

**GLOBAL SEMINAR-WORKSHOP ON INDIGENOUS WOMEN, CLIMATE CHANGE AND REDD+
Securing Rights and Enhancing Capacities for Adaptation and Mitigation
18-19 November 2010
The Legend Villas, Metro Manila, Philippines**

**The Pueblo of Laguna and Uranium Mining, 1953-1982, and Resistance to Renewed Efforts to Mine Uranium
June L. Lorenzo**

SUMMARY: Between 1953 and 1982, Anaconda Copper Mining Company mined uranium on Laguna Pueblo lands. After 30 years of mining, Anaconda unilaterally ceased operations in 1982, leaving Laguna Pueblo and nearby communities with high unemployment and other social economic problems, as well as serious and unforeseen environmental and health problems. After seven years of lying dormant, Laguna Pueblo began reclamation of the mine in 1989 with settlement proceeds received after negotiations with Anaconda. However, nearly twenty years after the closure of the mine, Laguna Pueblo continues to address persisting environmental and health issues. This has been exacerbated by a recent renewed interest in mining uranium in the Grants Mineral Belt coupled with a national climate that is favorable to nuclear energy. While the Pueblo government has begun to address environmental issues, it has largely been the voices and actions of Laguna women and others that have forced the Pueblo to tackle the serious health issues that have pervaded the community. This article tracks the Pueblo's experience with uranium mining and its continuing efforts to address legacy issues in the face of a very real threat of renewed mining.

The Place and Its People

The Pueblo of Laguna is one of 20 pueblos in the state of New Mexico, U.S.A. Pueblos in New Mexico are sovereign indigenous nations with their own land bases and governments. Among the pueblos are six different languages, some with a number of dialects. While the pueblos have many common cultural attributes, they have diverse styles of governments. Laguna Pueblo lands consist of 590,000 acres of buttes, mountains and high desert terrain in the Rio San Jose Valley in west central New Mexico. The Laguna population is divided among six villages; tribal membership is about 8,000 and approximately half of the membership lives on Laguna lands. Old Laguna Village, the oldest and largest, is the mother village.¹ Modern tribal government was formed after the Spanish system in the 1700's, with the head of government being a Governor, elected every two years. The Governor presides over an elected 19-member council with representatives from the six villages, who meet on a weekly basis to conduct official business.

Laguna people speak Keres, a language spoken by five other pueblos in New Mexico. "Kawaika" is our name for Laguna; our elders tell us we came from a place to the north, and

¹ Dated to the fourteenth century, Laguna Village was near a lake held by a beaver dam on the Rio San Jose, hence the name "laguna," or "lake" given by the Spaniards.

settled at different locations along the way. While Kawaika was settled long before the Pueblo Revolt of 1680, the Pueblo grew by virtue of being joined by members of neighboring pueblos who fled to Acoma and Laguna after the Spanish reoccupation in 1692. Laguna people are a matrilineal people, with clan identity determined by the mother's side and traditional home ownership in women.

Paguete Village, known as "Kwishchii," in Keres, is located 11 miles north of Laguna and rests at an altitude of 7000 feet on a mesa below Mount Taylor, a sacred site for a number of southwestern indigenous peoples. The village abuts one of over thirty existing Spanish land grants that exist in New Mexico and date back to the 1700's, known as the Cebolleta Land Grant. Around 1769, Laguna Pueblo purchased this land, known as the Paguate Grant, from Spanish individuals, even though it had originally been part of Laguna territory. Until the introduction of U. S. government funded homes in the 1970's, the majority of the homes in the village were made with adobe and rock and mortar.

Land Tenure and Pueblo Government

Technically, Laguna lands are not "reservation" lands in that they were not set aside under terms of a treaty between the Pueblo of Laguna and the United States government. When New Mexico Territory was acquired by the United States as a result of the Mexican War, the Treaty of Guadalupe Hidalgo, 9 Stat. 922 (1848), guaranteed property rights acquired under the Spanish and Mexican governments to all citizens, including the Pueblo Indians. The United States promised that it would "inviolably respect" the private property rights of citizens in the conquered territory and provide them with "guarantees equally ample as if the same belonged to the citizens of the United States." (Art. VIII, 9 Stat. 922, 929). This treaty entitled Pueblos to communal fee simple ownership of their lands. However, they did not clearly have federal protection or trust status until 1924 with the Passage of the Pueblo Lands Act. In the intervening years they lost thousands of acres of land through adverse possession by non-Indians that was recognized by American courts. Today, while the Pueblos own their lands in fee, they are in a trust relationship with the United States, and their lands cannot be sold without the consent of the United States.

