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Contamination Nation

Kurt T. Mantonya

The Navajo, like many other North American Native populations have been adversely affected by mining. Termination of tribal status, forced relocation, and exposure to radioactive elements are just a few of the tragedies these people have faced. This paper will take an ethnohistorical approach to mining on Navajo lands as well as investigates important case law that have been established over the past 100 years.

"As Navajo people, we are still living the nightmare of past uranium exploration on our lands. We ask that history not be repeated." Anna Frazier of Dine' CARE

Environmental impacts of subsurface mining continue long after the mining operations cease. Areas such as Galena and West Mineral Kansas get their names from mining and the impacts on the environment are still being felt even though subsurface mining ceased over 40 years ago. These impacts have even led to a site in northeast Oklahoma, Tar Creek, being listed on the Environmental Protection Agencies list of Superfund sites. Mining practices throughout the world have an extremely poor history when it comes to the dispossession of indigenous people, issues of compensation, and violation of human rights. Not only are people removed from traditional homelands but their lands are often rendered uninhabitable after the mining process has finished. This paper focuses on mining practices on reservation lands in North America and describes the historical impact that mining has had on Navajo in the American Southwest. Important laws and cases pertinent to the topic are also examined.

The search for minerals (gold, silver, etc...) was the main motivator for the exploration of the world by European countries. "Institutional contexts in which

white contact occurred can be reduced to four; mine, ranch, mission, and military. Much of the expansion into the northern regions of New Spain was motivated by the interaction of new wealth, mostly in the form of precious metals" (Griffen 1983:339). The post-contact era in the New World meant tremendous changes for the indigenous populations. Not only did the introduction of alien pathogens such as smallpox, have a toll on the people, but the conquistadors, conquered the Maya, Aztecs, and Incas in order to obtain wealth and territory. The Maya were elated upon the arrival of these new visitors and may have seen them as gods in their religion, they often greeted the new arrivals with riches. Father Juan Diaz', who sailed to the east coast of the Yucatan in 1518, offers this account "they brought gold cast in bars...a beautiful mask of gold, a figurine of a man with a half mask of gold, and a crown of gold beads" (Stuart & Stuart 1983:117). To the Maya this was an offering to the gods, but the Spaniards saw this as a land of wealth and opportunity. Conquest of the Maya and the Aztec allowed the Spaniards to use these indigenous people as slave labor in the mines. Conditions have not improved since these times

A History of Mining Law and Legislation in the U.S.

Early mining laws and legislation as well as treaties/acts made with individual tribes had a significant impact on the lives of indigenous populations. The 1872 Mining Laws “restricted mining rights for claims located in wilderness areas and national forests” (Zeimer 1998:145). Indian lands at this time were also regulated in the same manner. The Act of 1919

“which provides the authority to grant leases for mining purposes, also established that all mining claims on Indian lands will be located... in the same manner as mining claims are located under the mining laws of the U.S.” (Zeimer 1998:162). “As a result, claims located on land leased from an Indian reservation, like claims located within national forests, lack extralateral rights because the lands have been withdrawn from the public domain” (Zeimer 1998:162).

In 1909, Congress passed the first legislation pertaining to Indian lands and mining, “It provides that all land allotted to the Indians may be leased for mining purposes by the allottee for any term of years approved by the Secretary of the Interior” (Anderson 1974:215). This legislation was changed somewhat in 1982 with the Indian Mineral Development Act 25 U.S.C. § § 2101-2108 that:

“specifically authorized individual Indians and tribes to negotiate and enter into non lease mineral agreements... leases under the act are for a ten year term that can be extended if there is production in which case they continue for as long thereafter as minerals are produced paying quantities” (Getches et al. 1998:698-699).

