

# SOVEREIGNTY FOR SALE

## Nuclear Waste in Indian Country

Jon D. Erickson and Duane Chapman

*The United States government has a waste management problem which it seeks to solve in collaboration with willing hosts. ... With atomic facilities designed to safely hold radioactive materials with half-lives of thousands of years, it is the native American culture and perspective that is best designed to correctly consider and balance the benefits and burdens of these proposals."*

—David H. Leroy, U.S. Nuclear Waste Negotiator, speaking to the National Congress of American Indians.<sup>1</sup>

Since the late 1950s, when civilian nuclear power plants began operation, the disposal of highly radioactive waste nuclear fuel has challenged engineers and political leaders. Until very recently, facilities for storage of such waste have been constructed on the site of nuclear plants where both technology and highly trained personnel ensure safety and security. The Department of Energy (DOE) has proposed a permanent, centralized storage facility, also controlled and monitored by trained personnel, inside Yucca Mountain, Nevada. Plans to open the facility, however, have been so long delayed that the Department of Energy has proposed an interim solution—Monitored Retrievable Storage, or MRS—that would seek civilian hosts to house the waste.

What began in the 50s as a carefully monitored program has become an open search for a community willing to take responsibility for radioactive plutonium, the most hazardous material ever created by humanity or nature. With the finding of such a host, electric utility companies with nuclear power plants would be relieved of legal title and operational responsibility for the waste nuclear fuel from their plants. The only communities left in the process are seven Indian tribes, including the Mescalero Apache, Fort McDermitt Paiute-Shoshone, and the Skull Valley Goshute. If the Yucca Mountain site is authorized, constructed, and opened, much of the MRS

nuclear waste would be relocated there. If the Yucca Mountain site never opens, however, these tribes, without benefit of wealth or scientific expertise, would assume responsibility for a problem which is, literally, eternal.

### THE NUCLEAR ERA AND INDIAN SACRIFICE

The Department of Energy's current policy and the willingness of several Native American tribal governments to place themselves in consideration stems from a long history of radioactive exploitation and the loophole of tribal sovereignty, as well as the current socioeconomic conditions of the reservation system.

### Spent Fuel and the Eternity Problem

A representative 1000 megawatt (MW) reactor, operating under industry conditions of the early '80s, would require twenty seven metric tons of uranium (MTU) to produce approximately seven billion kilowatt-hours (kWh) annually. Uranium fuel is supplied to reactors in the form of dry pellets in bundles of cylindrical fuel rods. The resulting annual waste, or spent fuel rods, would consist of twenty seven MTU plus 250 kilograms (kg) of various plutonium (Pu) isotopes. Pu-239 has a half-life of 24,000 years, meaning that one-half of its radioactivity is dissipated after 24,000 years.

It has been estimated that inhalation and lung deposition of just one ten-thousandth of a gram of Pu-239 gives a 50% probability of lung cancer. It will take 100 kg of Pu-239 approximately 700,000 years to decay to a radioactivity level of one ten-thousandth of a gram. For the twenty-seven metric tons of radioactive waste produced in the reactor example, three quadrillion gallons of water would be required for safe dilution.<sup>2</sup>

The current system of sovereign Indian country began with the Indian Reorganization Act of 1934 (IRA). The expressed intention of the IRA was to replace traditional forms of tribal governments with constitutions and councils intended as examples of United States democracy. Ronald Eagleye Johnny, an attorney and former chairman of the Fort McDermitt Tribe, believes that, in fact, the IRA gave the Bureau of Indian Affairs (BIA) more authority over tribal governments than it had before, and standard constitutions written and issued by the BIA were far from models of the United States constitution. The BIA never provided education about the new forms of government and their constitutions; and what was intended to promote tribal sovereignty and self-government resulted in destroying traditional ways, stifling economic development, centralizing tribal decision-making power, and often creating a dependency on BIA management and federal funds.<sup>3</sup>

For U.S. producers or managers of solid and hazardous wastes, this federally defined sovereignty offers a minimal permit application process, little or no government regulatory oversight, scant public input or review, tax breaks, and exemption from state and local laws. The BIA, an agency with little expertise in environmental analysis, issues permits for waste facilities.<sup>4</sup> Only a handful of tribes have any environmental laws, and these are basically from their own initiatives and financing. The U.S. Environmental Protection Agency (EPA) has provided limited funding and direction for environmental services on Indian lands.<sup>5</sup> A company producing or managing hazardous or solid waste can site a dump or treatment facility, and effectively manage such a facility with little worry of inspection from a federal agency and little expense of standard environmental controls, all at a distance from where and for whom the waste was generated. A 1985 survey of twenty-five reservations identified more than sixty-five sites of contamination from hazardous substances, and a total of 1,131 generation, storage, or disposal sites on or near reservation borders.<sup>6</sup>

