it was contaminated. Most people did not know there was anything wrong with their water sources or houses until health problems began to occur, both in themselves and in their livestock. One of the most obvious effects of the mining involves the water supply. Between Monument Valley and Flagstaff, Arizona, new lakes began to appear from the old uranium mines. Some were a mile wide and 130 feet deep (Pasternak, 2010). For the Navajo, these were initially seen as a gift to help hydrate themselves and their livestock. This gift was a dangerous one, however, as rainwater mixed with contaminated ground water.

Studies show the dangerous levels of pollution to Navajo water sources. Donald Payne, an environmental health officer for the Indian Health Service, and Steve Cinnamon, a National Park Service ranger, began to run tests on water supplies after hearing about elevated cancer diagnoses and deaths in areas around the abandoned mines. In the early 1980s, they sampled 48 wells and livestock watering holes. The lakes that formed because of the abandoned wells were used by the surrounding residents as a source of water. There were up to 4,024 picocuries of uranium per liter in these lakes. When the U.S. Environmental Protection Agency finally announced a maximum safe level for uranium in drinking water in 2000, it was set at 30 picocuries per liter**.** Payne was so incensed that he warned the people living

around these lakes of the danger from drinking the water or letting their livestock drink from it (Pasternak, 2010). A subsequent study was conducted in the mid-2000s on the effects of uranium in drinking water. Results showed that uranium can damage the kidneys and DNA. An experiment with mice showed that uranium had negative effects on female reproductive systems, as well, producing effects such as early-onset menopause (Brown, 2007).

Water was not the only contaminated resource that was used by the Navajo with severe negative consequences to their health. Dust from the uranium plants had been used for agriculture, building homes, producing concrete, and many other things. The dust was mixed with other materials to form a kind of concrete that was used in many Navajo homes. This meant the inhabitants were exposed to radioactive material day after day, week after week, year after year, without even knowing there was a problem. The Navajo were not informed of the dangerous consequences of their exposure to radioactive material until it was often too late. The Navajo used their land even after the white men had left. They were still not told of the consequences until elevated cancer rates made the government conduct studies, and even then there was still not much action. The miners were able to begin seeking compensation starting in 1990, when the Radiation Exposure and Compensation Act (RECA) went into law. The law, however, still made it difficult for Navajo miners to get the compensation they deserved. This only happened after the Navajo began to link together the deaths of so many loved ones, who they realized had all lived near or worked in the uranium mines (Pasternak, 2010).

Health Effects and Human Rights

The Navajo people have no word for “radioactivity,” and no one told them that many would die in two or three decades from cancer (Johansen, 2007). The cancer rate amongst the Navajo doubled between the early 1970s and late 1990s, when the overall cancer rate in America was declining

(Pasternak, 2010). Miners and their families had no idea that there were long-term health hazards from uranium mining, even though cancer had been a designated occupational disease for uranium miners by 1932 in Germany and Czechoslovakia – two countries that had been mining uranium for decades (Brugge & Goble, 2006). A caravan of doctors and United States Public Health Service (PHS) representatives set out in 1950 to test the uranium miners (Brugge & Goble, 2006; Pasternak, 2010). They went because of findings from European scientific experiments, which linked cancer to uranium mining. Government representatives and doctors failed to inform the Navajo miners what they were testing for, however, and did not share the risks of being exposed to radon and other radioactive materials present in the mines (Brugge & Goble**,** 2006). A study was conducted over several years, but the Navajo were hard to collect data on because some did not know their birth date and refused to give out names of their kin so they could be better analyzed. The miners said they had no idea that these risks existed, and none of the Navajo miners recall being educated about the dangers of uranium mining or were provided with the proper protective equipment (Brugge & Goble, 2006). By 1978, the Navajos were beginning to link their lung cancer epidemic to the uranium mines. Before World War II, the disease was extremely rare among the Navajo, and Senate hearings in 1979 initiated proposals for compensation later drawn out in the Radiation Exposure Compensation Act of 1990 (Johansen, 2007).

The story of Lois Netztsosie illustrates the suffering that resulted from uranium mining on Navajo lands. Netztsosie was one woman who used the lakes day after day for her sheep. She would lead her flock there, and drink her fill at the same time. She had two daughters during this time period, and she would occasionally stay overnight by the lake and refill her drinking supply as she moved between different lakes with her flock. She and her husband began to notice that the flock was not thriving like they should have been, despite an abundant water supply. Then they noticed that birth defects were appearing in the new lambs. Some were born without eyes, others with fused limbs, and her husband suspected witchcraft. However, the worst part came when their two youngest daughters,

Laura and Arlinda, came down with a mysterious illness. Doctors at the Indian Health Service concluded that they must have some genetic disorder, but no one connected health problems among the sheep and the girls for a long time (Pasternak, 2010).