With the discovery of radioactive bearing ores and the processes to convert these into energy or weapons of destruction, laws and legislation were also passed to regulate this new industry and protect national interest. The first of these was the 1946 Atomic Energy Act established to regulate the industry. In 1957 the Price-Anderson Act was passed to “protect the public from nuclear accidents by mandating regulatory standards for private businesses and providing compensation for the public in the event of a nuclear accident” (Kuntz 1997:103). The Price-Anderson Act was amended in 1966 to extend the provisions of the 1957 act for another ten years and also to provide “for the transfer of all claims arising out of an extraordinary nuclear occurrence to a federal district court” (Kuntz 1997:104). The act was once again extended in 1975 and 1988 with few amendments. In regard to Indian Country, the Price-Anderson Act presents two important questions, “(1) whether the Price-Anderson Act provides an express prohibition to tribal court jurisdiction; and (2) whether tribal courts have concurrent jurisdiction over Price-Anderson claims” (Kuntz 1997:107). These questions were posed because of the significant numbers of Native Americans working in and around mines. Price-Anderson has recently been challenged in the U.S. Court of Appeals, Tenth Circuit case of *Kerr-McGee v. Farley*.

“This case involves the scope of the tribal exhaustion rule in Price-Anderson...Appellants filed a claim in the District Court of New Mexico for declaratory judgement and preliminary injunction, arguing that the Navajo Tribal Court is without jurisdiction to adjudicate nuclear tort claims against Kerr McGee” (Kerr McGee v. Farley 1997:3).

The early 1980's was a time of change for development policies. The Reagan administration in 1983 enacted policies with regard to the governmental status of Indian tribes. These policies were reflected in

provisions and amendments to the Surface Mining and Reclamation Act of 1977, and a host of environmental legislation. "In 1982, Congress enacted the Indian Mineral Development Act, providing tribes greater flexibility in entering into agreements for mineral development rather than relying on the Department of the Interior to handle these matters for them" (Getches et al. 1998:231).

Compensation

For the Navajo, compensation for years of neglect, violations of human rights, suffering, and death would prove to be a long road. It was not until 1990 that Congress passed the Radiation Exposure Compensation Act (RECA). It took forty years for this act to happen, as a result many of the miners who worked in 1940's found that help was too late. Under the act, "miners or their beneficiaries are entitled to \$100,000.00 in compensation if they (1) worked in the uranium mines of New Mexico, Arizona, Colorado, or Utah, between 1947 and 1971, (2) were exposed to two hundred or more WLM of radiation, and (3) contracted lung cancer or another serious disease" (Speiloch 1999:311). Between April 1992 and March 1993, the Department of Justice (the unit handling claims) processed 2,634 claims. Of these, 585 were approved, 260 were denied, and 1,787 were pending.

The landmark cases of *Begay v. United States* (1984) and *Barnson v. United States* (1985) aided the Navajo in their fight for compensation. The *Begay* case resulted from the findings brought forth by New Mexico senator Pete Domenici who introduced statistics "that over 4,000 of the more than 5,200 miners had died of lung cancer" (Ball 1993:65) and the miners alleged that "the government had an ongoing duty, consistent with the Atomic Energy Act, to inform miners of the health hazards" (Ball 1993:66). *Sylvia Barnson et al. v. United States* was a tort suit filed by uranium miners and the families of deceased

miners. The suit was filed against two mining companies in Utah and was settled out of court. The plaintiffs continued the action against the U.S. government, specifically, the Public Health Service and the Atomic Energy Commission. (Ball 1993:74).

The test case of *Allen v. United States* (1979) found the United States negligent in the death of ten of the twenty-four appellants in the case. The *Allen* case was brought by plaintiffs who were exposed to fallout from low-level radiation deriving from atmospheric testing. "They argued that the AEC did not use reasonable care to warn them about the dangers" (Ball 1993:71). Judge Jenkins concluded "that the AEC was not immunized and that the government had a legal duty as seen in the Atomic Energy Act of 1946, amended in 1954, to protect the health and safety of all persons coming into contact with the governmental actions" (Ball 1993:72).