The involvement of nuclear energy in Indian country began with atomic bomb development in the 1950s. Uranium mining and bomb test fallout were the most significant nuclear developments for Native Americans. The Southwest reservations and pueblos of the Four Corners region (the corners of Arizona, Colorado, New Mexico, and Utah) were major centers of mining and weapons development. Following the discovery of carnotite (a mineral containing both uranium and vanadium) on the Arizona Navajo reservation in 1941, the Secretary of Interior was specially authorized to lease tribal mineral resources for "national defense purposes." During the following four years, over 11,000 tons of uranium ore were mined in Monument Valley on the Navajo Reservation, and used in the production

of the first atomic bomb in Los Alamos, New Mexico (on lands claimed by the San Ildefonso Pueblo). The first atomic bomb was exploded at a site bordering the Mescalero Apache Reservation in New Mexico (now the White Sands Missile Range).

By 1958, the BIA reported over 90,000 tribal acres leased for uranium exploration and development. Between 1946 and 1968, over thirteen million tons of uranium ore were mined from the Navajo reservation alone for atomic bomb production. Over the years, Navajo lands, nearby pueblos (i.e. Laguna), and bordering lands were home to the nation's largest open-pit uranium mine, underground uranium mine, and uranium mill. Uranium exploration drilling activity continues on the north and south rims of the Grand Canyon. Over 1000 abandoned and unreclaimed open-pit and underground mines remain on the Navajo reservation alone.<sup>8</sup>

---

*Perhaps the greatest  
"radioactive wrong" is that  
the majority of miners and  
communities directly exposed,  
or downwind, or downriver  
from radioactive releases were  
unknowing victims.*

---

Today the abandoned mines and tailings remain, much of them in Indian country. (Tailings are the waste by-products of mining and milling retaining up to 85% of the original ore radioactivity.) Estimates conclude that the United States government has left over twenty-two million tons of mine tailings at twenty-four locations in nine western states since the 1950s.<sup>9</sup> Together with private sources, more than 150 million tons of tailings remain in the United States, much as seemingly harmless sandy residues covering acres of lands. In 1983, the U.S. Environmental Protection Agency (EPA) estimated that 3,288 abandoned uranium mines existed in nineteen states.<sup>10</sup>

Many nearby communities used available mining wastes to construct their homes. Indian children often played in abandoned uranium mine pits and the

radioactive sand piles. The U.S. General Accounting Office estimates that over 500 buildings in the early mining site of Grand Junction, Colorado, are contaminated by radioactivity.<sup>11</sup> An estimated 600 dwellings on Navajo lands are radioactive.<sup>12</sup>

Mines, mills, and tests have caused exposure of human populations to radioactivity. Fallout downwind from bombing and production facilities has perhaps affected the largest number of people in the vicinity of testing sites and bomb production facilities in Nevada, New Mexico, and Washington. For example, between 1944 and 1956, approximately 530,000 curies of radioactive Iodine-131 were released into the air at the Hanford Nuclear Reservation in Washington State, neighbor to the Yakima Indian Nation, resulting in the largest known public radiation exposure in U.S. history.<sup>13</sup>

Downriver communities have also been affected as tailings often found their way either directly or indirectly into major Indian water resources. In Gore, Oklahoma, the Kerr McGee Sequoyah Fuels Facility, located within the Cherokee nation, has spread the waste from their uranium processing plant both intentionally as raffinate fertilizer and unintentionally by leaks into local water supplies for a number of years. Concentrations of uranium, radium, and thorium in a surface effluent stream have been measured at 21.3, 2387, and 5.15 times permissible levels, respectively.<sup>14</sup> The largest spill of low-level radioactive waste in U.S. nuclear industry history occurred on July 16, 1979, when the United Nuclear uranium mill tailings dam broke, releasing more than 96,000,000 gallons of tailings liquids into the Rio Puerco, a major water source for Navajos and their livestock. The acidic tailings (pH of 1) and 1,100 tons of tailings solids contaminated the river forty miles beyond the dam, staining the streambed yellow and green with chemical salts.<sup>15</sup> The Black Hills of South Dakota/Wyoming, sacred lands to the Lakotas and bordering current reservation populations, contained 5,163 uranium claims by 1979 and 214,747 acres of private land in the area are also under mining leases. In June of 1980, eighteen years after 200 tons of radioactive mill tailings washed into the Cheyenne River, an indirect source of potable water for the Pine Ridge Reservation, the Indian Health Service tested gross alpha levels in reservation well water as high as fourteen times the national standard.<sup>16</sup> In Point Hope, Alaska, Iodine-131 injections into Alaskan Natives and dumping of radioactive military waste were among the more intentional exposures pushed upon unknowing victims or misled "volunteers."<sup>17</sup>