Cherie Daut was a lawyer seeking clients when she first met the Netztsosie family, and she immediately saw the connection to the old uranium mines that had become a source of drinking water. She realized that the health problem was what has now been termed Navajo Neuropathy. The average age of death for affected children is ten years old, and patients suffer "liver damage, dimmed vision, and most dramatically, fingers and toes that gradually [fuse] and [stiffen] into hooks" (Pasternak, 2010, p. 144). The condition was first identified by a 1976 University of New Mexico study, when researchers targeted a mysterious illness that had no cure. All of the children examined in the study were Navajo, which is why the disease bears the name of the tribe (Pasternak, 2006). Mothers such as Helen Nez, who got her drinking water from contaminated lakes, suffered the health consequences of this pollution. Throughout the 1960s and 1970s, Nez and her husband lost six children to Navajo Neuropathy, and did not make the connection to the drinking water until it was too late (Pasternak, 2010).

Consideration of the UN Declaration on the Rights of Indigenous Peoples, which builds on the ideals of the 1948 Universal Declaration of Human Rights, highlights how uranium mining infringed on the rights of the Navajo. Three of the declaration's articles (although there are others) best demonstrate how rights were violated. Article 25 states that indigenous peoples have the right to maintain their spiritual relation with the land they occupy and use, including the land and water (United Nations, 2007). The Navajo's relationship to their land was strategically manipulated by the VCA and other companies who said they were doing the right thing by mining the land to help their white brothers fight a war. Article 26 states that the indigenous group has the right to the lands, territories, and resources they own or have been using. Paragraph 3 is of special significance to the Navajo: "States shall give legal

recognition and protection to these lands… and resources. Such recognition shall be conducted with due respect to the customs, traditions and land tenure systems of the indigenous peoples concerned" (United Nations, 2007, p. 8). None of the mining companies or the government cleaned up the land after the mining ended or recognized how the Navajo treated the land prior to the uranium mining. The land was swiftly destroyed and the cleanup process was ignored. Article 29, paragraph 3, connects to indigenous health in regard to hazardous materials. It stipulates that states should put into place programs for monitoring, maintaining, and restoring the health of the indigenous group (United Nations, 2007). Although uranium mining did not fully end in the area until 1989, the cancer links were there and yet no one did anything about it until RECA was passed in 1990.

Conclusion

"Nuclear power must be recognized for what it really is—a power that comes from abuse. It is the symbol of the ultimate disrespect of modern industrial society for that which native societies keep dear: Mother Earth and the Five-Fingered People. The abuse of power is tyranny, and as well modern people have done, we must fight it as a monster." (Yazzie-Lewis & Zion, 2006, p. 9-10)

The main thing that the Navajo gained from uranium mining was death; the death of their land, the death of their resources, and the death of their people. The miners did not receive education from the national government about the health risks they faced. They had no knowledge of the dangers of mining, even though the government knew of the cancer risks (Udall, 2006). Stewart Udall, an important proponent of the RECA, said: "Where native people are illiterate, the U.S. government has a special trust relationship that involves both legal and moral responsibilities. Such a duty was never discharged with

respect to the Navajo uranium miners" (Udall, 2006, p. xi). This harm was done despite the Navajo's patriotic best intentions; the Navajo thought they were helping their white brothers win a war and went along with the mining for uranium. They created a lease with the government and the mining companies, believing the land would be taken care of and that the Navajo had priority for good jobs. No one saw the impending danger; cancer decimated the miners, as well as their families and neighbors who lived near the mining sites or used the radioactive materials in their houses.

Luckily, lessons have been learned from this unfortunate past. When former U.S. president George W. Bush took office, he wanted to mine for uranium again. However, the Navajo people knew the full consequences of uranium mining. By 2001, former Navajo uranium miners and their families were holding meetings and protest marches. The Natural Resources Protection Act of 2005 further solidified their stance. Navajo Tribal Chairman Joe Shirley signed the act, which was the first of its kind for Native Americans. It declared that "no Person shall engage in uranium mining and processing on any sites within Navajo Indian Country" (Johansen, 2007, p. 303). Strengthened human rights frameworks and sources of international law, including the recently-adopted UN Declaration on the Rights of Indigenous Peoples, provide further support for this cause. The government has made steps toward compensation by rebuilding houses that were built with radioactive waste and cleaning up the soil. However, it is not compensation for the lives that were ended by the mining industry. The *Diné Bikeyah* belongs to the Navajo, and it remains to be seen what else will be done for the indigenous peoples affected by mining.

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