The Pueblo of Laguna has had a constitutional style of government since approximately 1905. In 1949 amendments to the Constitution, Laguna people inserted language clearly stating that the Pueblo owned its mineral resources and that no resources would be taken without the consent of the Pueblo.

Discovery of Uranium; Connecting Laguna Pueblo to the Cold War

In October 1951, Anaconda secured a prospecting permit for Laguna Pueblo lands; one month later high grade ore was discovered south of Paguate Village; believed to be the largest deposits of ore in the entire Colorado Plateau. In May 1952, Anaconda entered into a lease with the Pueblo of Laguna for mining uranium on 4,988 acres of land near Paguate Village. The mine became known as the "Jackpile mine." Succeeding leases were signed in 1963 (2,560 acres) and 1976 (320 acres).

When the Pueblo Council deliberated on the issue of mining uranium on Laguna lands, they were mindful, in some respects, of their possible role in a greater world movement. They were familiar with the use of nuclear energy to take human life in Hiroshima and Nagasaki, as many Lagunas had served in the United States armed forces in World War II. With an understanding that the ore would be used only defensively to protect homelands, that it would be removed from the ground and hauled away so as not to pose health risks, and that the land would be restored by Anaconda after the mining, the Council agreed to lease the land for mining.

Under the terms of an agreement with the U.S. Atomic Energy Commission, Anaconda was the sole ore-buying agent for the Commission. In December 1953 Anaconda completed construction of a processing plant in Bluewater, approximately 45 miles west of Laguna, and began to process yellow cake for sale to the Atomic Energy Commission's raw materials depot in Grand Junction, Colorado. From Bluewater, New Mexico, uranium was sent to other centers where it was processed into plutonium for the bombardment in nuclear reactors. Los Alamos National Laboratory, heavily involved in the development of nuclear weapons, very likely received plutonium that had its origins at the Jackpile mine.

Much of this activity occurred on and very near to native nations. Six Pueblo nations in northern New Mexico are within thirty miles of the Los Alamos Scientific Laboratory, where the first atomic bomb was developed. The remote desert spot called Trinity, New Mexico, where on July 16, 1945, the first atomic bomb was tested, is within sixty miles of the Mescalero Apache Nation. The Grants Mineral Belt—which would ultimately become the largest uranium belt in the world—was located on or near the Navajo Nation and Laguna and Acoma Pueblo lands.²

Years of Operation: 1953- 1982

Between 1953 and 1982, Anaconda utilized three (3) open pit mines and nine (9) underground mines at Laguna to extract 24 million tons of uranium-bearing ore. More than 400 million tons of earth was moved to obtain the ore. The Jackpile mine was the deepest open pit mine at 625 feet. The mine operated 24 hours a day, 7 days a week, and 365 days a year for 30 years and employed as many as 800 tribal members. At its peak, the mine employed the majority of the workforce at Laguna and neighboring communities, drawing many away from an agricultural lifestyle.

During those years, mining activity **contaminated parts of the reservation with toxic, radioactive materials and miners who worked at the Jackpile Mine were not warned of the exposure to radiation, including radon gas and radioactive dust. Mining activity came within thirty yards from the edge of Pagate Village; daily blasting caused walls in old stone and mud houses to crack, and dust from the mine coated homes, crops, and clothes.**

Shutdown of Jackpile Mine and the Question of Reclamation

² See: Manny Pino, in "Metal of Dishonor: How the Pentagon Radiates Soldiers and Civilians with DU Weapons," [1997, International Action Center

About 1980, Anaconda gave notice to Laguna Pueblo that the company planned to cease productions at the Jackpile mine. Market prices for uranium apparently had made it no longer cost effective for Anaconda to continue the operations. Also, uranium mining in other countries such as Canada, Australia and Niger was less costly to produce. Operations ceased in March 1982, but this did not occur without causing great economic and social upheaval to the work force at the Pueblo³

Atlantic Richfield Company (ARCO), who had purchased Anaconda, closed the mine on March 1, 1982, after which it laid dormant for 7 years before any efforts to reclaim the mine began. More than 2,000 acres of land and several pits would require reclamation. One pit measured over 600 feet deep, and a few pits were filled with contaminated water that had seeped up over the years.