The health effects of radiation exposure on Indian communities are much more than coincidental. In the southwest, as many as 3,000 Navajo men were employed during the uranium boom of the late 1940s through the 1970s. A recent case-study reports the high occurrence of radiation exposure-related incidents

## Navajo Uranium Miners and Families

Worker-identified illnesses n=50

Illnesses	n (%)
Lung Cancer	12 (24)
Other Cancers	5 (10)
Chronic lung diseases (pulmonary fibrosis, bronchitis, obstructive lung disease, silicosis)	33 (66)

Family-identified\* illnesses as perceived by respondents n=55

Illnesses	n (%)
Birth defects	13 (23.6)
Lung Cancer	3 (5.4)
Other cancers	19 (34.5)
Eye disorders	4 (7.2)
Miscarriages	2 (3.6)
Other diseases	25 (45.4)

\* Family members include 53 spouses and 321 children

identified by a sample of miners and their families (see "Navajo Uranium Miners and Families" box).<sup>18</sup>

Numerous epidemiological studies support the high correlation between exposure to uranium and lung cancer among uranium miners. Miscarriages, birth defects, bone, reproductive and gastric cancers, and heart disease deaths are among other related health effects from uranium mining.<sup>19</sup>

Perhaps the greatest "radioactive wrong" is that the majority of miners and communities directly exposed, or downwind, or downriver from radioactive releases were unknowing victims. In particular, the health effects of uranium mining and radiation exposure have been studied for over forty years, yet few miners were ever made aware of the extent of risks involved. In the recent survey of forty-three Navajo miners and seven millers, 100% reported never being informed of radiation hazards or rights to benefits, having no personal knowledge about radiation, and never being provided personal protective equipment prior to 1970. Eight of the miners (18.6%) were provided safety instruction, all but one laundered dust-covered clothing at home, and fifteen (34.8%) were provided physicals. All of the surveyed miners reported working in unventilated mines, and all of the millers reported handling yellowcake (milled uranium) without personal protective equipment.<sup>20</sup>

Testifying at a Congressional hearing in 1967, the year radiation standards for uranium mining finally came into effect, Leo Gehrig, then Acting Surgeon General, projected a possibility of 529 miner deaths due to lung

# *So: what is the reason for the effort and expense to develop centralized storage if current on-site storage is more economical, has a proven safety record, and requires limited transport of spent fuel?*

---

cancer, and reported ninety-eight lung cancer fatalities since 1963.<sup>21</sup> In 1990, over twenty-five years later, Congress passed the Radiation Exposure Compensation Act, authorizing cash awards to workers and families who were affected by disease or death as a result of fallout from atmospheric testing in Nevada, or participation in nuclear testing, or uranium mining. Unfortunately, proving causation is still not an easy task and requires health, work, and marriage records, many of which are not available for Native American miners and families. According to the Tribal Office of Navajo Uranium Claims, only fifty-four of the 328 approved claims so far are from Navajos, and Navajos are again facing bureaucratic and legal difficulties in filing claims.<sup>22</sup>

## THE LEGACY OF NUCLEAR POWER

Civilian nuclear power plants began producing nuclear waste on December 2, 1957, in Shippingport, Pennsylvania, when the first full-scale nuclear power plant went into service. Today, 109 reactors are operating, and sixteen others have been closed.<sup>23</sup> The national spent fuel inventory has grown to over 23,681 MT (metric tons) of uranium, plutonium, and other radioactive by-products and is expected to grow to a minimum of 87,700 MT by the year 2030. Of the current inventory, nearly 97% is stored at reactor sites in large pools of water, mainly in the eastern half of the U.S.; although on-site dry cask storage is emerging as the preferred medium of storage. Considering total estimated inventories of commercial and DOE radioactive wastes, spent fuel accounts for 95.8% of total radioactivity at only 0.19% of total volume.<sup>24</sup>

Since the enactment of the 1982 Nuclear Waste Policy Act<sup>25</sup> (NWP) the DOE has been attempting to move away from at-reactor storage by electric utility companies. The goal is to create a system of federally operated transport, temporary storage, repackaging, and centralized, permanent, underground disposal. The expressed chief interest of the nuclear power industry

for centralized storage is economics and safety. However, research by Chapman<sup>26</sup> has demonstrated that the current system of at-reactor storage is economically superior given the prevailing decline in U.S. nuclear power capacity. No new orders have been placed for reactors in nearly fifteen years, and of the 139 orders placed between 1971 and 1978, 107 were canceled.<sup>27</sup> Furthermore, sites currently storing spent fuel will most likely remain radioactive for thousands of years due to contaminated reactor components. Fifteen of the sixteen reactors shutdown to date remain stored on site and radioactive, with no immediate dismantlement plans. The emergence of economic, safe, on-site, dry cask storage of spent fuel further supports continued on site storage.