The land west of the Mississippi River is especially rich in natural resources. Coal in Wyoming and New Mexico; copper in Arizona; turquoise in many parts of the west; oil and gas are ubiquitous throughout the western states and finally gold in the Black Hills and California are just a few examples of the mineral resources in the U.S. "In the 4% Indian land base remaining, estimates for all domestic uranium range from 40-65%, while one-third of the western coal reserves lie in these Indian lands" (Irvin 1983:90). "The Navajo and Laguna Pueblo tribes supplied close to 50% of the total amount of uranium oxide mined in the entire U.S. during the late 1970's. Uranium exploration and production leases currently cover more than 600,000 acres of the Navajo reservation" (Getches et al. 1998:698). The purchase of the Louisiana Territory afforded the opportunity for western expansion for a growing nation. Manifest Destiny and eminent domain moved (much like *terra nullius* in Australia and European Social Darwinism) native people from their traditional homelands and forced their

relocation to reservations. This was fostered by Anglo-Americans desire for western expansion and the prospects for cheap land as found in the Homestead Act and later in the Dawes General Allotment Act. It is of great interest and irony that many tribes were placed in reservations thought of at the time as being unhospitable and inhabitable places but because of their resources, proved to be another painful chapter in American Indian history.

The Black Hills of South Dakota are a prime example. "The Fort Laramie Treaty of 1868 guaranteed the Lakota undisturbed and sovereign use of land. This agreement was nullified by the U.S. government after the discovery of vast gold deposits in the Black Hills" (Irvin 1983:89). The Fort Laramie Treaty had an immense impact on the Lakota, confining these nomadic peoples to an area of 43,000 square miles. With the discovery of gold and the removal of the Lakota from the Black Hills the Lakota lands were further reduced to 5,000 square miles due to the Sioux Act of 1889. "Now, in the 1890's the push for a final reduction began: The government wanted each individual Oglala family to live on privately owned, 160-acre plots. This had been the essence of the Dawes Act" (Starita 1995:158). The Cold War brought about yet another cycle of mining problems to the Black Hills as the area was found to be rich in uranium. The following outlines some of the problems the Lakota nation has faced from uranium exploration.

"In 1962, 200 tons of radioactive mill tailings from the Edgement mill site washed into the Cheyenne River, an indirect source of Pine Ridge water" (Irvin 1983:91). This prompted the Women of All Red Nations (WARN) to research the effects. Their research discovered "gross alpha radioactivity levels in Red Shirt subsurface water tested at 15 picoCuries per liter (pCi/L). The federal safety standard is 5 pCi/L" (Irvin 1983:91). Because of the grassroots efforts by WARN, the Lakota received \$200,000, however, the Bureau of

Indian Affairs said the money could only be used for livestock. (Irvin 1983).

Companies were negligent in any kind of reclamation efforts to mitigate environmental impacts. In an effort to curb the detrimental effects of uranium mining and more specifically, the strip mining of coal. The Surface Mining Control and Reclamation Act of 1977 (SMCRA) was passed. "This act provided for the reclamation of all mined land but also provided that tribes shall be considered as states under the abandoned mine reclamation program" ... but this treatment is "only available to tribes with eligible lands and lands from which coal is produced" (Williams 1992:272). Although tribes are "treated as states" under the SMCRA, loopholes exist that put tribes in impossible positions. For example, "states may not receive federal approval of their mine reclamation programs unless they have approved state regulatory programs...tribes are not treated expressly as states under the Act's provisions for regulating surface coal mining, therefore, tribes cannot have approved 'state' regulatory programs" (Williams 1992:273).

The Navajo have faced similar circumstances with regards to mineral rights and mining on their homelands. Four years after their forced march and isolation to Ft. Sumner, the U.S. government had finally broken down the fabric of Navajo society. Following the signing of the peace treaty of 1868, the U.S. Government allowed them to return to their tribal homelands. In the 1920's, the reservation was broken down into six distinct units. Each unit had an Anglo American superintendent who made executive decisions on various matters with the guidance of elders. For example, prospectors in search of minerals on Navajo lands had to petition the superintendent who then took the case to the local elders, per the Metalliferous Minerals Act recognized Indian ownership of subsurface resources found on treaty reservation land" (Shepardson 1983:624). The elders would

then take a vote on the matter in their respective chapters. As a result of the 1868 peace treaty, the Navajo had the right to the mineral resources on their lands. That was soon to come to an end due to amendments made to the peace treaty by the U.S. government.