When the U. S. Department of the Interior requested that Anaconda prepare a reclamation plan by July 1980, Anaconda insisted that the 1952 and 1963 leases had no specific provisions for reclamation, so that all Anaconda was obligated to do was “leave the mine site in a condition that does not pose an unreasonable hazard to human health or safety.” Anaconda, with mining operations all over the world, could offer no experience of having reclaimed a uranium mine. At that time, no government standards for reclaiming a uranium mine existed.

In December 1980, the U. S. Geological Service determined that an Environmental Impact Statement was required; this began a process of public hearings and debate over the relative responsibilities of various parties to reclaim the mine. Because there were no radioactive mill tailings, the mine was exempt from Nuclear Regulatory Commission oversight. The Environmental Protection Agency was also excluded. Anaconda challenged the authority of the U. S. government to require it to reclaim the mine. Lagunas insisted that the reclamation be completed in a manner that satisfied physical and cultural/spiritual concerns. Between 1980 and 1985 Anaconda submitted a number of reclamation plans, including a “no action alternative,” and a “multiple land use reclamation plan.”

A Draft EIS (DEIS)--setting forth 6 (six) alternatives for reclamation, including Anaconda, Laguna and DOI proposals--was completed in February 1985 and filed with the Environmental Protection Agency (EPA) in March 1985. The DEIS cited three reasons for reclamation:(1) the site was a public health and safety hazard, (2) additional and more serious hazards would develop if the site was left unreclaimed, and (3) the mining lease terms and federal regulations require that reclamation be performed by the leaseholder. (Draft EIS p. 1-5). Public comments were taken beginning in October 1985, and a Final EIS was issued in October 1986.

³ By 1980, the Jackpile and nearby mines employed nearly 75 percent of the workforce at Laguna Pueblo. The final Environmental Impact Statement (1986) indicated that the total number of people in the Pueblo’s labor force was approximately 1200, with an unemployment rate reported to be over 50 percent, due largely to the shutdown.

Laguna Opts to Reclaim the Land Itself

In the midst of this process, Anaconda made a cash settlement offer to the Pueblo of Laguna. By early 1986, Laguna Pueblo had negotiated a settlement with Anaconda for approximately \$45 million. After nearly three years of negotiations and six (6) reclamation plans, Laguna determined that it would reclaim the land on its own, using the settlement funds. In December 1986 the U.S. Department of Interior issued a Record of Decision that established reclamation standards, including gamma and radon emission levels, contour slopes, and depth of cover.

Without existing standards for reclaiming a uranium mine, the Pueblo had to be innovative in designing its own reclamation plan, taking standards from various sources, such as AEC, OSHA, other mining standards, EPA for water, and USGS to design standards. Many of the regulations and standards that exist today for reclaiming mines were not enacted until decades after the largest lease was signed with Laguna Pueblo. Additionally, the CERCLA Comprehensive Environmental Response, Compensation and Liability Act of 1980, by which the government declares certain sites as hazardous, did not include radioactive material as hazardous material.

In 1988 Laguna Pueblo used the proceeds to create and charter the Laguna Construction Company, a for-profit enterprise, with the intent of employing skilled labor from the mining operations to reclaim the mine. Reclamation focused on removing safety risks from waste piles that contained traces of uranium. Pits in the mine were filled to ten feet over the water table to avoid ponds in the bottoms. Remaining waste piles slopes were contoured and sloped to avoid erosion and help them blend into their surroundings. Reclamation was completed in 1995. By then Laguna Construction Company had developed expertise in this field, and went on to do reclamation work on other mines and sites in the Grants Mineral Belt, as well as in other states. The project also drew worldwide attention, with visitors from Germany, Australia and Nigeria.

Approximately \$2.5 million of the initial \$45 million settlement for reclamation was set aside in 1986 for a 10 year monitoring program. The Pueblo developed a Monitoring Plan to monitor groundwater, revegetation, and post-reclamation radiation exposure during and after the reclamation. The program was scheduled to end in 2005, and has been extended by the Laguna Pueblo Council.