So: what is the reason for the effort and expense to develop centralized storage if current on-site storage is more economical, has a proven safety record, and requires limited transport of spent fuel? Where does MRS and Indian country fit in the picture?

The answer to the first question seems clear: the nuclear power industry is interested in eliminating its liability and responsibility for spent fuel. Together or separately, an Indian country MRS facility or a Yucca Mountain depot would exempt manufacturers of the waste from subsequent liability for damage it may cause. The time period for potential liability is probably between 250,000 and 500,000 years. In addition, amended statutory language in the NWP requires that the host waive its rights to sue the government in the event of an accident.<sup>28</sup>

The relationship between Yucca Mountain and a potential Indian country MRS facility is complex. With the 1987 Amendments<sup>29</sup> to the NWP, Yucca Mountain, Nevada, became the exclusive site under consideration as a permanent spent fuel repository. The original goal of opening a disposal facility by 1998 has been pushed back to 2003. The DOE now estimates the scientific investigation of the site will conclude by 2001, with an estimated opening in 2010. The GAO, however,

estimates that, at the program's present pace, the investigation will take five to thirteen years longer than anticipated.<sup>30</sup> Despite significant delays, the DOE has entered into contracts with nuclear utilities to start accepting spent fuel by 1998. These delays have renewed interest in a temporary storage solution—MRS.

The original attempt to develop an MRS was based upon the availability of scientific expertise nearby. The goal was to site an MRS facility in Oak Ridge, Tennessee, near the National Laboratory there, a lab with an outstanding record in nuclear materials management. During this period, the DOE's siting criteria were significantly different than today's. Criteria included federal land preference, an eastern United States location to limit transportation impacts (only four of the nation's commercial reactor sites are west of Dallas, Texas), and a site without known use conflicts.<sup>31</sup> The Clinch River Breeder Reactor site in Oak Ridge was ultimately preferred due to its proximity to the DOE's Oak Ridge facilities where nuclear activities were already taking place, pre-existing extensive site data, and available, experienced technical personnel.<sup>32</sup> Due to the pressure exercised by the state of Tennessee, the community of Oak Ridge, and the threat of veto by the state's governor, however, the MRS in Tennessee was revoked by the 1987 NWPA Amendments.

As the Department of Energy and White House slowly came to terms with delays in the Yucca Mountain repository program, cancellation of the Oak Ridge MRS site, and increased pressure from utility contracts to accept spent fuel, the federal government utilized an entirely different option. The Office of the Nuclear Waste Negotiator was created in August of 1990, a distinct federal agency, separate from the DOE, accountable to the President and Congress, and headquartered in Boise, Idaho. The Nuclear Waste Negotiator recommended soliciting a voluntary MRS host and so attention turned to Native American reservations. Past siting criteria were ignored as the Nuclear Waste Negotiator invited all state and territorial governors and the governors, chairs of Tribal and Business Councils, and presidents of Pueblos and Native American Nations to apply for grants for the purpose of independent feasibility studies. The Department of Energy has pointed out that negotiating an agreement allows the possibility of avoiding statutory language which requires the construction and opening of an MRS to be tied to the licensing and construction of a repository.<sup>33</sup> An Indian MRS could, under existing laws, become the United States long-term storage facility.

Over the past three years, the Nuclear Waste Negotiator has awarded twelve 100,000 dollar Phase I grants to Indian tribes. (The three county government Phase I applicants have since withdrawn from the process.) Phase II-A offers an additional 200,000 dollars for additional education and feasibility studies. Nine Indian tribes have participated, and as of this writing,

three tribes have been awarded grants. The Mescalero Apache of New Mexico and the Skull Valley Goshute of Utah have since applied for Phase II-B money<sup>34</sup> : 2.8 million dollars to enter formal negotiations and identify potential sites. Over three million dollars per volunteer site can be spent before assessing the technological feasibility of a site and before any formal agreement is made. Benefits packages for accepting an MRS facility have been discussed in the range of tens of millions of dollars per year. Current volunteers are all in the western half of the United States, are all predominantly non-technical communities, and are all Indian tribes.