While tribal government was still in the formal stages of being established, the U.S. government made decisions that affected the Navajo. The Navajo were allowed to make decisions in areas such as overgrazing. "Mineral rights on executive order reservations (i.e. Navajo) was another issue. Secretary of the Interior Albert B. Fall believed that these did not belong to the Indians. He testified in 1922 that such reservations are merely public lands temporarily withdrawn by executive order" (Shepardson 1983:625). The tribal council of course disagreed as the royalties that would come into the tribal government would be grossly limited. This led to the creation of the Cameron bill signed in 1927 which became the Indian Oil Act that is still in force to this day.

"The Cameron bill recognized the right of the Indians to 100% of the royalties on executive order reservations. A tax of 37.5% would go to the state in which the oil was found with the provision that the tax money be spent in consultation with the Indians on projects for their benefit" (Shepardson 1983:626).

The search for minerals on the Navajo Reservation began in the 1890's. Uranium played a significant role in exploration on the Navajo Reservation. This exploration was spurred by the search for carnotite, a yellow mineral that contains both vanadium and radium. Vanadium is used to harden steel and radium was being studied for its cancer killing properties. The real explosion in the search for uranium began in the 1940's due to World War II and the discovery of the process of fission. "In order to fill the huge demands for uranium

to fuel the nuclear weapons program of the 1940's through the 1970's, many Indian tribes were encouraged to mine the rich uranium which lay beneath the surface of their land. The Navajo Nation saw mining uranium ore as an act of patriotism and as a means for economic development and jobs" (House Report 1994:2).

These statements of patriotism were not made lightly by the Navajo. The Navajo and other Native Americans were very active in World War II. The Navajo Tribal council passed resolutions attesting to their commitment to the war effort. One such resolution passed on April 9, 1941 stated "whereas the Navajo tribe wants its mineral resources developed in a proper way to provide income to the tribe. Furthermore, many of these minerals are needed at the present time for National defense purposes" (Navajo Tribal Council 1941:335), companies soon turned their attention to uranium exploration on the Navajo Reservation.

Dispossession of Native Peoples

Besides the health hazards from mining, particularly of uranium ore, indigenous people face dispossession of their lands by mining companies and governments. In Los Angeles California, to receive the Martin Luther King "Spirit of the Dream Award" a group of Navajo from the Sovereign Dine' Nation voiced their protest of coal mining on Black Mesa and "Southern California's demand for electricity that has resulted in the removal of Dine' from their homelands" (Norrell 1:1999). This protest although not sanctioned by the Navajo Tribe, was against Edison Electric who uses coal extracted by the Peabody coal company at Black Mesa. This problem goes back many years to the Hopi-Navajo land dispute and the so-called "Joint-use area" (JUA). This contentious situation is the result of arbitrary boundary lines established by the Secretary of the Interior and the Commissioner of Indian Affairs in the 1930's for the Navajo and the

Hopi. One of these boundaries is the Parker-Keam Line, established in 1891. In 1962 a decision in *Healing v. Jones* found that the Hopi had ancestral claim to the area even though they never used it and the Navajo had indeed settled there. It was the opinion of the court that both tribes should share the area. "The Navajo never got joint rights to that area. So the Hopis got to keep 100% of what they had always occupied – and 50% of what the Navajos had always occupied...Congress ordered that the land be divided. Nearly 10,000 Navajos and 109 Hopis found themselves living on the wrong side of the fence" (Locke 1989:468). In 1974, Congress signed the relocation act four years after Peabody began mining the soft-bituminous, low sulfur coal (Smithson 1996). Not only is the land being stripped but surface and subsurface water is being contaminated. "Resisters (The Navajo who lay claim to the area) who refused to sign 75-year accommodation agreements, which would have allowed families to stay on their homes sites for the limited 75 years, are receiving federal 90-day notices concerning intent to vacate" (Norrell 1:1999). This kind of relocation causes social and economic disruption.