Now, over twenty years after reclamation began, the Pueblo government is aware that today it would call for a more environmentally focused reclamation plan, as opposed to engineering focused. It is also aware that by current standards the \$45 million is far short of the amount needed to completely reclaim the mine. **Former mining employees as well as Pueblo members living in Paguete and downwind continue to report growing numbers of cancer-related illnesses. Contaminated surfaces and groundwater sources still exist. In addition, water that flows through the old mine, including the Rio Moquino and the Rio Paguete, is contaminated from radioactive elements. Many Laguna members have died, and others continue to suffer from high incidences of diabetes, believed to be linked to radiation**

exposure attributed to uranium mining. In addition, radiation exposure can cause damage that may not show up for 10-40 years.

Currently, little is known about the stability of the radioactive pollutants and additional risks, which may involve migration into local groundwater supplies or into the atmosphere.

In 2007, the Laguna Pueblo Council, in response to a growing interest by the uranium industry in renewed mining, adopted a moratorium on any uranium mining and development. However, in the event that mining is permitted near Laguna lands, the Pueblo has insisted on consultation regarding possible negative impacts or ensuring that adequate protections are in place with any new operations. The Pueblo has also begun the process of establishing its own air and water standards so that transport of uranium more through Pueblo lands is monitored.

In 2009, an area including and surrounding Mt. Taylor, or Tsibiina, was designated as a Traditional Cultural Property under New Mexico state law. This designation ensures that the Pueblo and four other tribes will be consulted when major development, including mining, is planned on public lands in the designated area. While it is being challenged in court, it continues to give the Pueblo an opportunity to express concerns about adverse impacts to the cultural property.

Role of Laguna Women in Addressing Impacts of Mining

Out of great concern that the health and environmental impacts were not being adequately addressed, the Laguna Acoma Coalition for a Safe Environment (LACSE) was formed in the 1980's. This group of Lagunas, Acomas and interested supporters worked to spread information to the public on the need to monitor any lasting health impacts. Indigenous women have been active in the coalition's work. In the summer of 1996, coalition members conducted a survey of former mine workers who had at least 5 to 7 years of exposure with a \$10,000 grant from the Childhood Cancer Research Center in Maryland. Melissa Dyea-Purley, then a graduate student, assisted in conducting the survey. Of the 4 or 5 interviews conducted with former mine workers from Pagate Village, all but one have since died, mostly from cancer related causes.

The Coalition also created a uranium education curriculum for middle school students which addresses the science of radiation as well as the local environmental, health and social effects. Millie Chino, a resident of Pagate, incorporates lessons for third graders on the effects of the mining to the Laguna culture, including the loss of traditional structures.

Dorothy Purley, another resident of Pagate, and a founding member of LACSE, was one of the strongest advocates for health issues following closure of the mine. She worked as a truck driver for eight years in the open-pit mine, hauling high-grade uranium ore to the mill site. In 1993 she was diagnosed with lymphoma; but this news only spurred her into advocacy for education of Native American tribes and others about the hazards of radiation contamination. Ms. Purley spoke in venues all over the world about the problems of continued mining and the use of nuclear materials, including Hiroshima and Nagasaki, Japan, at gatherings commemorating the 50th anniversary of the dropping of the atomic bomb. She was also a

driving force behind efforts to secure government compensation for uranium mine workers; through her and other efforts, the 1990 Radiation Exposure Compensation Act was amended to include open pit workers, enabling many Laguna families to be compensated for radiation contamination while working at the mine. She unfortunately passed away in 1999. Her daughter, Carletta Garcia, continues to advocate on the same issues.

Since 2009, the Coalition has been a member of the Multicultural Alliance for a Safe Environment (MASE), whose mission is to “restore and protect the natural land cultural environment through respectfully promoting intercultural engagement among communities and institutions for the benefit of all life and future generations.” MASE members have lobbied at local (including tribal government) and national levels, participated in public hearings of government regulatory agencies, and held educational seminars for the public.

Conclusion: Pueblo Strategies to Address Climate Change

There are many times in our history when the women have been the conscience of the people. At Laguna, women have played an important role in urging their own government and the rest of the world to take seriously the health and environmental risks associated with uranium mining. Now, in the face of a national climate that supports nuclear energy and a local, state need to gain income to pay off a huge historic deficit, the role of protecting the land and its people has become even more important. Whether we planned it or not, we have been thrust into the national debate about whether nuclear energy is “clean energy.” We are aware of the need to equip ourselves with education on the issues, as well as alliances that can strengthen our work. We are not yet at the point where we can comfortably discuss strategies for mitigation or adaptation to climate change, but understand that if no one else will make the connections, it is our responsibility.