The new Secretary of Energy has expressed the need for an understanding with an Indian tribe.<sup>35</sup> In a June, Washington meeting between the Mescalero's consultant and the Department of Energy, all signs were go on continuing the voluntary host program under the Clinton Administration's new Nuclear Waste Negotiator, encouraging the Mescalero to continue into Phase II-B.<sup>36</sup> The deadline for feasibility grants expired this past March after two extensions. If there is to be an MRS, therefore, it will be in Indian country.

#### INDIAN COUNTRY POVERTY

Socioeconomic conditions make Native American communities ideal candidates for restriction-free cash awards and enticing benefits packages. Clearly, poverty on the reservations has contributed to the willingness of the Mescalero Apache, Ft. McDermitt Tribe, and Skull Valley Goshute to participate in the process. Some reservations have per capita incomes as low as 1,325 dollars and civilian unemployment rates and poverty levels as high as 100%. Of the reservations with trust lands, accounting for over one-half of on-reservation Native American populations, average per capita income was just under 5,000 dollars, compared to 14,420 dollars for the general United States population.<sup>37</sup>

Despite their poverty, the vast majority of tribes have not looked favorably on solicitations from the Nuclear Waste Negotiator. Of 573 letters sent to tribal leaders, only nineteen Indian tribes applied for grant money. Furthermore, six of these applicants withdrew under tribal opposition: two before the grant was awarded and two during Phase II. Two returned the 100,000 dollar gift.

#### THE MESCALERO APACHE, FT. McDERMITT TRIBE, AND SKULL VALLEY GOSHUTE

The Mescalero Apaches of New Mexico have gained the most national attention as a likely volunteer for MRS of nuclear waste. They were the first to apply and receive both Phase I and Phase II-A grants, and are currently pushing for Phase II-B money. Their tribal council president of over thirty-five years, and long-time voice in national Indian issues, Wendell Chino, has promoted the MRS process with other tribes as well. In a letter from Chino to the Nuclear Waste Negotiator, he describes his motives as: "first, because we were asked

*Together or separately, an Indian country MRS facility or a Yucca Mountain depot would exempt manufacturers of the waste from subsequent liability for damage it may cause.*

---

to consider it by the United States government; second, because there appears to be an opportunity to operate an MRS facility on a sound commercial basis; and, third, because we can bring to such a program our strong traditional values that favor protecting the earth."

Opposing views from other members of the tribe are quite strong. Francine Magoosh, a tribal member, expresses shame, rather than patriotic duty or reverence for nature, over the council's actions to date. She and other tribal members heard of their tribe's decision to study MRS from sources off the reservation, not from the council. She claims that her attempts to get the council to discuss or educate the people about MRS all failed. Some have learned more about MRS independent of the council's studies, but many remain uninformed and fearful. Magoosh estimates that ninety-five percent of the tribe oppose participation but are powerless to affect Wendell Chino's decision.

Magoosh and ten other anti-MRS activists have since lost their reservation jobs. When Magoosh was fired from her job as a social service representative, a BIA position, the explanation she received from her supervisor was, "I told you not to get involved in politics." The daughter of a very active anti-MRS Mescalero was threatened and physically assaulted, according to Ms. Magoosh.<sup>38</sup>

The source of Chino's power arises from the Mescalero's BIA approved constitution.<sup>39</sup> The tribal president serves in both the legislative and executive departments, appoints judiciary members, heads the court of appeals, establishes committees, acts as contracting officer, holds veto power, grants pardons, and directs the tribal police. Referendums, recalls of council members, or amendments to the constitution are all possible, but at Chino's discretion given his constitutional powers and duties. Chino's unmarred election record has been subject to much debate in the past. Elections occurring every two years are coordinated by an election committee appointed by Chino, and votes

have always been counted in secrecy. In the past, the tribal court (appointed by Chino) has ruled that it has no jurisdiction over the election committee, also appointed by Chino. When other members of the tribe attempted to get Washington involved, an FBI agent sympathetic to their position was transferred and their current contact is unwilling to get involved.<sup>40</sup>

Parallel circumstances can also be found on the Ft. McDermitt Tribe Reservation on the Oregon/Nevada border. The tribal council was the first to follow the Mescalero into Phase II-A, and has adopted a similar approach. Over eighty percent of the reservation population is unemployed. The few reservation jobs and all BIA benefits are controlled by the Tribe's current chairperson, Helen Snapp. While their constitution is considerably more democratic than the Mescalero's, Snapp has been accused of disregarding it. Earnestine Coble, Director of the Tribe's MRS Office, now says there will be a tribal vote at the end of Phase II-B; but the application for the original 100,000 dollars stated that members would vote at the end of Phase I.<sup>41</sup>