One of the richest vanadium-uranium deposits happens to be in one of the most beautiful and sacred landscapes on the Navajo reservation, Monument Valley. In the late 1920's during the build up of vanadium for post and pre-war weaponry and the work of scientists on the medical effects of uranium and radium, Monument Valley became a place of great national interest. Gouldings Trading Post was established in 1924 by Harry and Mike Goulding who "operated the store for more than forty years, catering to film crews who used Monument Valley as a setting for many famous westerns, and to the miners and prospectors" (Eichstaedt 1994:26). In Peter Eichstaedt's book "If you Poison Us". Eichstaedt had the opportunity to interview many Navajo's who worked during the mining era and discusses how many of the people were dispossessed by Gouldings as

well as the mining companies. Luke Yazzie was one of these individuals who discovered some of the mineral near his land. "He heard that white men were looking for a certain kind of rock, and he was curious about it. When it was described to him, Luke told them where a lot of it could be found. He brought a sample to Harry Goulding, who turned it over for testing to Denny Viles, the production manager and Vice President of VCA, who was in the area" (Eichstaedt 1994:26-27). The results were astonishing and this area soon became the richest source of uranium-vanadium in the Four Corners area. So rich in fact that a separate mine, Monument number two, was established. As the word spread about employment opportunities at Monument Valley, many Navajo moved into the area in order to take advantage of these opportunities. Yazzie and other Navajo were also promised royalties for the minerals extracted, but they never came. Paraphrased below is an interview with Yazzie that discusses how the Navajo were exploited.

"The workers were told they would get a portion of the profits. While we were working, Mr. Goulding got rich and moved to Phoenix. I (Yazzie) periodically returned to Goulding's trading post and asked when I would be getting my royalties. When I went to Goulding's I was told 'your money is coming. I never knew what was going on. Goulding used to feed me and stuff and act like he liked me. My father told me to never take the rocks to the White man. If you do, you'll get nothing out of it. I took it to Goulding, and I got a cigar for it" (Eichstaedt 1994:28).

Vanadium Corporation of America (VCA) never paid the full royalty amount to the Navajo of Monument Valley and the company downgraded the properties of the ore.

Health Concerns of Mining and Economic Impact

Uranium mining has had detrimental impacts on the health of the local populous, livestock, wildlife, and the miners themselves. It is also important to address the economic impacts mining has had on the people. Reservations typically offer little to no economic support in the form of jobs, so any type of economic activity is generally welcomed. "Since 1954 or before, the tribal budget (Navajo) has depended on energy revenues. Between 1954 and 1971 those revenues comprised from 50-94% of total tribal income, varying over the years but dropping with time" (Aberle 1983:650). According to Navajo Nation President, Milton Bluehouse, in his address to the Nation on December 12, 1998, "new lease agreements with the Peabody Coal Company will bring in an additional \$35 million over the next ten years, in addition to the \$3 million bonus" (FDT Staff 1998:1). This is an important source of income for the Nation. According to statistics gathered from "Navajo Nation Fax", approximately 1,637 (80.5%) Navajo coal miners were employed annually between 1984 and 1987. Many of these miners make very good wages, some in the \$50,000/year range. Of the Navajo workers in the coal mining industry in 1987, the majority were employed as skilled and semi-skilled laborers and very few in the managerial/professional areas. There is a severe imbalance in ratios of the professional sector and again demonstrates the subjugation of the Navajo. The mining companies come into an area, bring their own professional workers to manage the mining, and hire unskilled, Navajo workers for the lower positions. The total number of Navajo working in industry (power plant, coal mining, transport, manufacturing, agriculture, and petroleum) in 1987 was 4,340, compared with a total population in 1988 of 161,941, the difference is startling. In 1979, 50% of the population was below the poverty line. These figures do not take into account other sectors of employment

such as service, crafts, private agriculture, or herding. Reservations are in dire need of economic development in order to get their people off of welfare.

Although tribal lands need economic support, the system was badly abused in the early years of uranium mining and even to the present time. Mining companies did not provide adequate ventilation nor safety regulations for the workers to follow. When the mines were abandoned, they were simply left. In testimony to the House of Representative in 1990, Faith Roessel had this to say.

