

**BEFORE THE NEW MEXICO PUBLIC REGULATION COMMISSION**

**IN THE MATTER OF AN INVESTIGATION )  
INTO THE PUBLIC SERVICE COMPANY )  
OF NEW MEXICO'S PURCHASE OF )  
PALO VERDE NUCLEAR GENERATING )  
STATION UNIT 1 & 2 LEASES )  
AND THE FINANCIAL IMPACT )  
ON RATEPAYERS )**

**DIRECT TESTIMONY**

**OF**

**LARRY J. KING**

**ON BEHALF OF**

**NEW ENERGY ECONOMY**

**Background and Experience**

**Q. Please state your name and address.**

A. My name is Larry J King and my mailing address is PO. Box 2197, Gallup, NM 87305 and I have lived in Church Rock, New Mexico all my life.

**Q. On whose behalf are you testifying in this proceeding?**

A. I am testifying on behalf of New Energy Economy (“NEE”).

**Q. Have you testified before in the New Mexico Public Regulation Commission?**

A. No.

**Q. Please summarize your professional background as it relates to the Joint Petition.**

A. I worked at United Nuclear Corporation Mining and Milling (UNC), about 12 miles northeast of Gallup, NM, at the end of NM State Highway 566, from October 1975 to April 1983. The first year, October 1975-1976, I worked as a surface laborer. My duties were to sweep and clean the “change room”, the building where mine employees changed clothing from their street clothes into their work clothes or vice versa. Workers getting off work took showers and groomed themselves before going home. While I did my janitorial duties, I was consistently exposed to uranium dust that the miners brought back from the underground mine caked onto their work clothes. From October 1976-1977, I transferred to the geology department as an “underground ore prober”. My job duty was to follow the miners to their assigned locations and after they blasted the mining tunnels I used a Geiger counter to determine the grade of the

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ore pile and tagged the piles accordingly with colored ribbons. That would tell the haulers where to take the ore and distribute them correspondingly. From October 1977 to April 1982, I transferred to the engineering department as an “underground surveyor”. During that time, using several kinds of surveying equipment, I surveyed the underground mine tunnels as miners progressed forward. My survey data was used by the engineering staff to update the mine maps and do strategic planning to continue mine production. I provided surveyed reference points to give miners direction to follow towards potential uranium ore bodies. Every two weeks at the end of pay period I had to physically measure all progress made by miners because they were paid by the footage. This meant entering unventilated tunnels and with high radon levels, wading through knee/waist deep mine water, choking through heavy dynamite smoke all in an effort to reach the face of the tunnel to take measurements. This information was provided to the payroll department that determined how much miners would receive on their next paycheck. On a daily basis, I was consistently exposed to radon, uranium dust, heavy metal air particulates, contaminated mine water, diesel smoke, dynamite powder/smoke and abrupt changes in temperature. On a Monday morning in April 1982 all mine employees were called in for a meeting and were told the mine was going to shut down by the end of the week and the first round of layoffs were to begin immediately. I survived the first round of layoffs, but was transferred to the UNC mill site as a surface laborer. I began monitoring existing wells for underground aquifer water levels and took water samples to assess contamination contents in the water. I was monitoring a contaminated aquifer about 100 feet below surface, because the plume was moving in a northerly direction towards the

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Navajo Nation Reservation boundaries. The mill site had three tailing ponds that were built without liners. I got laid off in April 1983.

From October 1983 to January 2018, I worked as an Engineering Technician/Project Manager for the U.S. Government. I oversaw several sanitation facilities construction, costing millions of dollars in federal funding and ensured projects stayed within budget. Worked with tribal, state and federal agencies to streamline processes in completing projects. Provided updates at chapter houses to community members and tribal staff/officials regarding community projects. Gained general knowledge in chapter activities/policies coordinating with staff regarding bathroom additions, right-of-ways and demographic issues.

In January of 1997, I became involved with a grassroots organization called “Eastern Navajo Diné Against Uranium Mining” (ENDAUM), and am still presently active with the organization. Our efforts were focused on halting In Situ Leach Mining by Hydro Resource Incorporated (HRI), from starting in the Navajo Communities of Crownpoint and Church Rock, NM, to protect its sole drinking water source for the communities. Although we were unable to have Nuclear Regulatory Commission (NRC) overturn the license they granted to HRI, ENDAUM stayed the course and prevented HRI from opening their mines.