One factor that separates the Ft. McDermitt Tribe or the Mescalero Apache from other tribes is the degree of council power. Many of the other tribes in the MRS process have withdrawn as the tribes' members participated in the process. Grace Thorpe of the Sac and Fox, after learning about her tribe's decision to apply for Phase I money, educated herself about spent fuel. She circulated a petition that was signed by the required fifty people, and a special meeting was called. Seventy of seventy-five attendees voted "no" to MRS, and the tribe withdrew from the program, returning the 100,000 dollar grant. Similarly, two other Oklahoma tribes followed the Sac and Fox lead. The Prairie Island Indian Community, in considering their Phase II-A application, felt the safety and health risks were too great and decided as a tribe to end their studies.<sup>43</sup>

In exploring the internal circumstances behind the Skull Valley Goshute decision to pursue MRS, council



solidarity seems not to be as much of an issue as current land use and economic motives. The uninhabited tract of land being considered for an MRS facility is bordered by a hazardous and toxic waste incinerator, a nerve gas plant, and a magnesium mine. This potential nuclear waste site is currently leased as a rocket motor testing ground. The tribe's lease provides ninety percent of their economic base and expires in 1995.<sup>44</sup> The tribe is looking for something to replace this lease.

External influences are also important. These include consultants, who play a major role in managing the tribal authorities' interactions with the Nuclear Waste Negotiator and the Department of Energy. It is unclear whether consultants initiated the current Native American involvement, or how the Phase I and II funds are divided between consultants, tribal leadership, and tribe members.<sup>45</sup> Nuclear lobbyists based in Washington have also been involved in influencing Indian councils.<sup>46</sup>

At the federal government level, the prospect of giving federal land to a tribe to be held in trust for an MRS facility has been particularly influential for the Mescalero. Of the three sites suggested as possible MRS candidates, two are on non-Indian land and one straddles the reservation border.<sup>47</sup> The adjacent land of the White Sands Missile Range, home of the first atomic bomb explosion, appears to be the current candidate for further study. The land would be put in trust for the Mescalero in return for the benefits of sovereignty.

The Department of Energy has exerted indirect influence by funneling federal money to national Indian organizations for the purpose of educating Native America about nuclear waste. Yearly DOE nuclear education money transferred to the National Council of American Indians was as high as 355,000 dollars in 1989. In addition, the Council of Energy Resource Tribes (CERT), funded by the federal Administration for Native Americans, has held conferences with government and industry advocates of centralized nuclear waste storage in an effort to "pinpoint tribal traditions that would help build 'consent' on nuclear waste storage."<sup>48</sup>

#### NATIVE AMERICAN OPPOSITION

Indians from around the nation are taking action to address the MRS Indian country problem. Grace Thorpe of the Sac and Fox Nation has worked to create the National Environment Council of Native Americans, and has brought new perspectives on nuclear waste storage to tribes, to NCAI meetings, and to Washington. Ron Johnny, former Ft. McDermitt Tribe council chairman, has been approached by fifty-four Ft. McDermitt members (a substantial number, considering that about sixty votes put the current chairman into office) for help in keeping MRS off the reservation. The tribe's constitution prohibits the sale or lease of tribal lands, and Johnny hopes this will be a sufficient clause to cancel any negotiations over locating an MRS facility.<sup>49</sup>

#### CONCLUSION

The magnitude of the nuclear power fuel waste problem is incomparably greater than the problems created by the earlier history of uranium mining and nuclear weapons testing. It is as if we are watching an epic tragedy unfold. As each mistake occurs over the decades, our national policy slowly moves to transfer our largest problem to the people who have the least resources to defend themselves.

Our advanced nuclear laboratories in California, New Mexico, and Tennessee do not want the responsibility of nuclear power waste storage. Nuclear power utilities want to rid themselves of it. No State government wants it. The emerging situation is staggering: the problem is too big for the Los Alamos and Oak Ridge National Labs, too big for high-tech states that produce the waste, too big for the federal government itself. This problem we will give to the Ft. McDermitt Tribe, Mescalero Apache, Skull Valley Goshute, or any Indian country "volunteer," unless a change in federal nuclear waste policy occurs, or all remaining tribes in the MRS program drop out. •

*Jon D. Erickson is a Research Support Specialist and Duane Chapman is a Professor of Resource Economics at Cornell University. The authors thank Ronald Eagleye Johnny and Eleanor Smith for comments and suggestions.*