"From the 1920's to the early 1970's uranium ore was mined on the Navajo reservation for the U.S. Atomic Energy Program. The primary purchaser and beneficiary of this mining activity was the United States Government, and the development of uranium Resources were entrusted to the Atomic Energy Commission. As a result of the mining, the Navajo Nation has been left with at least 1,104 known abandoned uranium mines and tons of hazardous radioactive uranium mine wastes scattered across our lands" (U.S. Government Printing Office 1993:7)

Kerr McGee, which operated from 1954 until 1963, is one company that treated the Navajo unfairly in their quest to obtain mineral resources. Kerr McGee established a uranium mine near Red Rock, Arizona.

Those engaged in mining activities were often workers with no formal protection from radioactive elements and no ventilation system to allow radioactive gases to be removed from the mines. Workers were endangered by radioactive elements and the different particles (alpha, beta, gamma) that they emit. The gases were released by the miners working with a pick or by blasting. The miners were also forced to go into the mines immediately after a

blast where they inhaled the dust and radioactive gases as well. One informant in the Eichstaedt offers this account.

"The working conditions were terrible. Inspectors looked at the vents. When they weren't inspected they were left alone. Sometimes the machines didn't work...They told the miners to go in and get the ore shortly after the explosions when the smoke was thick and the timbers were not in place. There was always the danger of the ceiling coming down on them." (Eichstaedt 1994:50).

Perhaps the greatest nuclear tragedy outside the detonation of H-bombs on American soil also occurred within the lands of the Dine'. On July 16, 1979 near the small community of Church Rock, New Mexico, the unspeakable occurred. A holding dam broke releasing millions of gallons of radioactive wastes and millings into the landscape and the Rio Puerco river. United Nuclear Corporation (UNC) was in the process of mining uranium near Church Rock. "Usable uranium is extracted from the sandstone in which it is found by grinding it fine and leaching it with sulfuric acid. The acid carries off the desired isotope. But the leftover sands, still contain 85% of the ore's original radioactivity" (Wasserman et al. 1982:179). These leftover radioactive sands, were to be kept away from miners and the population in general. At the time, there was no official recommended method of storage or disposal. The method employed at the time was to pool the contaminated sand in water so that some of the radioactivity could be evaporated off, then the dried sand would be stored underground.

The flood itself did not take a single life but the leftover residues had a lasting impact. Residues got into the water table, streams, and the landscape in general.

"1700 Dine' were immediately affected, their single water source contaminated. More than 1,000 sheep and other livestock, which ingested Rio Puerco and other streams water in the aftermath died"(Churchill and LaDuke :249).

The spill contaminated the Rio Puerco and left behind pools of deadly water. After the incident, UNC did not tell the Navajo of the potential deadly impacts of this water. Children were seen playing in the pools. Livestock were allowed to drink from this polluted water. UNC finally told the Navajo of the problem after days of avoidance. The Centers for Disease Control was called in and "warned the locals not to drink water from the river, and to avoid its banks during windstorms, when radioactive particles might be more easily inhaled" (Wasserman 1982:181). UNC stonewalled for over a year in delivering any emergency aid. They settled out of court for a minimal amount from a class action suit filed by the citizens of Church Rock.

These are just a couple of the countless cases of unfair treatment by the typically white owned and operated companies whose main concern were profits. In order to make sure these profits kept coming, the companies not only paid low wages but had little regard for safety features in the mines. In the Church Rock disaster, UNC ignored warnings from the U.S. Corps of Engineers, who testified that if the dam would have been built according to legal specifications, the failure would not have occurred.

The Navajo have been adversely affected by the uranium mining and, recently, have been the most vociferous in their fight to have their lands reclaimed and to receive federal assistance for those affected. Many of the mining companies dismiss the charges, claiming they did not have knowledge of the adverse affects of uranium and its associated radon daughters on the people. As a result of complaints

about the working conditions and the lack of fair pay, the Atomic Energy Commission and other federal conducted investigations into the health hazards in the mining industry.

These actions during the 1950's were helped by Henry Doyle and Duncan Holladay, both Public Health Service employees. Doyle and Holladay took it upon themselves to conduct medical testing on the Navajo employees. After Holladay's testing, a report was submitted to the Atomic Energy Commission which stated: "that radon and radon daughter readings were found to be 'too high for safe operation over an extended period and that the median level of radon concentrations in the mines of the Colorado Plateau is above the median levels reported in European mines'" (Eichstaedt 1994:63). The report released in 1952 was sent to a variety of federal agencies and to agencies operating in the Four Corners area.