Several positive things evolved during the tenure of ENDAUM. To name a few: we were able to educate our tribal government about the legacy of uranium mining and its disastrous health and environmental impacts. This resulted in the banning of uranium mining within the boundaries of the Navajo Nation, which the Tribal President signed into tribal law in April 2005.

I participated in a chapter project in 2003 to monitor the mining legacy in Church Rock, NM, the “Church Rock Uranium Monitoring Project” (CRUMP). With the assistance of many outside organizations and agencies, we sampled our air, water and land. From the project, we discovered how highly contaminated the communities close to mine sites were, and also a portion of NM State Highway 566, even though we already knew it in our hearts.

From these results, another grassroots organization was formed in 2007, the Red Water Pond Road Community Association (RWPRCA), to address the community’s grave concerns of being sandwiched between two abandoned mines, Kerr McGee and UNC, for several years. There main initiative is the removal of mine waste from their residence. I am also currently involved with this organization’s efforts to assist them in addressing the problems associated with two abandoned mines and the mine waste legacy. We are currently involved in negotiations with the Environmental Protection Agency (in concert with the US House of Representatives Natural Resource Committee) to seek reparations and community re-location.

**To insure that the public interest is sufficiently protected the PRC needs to investigate PNM’s planned purchase of expiring nuclear leases.**

**Q. Do you support the Joint Petition for a formal investigation into Public Service Company of New Mexico’s (“PNM”) planned purchases of Palo Verde Nuclear Generating Station (“PVNGS”) lease at Unit 1 for 104 megawatts (“MW”) and lease at Unit 2 for 10MW in 2023 and 2024 respectively?**

A. I support the Joint Petition for a formal investigation into PNM’s planned purchase of PVNGS leases for the following reasons:

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a) I believe that without a formal investigation the New Mexico Public Regulation Commission (“NM PRC”) will not have the information necessary for the public and agency decision makers to understand the degree to which the purchase of those expiring leasing would contribute to environmental, health and financial impacts to the public. The PRC should design the investigation to insure a fully informed and well-considered decision. That necessarily means that it should also examine alternatives to the proposed action, and the action’s direct, indirect and cumulative effects.

b) Consistent with the New Mexico Constitution<sup>1</sup> and Navajo Nation Ban on Uranium Mining, attached as Exhibit A, we must promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of humans and animals and ensure that the PRC uses all practicable means to assure for all safe, healthful, productive, and aesthetically and culturally pleasing surroundings and to attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences.

c) Uranium's decay products, particularly radon, have well documented adverse health effects on humans. When radon is inhaled, alpha particles are deposited in the lungs and has the potential to cause lung cancer. The adverse effects from occupational exposure to radiation from uranium and its decay products are firmly established. Numerous studies demonstrate that uranium miners and mill workers suffer higher mortality rate compared with individuals

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<sup>1</sup>NM Constitution, Article XX, §21: The protection of the state’s beautiful and healthful environment is hereby declared to be of fundamental importance to the public interest, health, safety and the general welfare.

who never worked in uranium mines or mills. Increased mortality and morbidity rates were particularly pronounced among Diné uranium workers and in those cases were directly attributable to exposure to radiation from uranium and its decay products.

**Q. Is the information set forth in this testimony based on personal knowledge?**

A. Yes. The information set forth in my testimony is based on my personal knowledge. If called as a witness in this proceeding, I could and would testify competently to these facts.

**Q. Are you aware of the Church Rock mill tailing spill and can you explained what happened?**

A. The Church Rock UNC Mill Tailing spill occurred in the early morning of July 16, 1979, when United Nuclear Corporation's Church Rock uranium mill tailing disposal pond breached its dam. 1,100 tons of solid radioactive mill waste and approximately 93 million gallons of acidic, radioactive tailing solution flowed into Pipeline Arroyo, a tributary of the Puerco River. At first, I did not notice the breach when driving into work. It happened on the day when I came in two hours earlier, every two week before morning shift starts at 8 a.m., to take measurements and document all activities done by the underground miners so they could get paid accordingly. I recall a few weeks prior to the dam breach, I was called by my supervisor to go with them from our mine site office to the tailing ponds. I noticed several large cracks on top of the dams, large enough to put a fist in and unable to see the bottom of the cracks. My supervisors conversed with others at a distance, so I was unable to hear their conversations, then we got back into our vehicle and returned to the mine office. I did not do anything but accompanied my bosses to the tailings dam and unsure of what my purpose was

to be or what was being discussed amongst them. The cracks were in the same location of where the breach occurred.