#### NOTES

1. D. H. Leroy, "Federalism on Your Terms: An Invitation for Dialogue, Government to Government," prepared remarks by the U.S. Nuclear Waste Negotiator to the National Congress of American Indians, San Francisco, December 4, 1991: 2, 7-9.
2. D. Chapman, *Energy Resources and Energy Corporations* (Cornell University Press, Ithaca, N.Y., 1983).
3. Personal communication with Ronald Eagleye Johnny, J.D. See also, R. E. Johnny, "Can Indian Tribes Afford to Allow the Bureau of Indian Affairs to Negotiate Leases and Permits of Tribal Resources?," *American Indian Law Review*, 16: 203, 1991.
4. "Waste Companies Exploit and Threaten Sovereignty," *Akwesasne Notes*, 23#3: 11, Midwinter (1992).
5. See Hearing on the Indian Tribal Government Waste Management Act of 1991 (S. 1687) before the Select Committee on Indian Affairs, U.S. Senate, One Hundred Second Congress, First Session, Oct. 17, 1991.
6. S. H. Berlaut, "Responding to Dangers Posed by Hazardous Substances: An Overview of CERCLA's Liability and Cost Recovery Provisions as they Relate to Indian Tribes," *American Indian Law Review* 15(2): 279-294, 1992; Berlaut cites Office of Emergency and Remedial Response, U. S. EPA, Hazardous Waste Sites on Indian Lands: Report to Congress, 1985.
7. Personal communication with Jan Stevens of the Sac and Fox Nation, July 14, 1993.
8. J. Redhouse, *An Overview of Uranium and Nuclear Development on Indian Lands in the Southwest*, Albuquerque, N.M.: Redhouse/Wright Productions.
9. S. E. Dawson, "Navajo Uranium Workers and the Effects of Occupational Illnesses: A Case Study," *Human Organization*,