The Atomic Energy Commission was reluctant to have the report released because "The United States was still dependent on foreign sources, which the AEC feared would be jeopardized. Most of all, the AEC was worried that if information on the dangerous conditions detailed in the report reached the miners, it might cause a general panic and a mass exodus from the mines" (Eichstaedt 1994:63). Although the report detailed what had been feared, that miners were being poisoned by the deadly gases, it came too late. The miners were already infected and little could be done.

Present statistics on the number of Navajo that have died as a result of uranium mining include the number given by Senator Domenici from New Mexico but there are other statistics as well. The 1988 Navajo Nation Fax, lists 84 or 14.4% (which is the third highest cause for mortality) people dying from neoplasms which are a cancer. These may be non-mining deaths or a combination of the non-mining and mining deaths. "Of the 150-odd Dine' miners who worked underground at the Shiprock facility

during the eighteen years of its operation, eighteen had died of radiation induced lung cancer by 1975 and another twenty-one were feared dying. By 1980, twenty of these twenty-one miners were dead" (Churchill and LaDuke 1992:248). Also of this 150, ninety-five contracted ailments and cancers similar to their co-workers.

In Table 2, a working level month "was the amount of radiation a miner was exposed to in a month, or 168 hours (42 hours per week times four weeks). A mine that had 1 working level of radiation would give a miner 1 working level month after a month of work in the mine. A mine containing 10 working levels of radiation would give a miner an exposure of 10 working levels in just one month" (Eichstaedt 1994:84).

Current Issues in Mining

The Navajo Nation currently has a preliminary assessment and site inspection program (pa/si) in the works which is to "assess and evaluate hazardous substance sites on the Navajo Nation. These evaluations include, but are not limited to, the abandoned sheep dip vat sites and the abandoned uranium mines" (www.cia-g.com:1). To be eligible for listing as a superfund or Surface Mine Control and Reclamation Act (SMCRA) site, the sites must go through a series of "tests" established by the Environmental Protection Agency and the Navajo Nation. For eligible sites, the Navajo Abandoned Mine Claims Commission and the Navajo Superfund Program are assisted by the EPA in order to clean up these areas. Sites found ineligible for the SMCRA are sent through a tedious series of steps that entail Navajo Superfund enforcement, EPA, and decisions on EPA removal, to name a few.

Table 3, illustrates some of the steps taken in order for the Navajo Nation to have a listed on the EPA's file of Superfund sites. The tribe also has listed two National Priorities List (NPL) sites, that are a part of

the Environmental Protection Agency (EPA) Superfund sites. These sites include the Prewitt Abandoned Oil Refinery NPL Site and the United Nuclear Corporation Mill NPL Site. According to information in the web document, the purpose of the NPL sites is "1) provide remediation oversight on behalf of the Navajo Nation, 2) to provide technical review of the site related documents, and 3) to maintain a public document repository on this site for the Navajo people" (www.cia-g.com:1). In a Farmington Daily Times story dated March 22, 1998, the Navajo Nation received \$9.3 million in grant monies from the Office of Surface Mining, a federal agency in order to support reclamation as well as the closing of up to 320 open mines. Recently, Hydro Resources Inc. was trying to obtain permits in order to gather uranium. There was much public disinterest because of the mining process that may contaminate the water. "The process called in situ leach mining (ISL), will contaminate the groundwater in the area where it occurs, contamination which HRI would be required to clean up after the mine closes" (Shaiman 1999:1). The area around Crownpoint has a long history of mining and contamination but according to Quentin Tolth, a local resident, "I think it will be good because of jobs, but it depends on safety issues. As long as it's high tech and wouldn't affect future years, I would like to see them do it" (Mass 1998:2). Of course, Hydro Resources Inc. claims that groundwater will not become contaminated.