**Q. After the breach of the dam wall what happened?**

A. Several days after the spill, the Indian Health Service and the Environmental Improvement Division of New Mexico warned local residents over the radio and with signs written in English and Diné to not drink from, water livestock at, or enter the Puerco River. Many Navajo people in the area speak only Diné, spoken by 150,000 people in the Navajo Nation. The governmental communication was inadequate and hurt the people because the warnings were not authoritative, did not come fast enough and did not reach enough people, because community members and livestock owners continued to wade and cross the contaminated wash. Warning signs posted in Diné served no purpose, as the traditionally spoken language is not a written language, but meant to be pass down generation to generation orally. The UNC spill left a wake of radioactive waste and heavy metals in the Puerco River's bed and banks which flowed through the City of Gallup NM. Several Navajo community chapters to the west, crossed the Arizona State line and continued through Sanders and Holbrook, Arizona, eventually reaching the Little Colorado River pass in Winslow, AZ. To my knowledge, there has never been any remediation performed to address the contamination. The company's method of cleanup was to hire laborers and provided them with shovels and five-gallon plastic buckets to scoop up the sludge and fill buckets, which were then dumped into fifty-gallon metal drums and eventually disposed of elsewhere. Federal and State



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agencies have refused to conduct any type of comprehensive health studies to assess the damage even to this day!

A few years ago (+4 yrs) a doctoral candidate student with assistance from his consultant colleagues conducted water testing for the town of Sanders AZ. They discovered the small rural town's main drinking water source was contaminated with uranium and other heavy metal and the water utility owner/operators had known about it for years. The water wells were located within the immediate vicinity of the Puerco River, where mine water from UNC flowed for several years. Had any studies been conducted years earlier, this catastrophe perhaps might have been avoided. I have stated several times over the years, the accidental release of radioactive waste from UNC Mill did not happen only one day, July 16<sup>th</sup>, but untreated contaminated mine water has continually flowed freely through the Red Water Pond community and down the Puerco River since the early 60s to 1995 when the mine was being de-watered to do production, until the water pumps were finally shut off at the mine.

**Q. Was the Church Rock radiation contamination the worst in US history?**

A. Yes, but people know much more about the Three Mile Island disaster. People affected there were compensated justly. Whereas, the UNC spill happened in Church Rock and our impoverished indigenous community has been left to suffer the consequences without redress. Federal agencies, USEPA, NRC, BIA, IHS, to name a few, entrusted to equally protect and provide a safe and healthy environment to all U.S. citizens regardless of race, sex and religion have failed to protect our community. To this day our indigenous communities are still

struggling to have their demands heard and addressed. Environmental injustice is at the heart of this tragedy.

**Q. What is your understanding of the harms caused by uranium mining and milling and nuclear-generated electricity?**

A. I have gained a lot of knowledge about the ill effects of exposure to uranium and other heavy metals associated with it, with my involvement with grassroots organizations for more than twenty years, advocating for a safe, healthy and clean environment.

Our community also continues to suffer from the poisons left behind by the mining operations that began in the early 1950s. There are about 20 abandoned uranium facilities in the Church Rock area. More than half of those were developed by companies that sold uranium ore to the US Atomic Energy Commission for use in the nation's nuclear weapons program and have not been cleaned up and remediated at all. I knew in my heart that me and my family lived in contaminated area, but it wasn't until 2003 when the chapter started CRUMP, that we found out how bad the problem was and still is. With the assistance of many outside organizations and agencies, we sampled our air, water, and land. An abandoned mine still exists west of my residence about 1000-ft, to this day where the survey had indicated radiation readings 10 times above EPA allowable limits for a community dose. A windmill that had been in the community since I was a toddler had to be shut down when it was deemed unsafe for human and livestock consumption. The windmill was the primary domestic water source for many years to several surrounding Navajo communities prior to the mines coming in. About 6 miles of NM State Highway 566 between my resident and the UNC Mill/RWPRCA, was also

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found to have marginal to high readings of radiation along the road, due to ore haulage along the route. From the survey of 2003 it was also discovered how contaminated RWPRCA was. The USEPA eventually conducted their own survey/samplings and concurred with CRUMP's findings regarding dangerous community exposure from being sandwiched between two abandoned mines less than ¼ mile apart for years. The residence had to relocate temporarily about three times in last few years to allow EPA to conduct contaminated soil removal around several homes, reconstruct arroyos and access roads to the community. I have heard and seen several personal testimonies from friends and relatives about the sickness they are dealing with from either being former uranium workers and/or living in the immediate vicinity of uranium mines.