- Vol. 51, No. 4, 1992; Dawson also cites C. McLeod, "Uranium Mines and Mills Have Caused Birth Defects among Navajo Indians," *Energy Resources* 12:49, 1985.
10. "Houses That Glow: Uranium Mining's Legacy," *Toxics and Minority Communities*, Issue Pac #2: 8-9, (Alternative Policy Inst. of the Center for Third World Organizing, Oakland, CA, 1986).
11. *Ibid.*
12. See Redhouse, *supranote* 8.
13. A. B. Benson, *Hanford Radioactive Fallout, Hanford's Radioactive Iodine-131 Releases (1944-1956) — Are there observable health effects?* (Cheney, WA: High Impact Press, 1989).
14. Research of Dr. Richard Hayes of the University of Oregon, cited in *Indigenous Environmental Perspectives: A North American Primer*, prepared for the United Nations Conference on the Environment and Development, and the Protecting Mother Earth Conference, Indigenous Women's Network, Lake Elmo, MN, 1992.
15. W. P. Robinson, "Uranium Production and its Effects on Navajo Communities Along the Rio Puerco in Western New Mexico," in B. Bryant and P. Mohai eds., *The Proceedings of the Michigan Conference on Race and the Incidence of Environmental Hazards*, (Ann Arbor: University of Michigan School of Natural Resources, 1990).
16. W. Churchill and W. LaDuke, "Native America: The Political Economy of Radioactive Colonialism," in W. Churchill, ed., *Critical Issues in Native North America - Volume II* (Copenhagen: International Work Group for Indigenous Affairs, 1991).
17. Personal communication with Jack Shaffer, Pt. Hope Inupiat, Pt. Hope, Alaska, June 1993.
18. Dawson, *supranote* 9.
19. Dawson cites C. Butler, J. M. Samet, W.C. Black, C.R. Key, and D.M. Kutvirt, "Histopathologic Findings of Lung Cancer in Navajo Men: Relationship to Uranium Mining," *Health Physics*, 51: 365-368, 1986; L.S. Gottlieb, and L.A. Husen, "Lung Cancer among Navajo Uranium Miners," *Chest* 81: 449-452, 1982; National Institute of Environmental Health Sciences and NIOSH, *Radon Daughter Exposure and Respiratory Cancer Quantitative and Temporal Aspects*, National Technical Information Services, Springfield, VA, 1971; McLeod, C., "Uranium Mines and Mills May Have Caused Birth Defects among Navajo Indians," *Energy Resources*, 12: 49, 1985.
20. See Dawson, *supranote* 9.
21. Statement of Leo J. Gehrig, Acting Surgeon General, U.S. Public Health Service, May 10, 1967; Printed in "Hearings before the Subcommittee on Research, Development, and Radiation of the Joint Committee on Atomic Energy, Ninetieth Congress, First Session on Radiation Exposure of Uranium Miners," U.S. Government Printing Office, 1967.
22. K. Schneider, "Valley of Death: Late Rewards for Navajo Miners," *The New York Times*, May 3, 1993.
23. U.S. Council for Energy Awareness, *Nuclear Technology Milestones 1942-1992*, USCEA, Washington, D.C.
24. Oak Ridge National Laboratory, "Integrated Data Base for 1992: U.S. Spent Fuel and Radioactive Waste Inventories, Projections, and Characteristics," U.S. Department of Energy, Washington, D.C., DOE/RW-0006, Rev. 8 (1992).
25. Public Law 97-425, 42 USC 10101.
26. D. Chapman, "The Eternity Problem: Nuclear Power Waste Storage," *Contemporary Policy Issues*, 8: 80, 1990.
27. U.S. Council for Energy Awareness, *Historical Profile of U.S. Nuclear Power Development—1992 Ed.*, Energy Update, Washington, D.C.
28. Nuclear Waste Policy Act Amendments, Public Law 100-203, 42 USC 10101, Section 171(b)(5).
29. Public Law 100-203, 42 USC 10101.
30. U.S. General Accounting Office, "Resources, Community, and Economic Development Division, Nuclear Waste: Yucca Mountain Project Behind Schedule and Facing Major Scientific Uncertainties," Report to the Chairman, Subcommittee on Clean Air and Nuclear Regulation, Senate Committee on Environment and Public Works, GAO/RCED-93-124, 1993.
31. U.S. Department of Energy, Office of Civilian Radioactive Waste Management, "Screening and Identification of Sites for a Proposed Monitored Retrievable Storage Facility," DOE/RW-0023, 1985.
32. U.S. Dept. of Energy, Office of Civilian Radioactive Waste Management, Monitored Retrievable Storage Submission to Congress, Vol. 1, The Proposal, DOE/RW-0035/1-Rev 1, 1987.
33. U.S. Dept. of Energy, Office of Civilian Radioactive Waste Management, Annual Report to Congress, DOE/RW-0335, 1992.
34. Office of the Nuclear Waste Negotiator, Boise, Idaho.
35. E. Lane, "O'Leary's Nuclear Waste Plans Becoming Clearer," *The Energy Daily*, Mar. 5, 1993.
36. See Hudson, *supranote* 34.
37. Census 1990, U.S. Dept. of Commerce, Bureau of the Census.
38. Personal communication with Francine Magoosh, June 1993.
39. Revised Constitution of the Apache Tribe on the Mescalero Indian Reservation, approved Mar. 25, 1939, revised Jan. 12, 1965 (the year Chino officially came to power), U.S. Dept. of the Interior, Office of Indian Affairs.
40. See Magoosh, *supranote* 38.
41. Personal interview with Ronald Eagle Johnny, J.D., former Ft. McDermitt tribal chairman, June 22, 1993.
42. Personal communication with Grace Thorpe, member of the Sac and Fox Nation and founder of the National Environmental Coalition of Native Americans, June 1993.
43. Personal communication with Edith Pachini, Prairie Island tribe and MRS committee member, July 1993.
44. Personal communication with Danny Quintanna, Salt Lake City Lawyer and Skull Valley MRS Director, June 1993.
45. Pacific Nuclear Corporation, a designer and manufacturer of nuclear waste containers, are the chief consultants to the Mescaleros. The Ponca Industrial Corporation recently applied on behalf of the Tonkawa tribe of Oklahoma after losing their Ponca tribe client (S. Davis, "Ponca want accounting for MRS \$\$\$," *News From Indian Country*, May, 1993; "Tribe Applies for Grant for Nuclear Waste Study," *Tulsa World*, April 4, 1993.).
46. The Washington nuclear lobbyists, Edison Electric Institute and the U.S. Council for Energy Awareness, have financed trips of the Mescaleros, New Mexico officials and reporters, and other tribes to east coast nuclear plants and spent fuel storage facilities (Personal communication with Felix Killar, Director of Nuclear Waste Program, U. S. Council on Energy Awareness, March 1993).
47. T. Davis, "Indians' N-dump proposal scares Ruidoso tourist-woosers," *Albuquerque Journal*, Jan. 2, 1992.
48. J. A. A. Hernandez, "How the Feds Push Nuclear Waste onto Indian Lands," *SF Weekly*, September 23, Vol XI, No. 30, 1992.
49. See Johnny, *supranote* 41.