Although the ISL process appears to be sound, the Navajo Nation must study the technical reports provided as well as environmental impact assessments. Hydro Resources claims that 99.9% of the radioactive materials will be filtered out and they will establish monitoring stations at 200 foot intervals around the perimeter of the mine. This type of mining still needs to be examined at great depth.

HRI and the Navajo Nation have recently gone to court regarding issues of sovereignty and jurisdiction with regard to

the mining activity. The proposed area of the mine is outside the boundary of the Navajo Nation but within the boundary of the Eastern Agency (of the Navajo Nation). The question here is the definition of Indian Country. According to Getches et al., Indian Country is defined as

"A. All land within the limits of any Indian reservation under the jurisdiction of the U.S. Government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation.

B. All dependent Indian communities within the borders of the United States whether within the original or subsequently Acquired territory thereof, and whether within or without The limits of a state, and

C. All Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same" (Getches et al. 1998:439-440).

The EPA did find that the Church Rock area is in Indian Country and is subject to Navajo Nation and federal jurisdiction. Currently the area is under federal jurisdiction while the Navajo Nation secures the required permits to regulate operations. HRI and the State of New Mexico are currently in the appeal process. But with the clear definition of Indian Country and the ruling in *U.S. v. Sandoval* "were nevertheless Indian country since they were occupied by distinctly Indian communities, which were dependent tribes recognized and protected by the federal government" (Getches et al. 1998:441). Section 1151 (b). Just like the *Sandoval* case, the Church Rock area, though not within the boundary of the Navajo reservation has a majority population that is Dine'.

The Navajo, like many other indigenous nations throughout the U.S. and the world still face problems associated with mining. For example, the Navajo are currently in a dispute with Edison over

mining on the Navajo-Hopi reservations in which many local people face the possibility of being dispossessed without fair compensation and will face loss of traditional homeland and culture as well. The ancestral homelands of the Navajo (the Dinétah) are currently being tapped for the natural resources it contains (oil and gas). Burlington Resources recently petitioned the Bureau of Land Management (BLM) to drill two wells within direct vicinity of Gobernador Knob; a piece of landscape sacred to the Navajo and according to legend is the Birthplace of Changing Woman. "Today, the area still serves as a place where Navajos go to perform traditional ceremonies" (Navajo Times Staff 1999:1). Representatives from the BLM and Burlington Resources acknowledge the cultural significance of Gobernador and a decision is pending. This will most likely be

a place of future contention. This area is being tapped of natural resources at an alarming rate. The Navajo Nation is attempting to reclaim these traditional homelands. In part to regain some of their traditional culture, but also to receive some of the royalties that are rightfully theirs. Native peoples have had a long fight with "big government" and multinational corporations that have resulted in the dispossession of their people, loss of culture, loss of members, and unfair treatment to name a few. But there is a light at the end of the tunnel. If Indigenous nations can follow in the footsteps of individuals such as Eddie Mabo, (Mabo v. Queensland 107 A.L.R. 1992 Australia High Court) in which an aboriginal obtained native title, they will be able to regain their lands and in essence, their futures.

Appendix

Table 1: Radiation Exposure to Uranium Miners¹
Mortality summary by states and year States Where Miners Worked

Colorado	70	Colorado/Utah	7
Utah	12	Colorado/Arizona	1
Arizona	1	Wyoming/Utah	1
Wyoming	1	NM/Arizona	1
Colorado/NM	1	New Mexico/Utah	1

Total 96

Total Deaths by Year

1945	1	1956	2
1946	0	1957	3
1947	1	1958	5
1948	0	1959	5
1949	1	1960	9
1950	1	1961	6
1951	1	1962	7
1952	0	1963	10
1953	1	1964	9
1954	1	1965	16
1955	2	1966	16

Total 97

¹ Eichstaedt, Peter. 1994 If you Poison Us. Red Crane Books. Santa Fe. Page 93

Table 2: Estimated Number of Miners with More than 120 WLM of Cumulative Exposure to Radon Daughters as of December 31, 1963²

Cumulative Working Level Months	Number of Miners in Category
Less than 120	961
	120-359 920
	360-839 739
840-1,799	482
1,800-3,719	246
3,720 and Over	67
Total 3,145	

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² *ibid.* 85

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