It has also affected livestock from drinking water that flowed in the Puerco River and pits left behind from exploration drilling. Sheep get trapped in the sludges left in the pits. I have witnessed sheep and goat born without wool, leaving them with just a pink skin; living only a short time.

My own experience with how it effected my late father's herd of cattle was about in the late 90s when I had inherited my father's legacy to maintain the family ranch and prosper. I discovered hundreds of bones scattered among the shrubs/weeds in the fields from cow carcasses hidden amongst vegetation inside my permitted grazing unit. I believe that this significant cattle die-off resulted from the radiation exposure catastrophe to the Puerco River flow, because my father had extended portion of his ranch fenceline into the Puerco River wash so that he could alleviate some hardship on him in watering his cattle. This fenceline

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extending into the wash, unbeknownst to him, sickened and killed his livestock and also harm our family financially from UNC contaminated water. Currently, I only provide regulated water source to my cattle, because I care for my animals as much as I care for my relatives and fellow human beings.

My family also suffered during the uranium eras in other ways. One of my uncles and his in-laws were killed when their truck was T-boned by a uranium ore truck on NM State Highway 566 about a mile south of the UNC Mill in May 1975. In July 1976, my mother and her cousin sister veered off NM566 into an arroyo and died about five miles south of UNC Mill, an area where the highway right-of-way fenceline extended down into the arroyo which made the accident unnoticeable for about 2 days. In September 1977, my brother was killed in a head-on collision with uranium ore truck near the gate to the Old Church Rock Mine 2, about 500-feet across from my current residence at midnight while on his way to work at Kerr McGee Mine.

In addition, I have seen and heard from others on how community members waded and played in the contaminated stream. I did the same thing and no one from the UNC ever forewarned the community that the flowing water is full of toxic radioactive cancer-causing waste. I am aware of former colleagues that have died from working in the mines and others that are fortunate enough to still be alive today but are riddled with sicknesses that they attribute to uranium mine exposure. UNC has never been held accountable for this spill in any way.

**Q. Please explain if the radioactive mine spills have been cleaned up and what you are doing about it?**

A. To my absolute knowledge, the radioactive spill has never been cleaned up! The Puerco River that carried the contaminated fluids since the early 60s to mid 90s, specifically the July 16<sup>th</sup> spill, abuts my grazing permitted area on the east side and wraps around to the south side; on the west side is an existing abandoned mine that was once part of UNC mine, the Old Church Rock Mine 2. Me and my family's residence are encircled with mine legacy contamination. This mine was part of HRI's plan to open an In situ Leach mine, which my organization fought vigorously to stopped, but has since been assumed by a Canadian company. The spill remnants may not be visible, but I understand the contamination from the spill has not gone away. In the mid 90s, when a waterline was being installed in the bed of the Puerco, I noticed the same odor and color in a layer about eight feet below the streambed. In my mind the only recourse of the situation is to remain vigilant: to continue to demand our tribal, local, and federal officials to fund and conduct a comprehensive health study for communities and residence affected along the Puerco River and following that evaluation to redress the communities fully for health impacts and financial losses.

**Q. Were you actively involved in the passage of the “Enactment of the Diné Natural Resources Protection Act of 2005”?**

A. As a member of ENDAUM, I worked with others to rigorously educate our elected tribal officials who were very naive at the time to the uranium legacy, and pass the “Enactment of the Diné Natural Resources Protection Act of 2005,” in the Navajo Nation Council and signed into law by Navajo Nation President Shirley in April 2005, attached and incorporated as Exhibit A to my affidavit. The Resolution banned uranium mining and uranium processing on any sites within Navajo Nation due to injury to humans, including severe illness and death,

and to animals, and the detrimental economic impacts including to the land, water, vegetation and other natural resources.

**Q. What are the dangers from nuclear-generated electricity?**

A. In order for nuclear-generated electricity to occur there must be mining and milling of uranium. My experience indicates that there have been many illnesses and deaths caused by the continued reliance on this form of extractive energy. Additionally, we still haven't discovered any way to deal with the radioactive waste created from the burning of uranium – this will cause neurological deficiencies, cancers and other health problems for future generations, as it too, has and will continue to poison waterways. What we do to the Earth we do to ourselves. There is no escaping this reality.

**Conclusion**

Given the outsized risks and harms caused by uranium mining and milling and nuclear-generated electricity that has disproportionately harmed Native Americans I urge the PRC to take a hard look into PNM's planned purchase of PVNGS nuclear leases.

**Q. Does this conclude your testimony?**

A. Yes, it does.