MONITORED RETRIEVABLE STORAGE OF SPENT NUCLEAR FUEL IN INDIAN COUNTRY: LIABILITY, SOVEREIGNTY, AND SOCIOECONOMICS

*Jon D. Erickson, Duane Chapman, and Ronald E. Johnny**

Introduction

Federal nuclear spent fuel policy has evolved into soliciting Indian tribal and state units of government to volunteer for hosting temporary waste storage, Monitored Retrievable Storage (MRS). Through the United States Office of the Nuclear Waste Negotiator (NWN), feasibility study grants have been awarded almost exclusively to Native American tribes. In the authors' view, the voluntary host process relies on Indian sovereign rights, a lack of technical qualifications, and the depressed economic position of Indian country populations. This article begins with a short history of policy evolution, outlines the legal nature and appeal of sovereignty in siting waste storage or radioactive activities, describes the socioeconomic influences on sovereign tribal council decisions, and concludes that MRS in general is undesirable and the potential result of the voluntary siting process is dangerous and unethical.

I. Spent Fuel Policy Evolution

On December 20, 1951, an experimental reactor produced the first electric power from the atom, lighting four light bulbs. Nearly six years later, on December 2, 1957, the first full-scale nuclear power plant went into service, at Shippingport, Pennsylvania. Today, nearly all of the U.S. civilian nuclear reactors constructed in the late 1950s and early 1960s have been shut down, including the first Shippingport unit. However, the legacy of their atomic power, and that of the 109 units currently operating, remains in the form of spent, or used-up, radioactive fuel.[1]

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* *Jon D. Erickson*: M.S., 1992, Cornell University. Research Support Specialist, 1993, Cornell University; Ph.D candidate, Resource Economics, Cornell University.

Duane Chapman: Ph.D., 1969, University of California, Berkeley. Dr. Chapman is a Professor of Resource Economics at Cornell University and has been a member of two National Academy of Science panels on nuclear power, and a consultant to business and government.

Ronald E. Johnny: J.D., 1985, University of Denver College of Law. Tribal Chairman, 1987-89, Fort McDermitt Tribe. Chairman, 1988-90, Inter-Tribal Council of Nevada. Mr. Johnny is a program attorney at the National Judicial College, Reno, Nevada and a Native American history instructor, University of Nevada, Reno.

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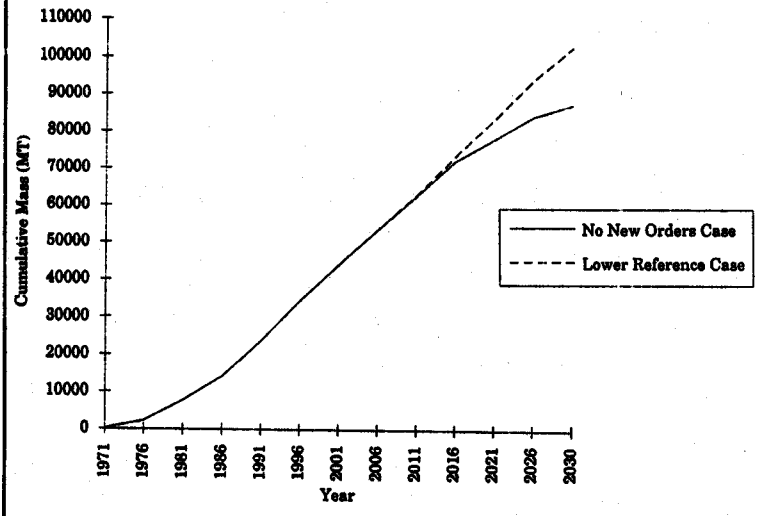
1. Nuclear Technology Milestones 1942-1992, at 1 (n.d.) (U.S. Council for Energy

FIGURE 1.
HISTORICAL AND PROJECTED SPENT FUEL



SOURCE: OAK RIDGE NAT'L LAB., U.S. DEP'T OF ENERGY, INTEGRATED DATA BASE FOR 1992: U.S. SPENT FUEL AND RADIOACTIVE WASTE INVENTORIES, PROJECTIONS, AND CHARACTERISTICS (DOE/RW-0006, Rev. 8) (1992).

The national spent fuel inventory has grown to over 23,681 metric tons (MT) of uranium, plutonium, and other radioactive byproducts.[2] Figure 1 shows Department of Energy (DOE) estimates for cumulative spent fuel in a No New Orders Case and a Lower Reference Case.[3] Nearly 97% of the current inventory is stored at reactor sites, mainly in the eastern half of the U.S. The remaining 3% is stored at the West Valley Demonstration Project (27 MT) in West Valley, N.Y., at the Midwest Fuel Recovery Plant (674 MT) in Morris, Illinois, and at the Idaho National Engineering Laboratory (43 MT) in Idaho Falls, Idaho. The majority of spent fuel is currently stored in pools

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Awareness news release) (on file with author); U.S. COUNCIL FOR ENERGY AWARENESS, HISTORICAL PROFILE OF U.S. NUCLEAR POWER DEVELOPMENT (1992).

2. OAK RIDGE NAT'L LAB., U.S. DEP'T OF ENERGY, INTEGRATED DATA BASE FOR 1992: U.S. SPENT FUEL AND RADIOACTIVE WASTE INVENTORIES, PROJECTIONS, AND CHARACTERISTICS 17 (DOE/RW-0006, Rev. 8, 1992) [hereinafter OAK RIDGE]. Fuel consists of uranium pellets contained in long, cylindrical fuel rods, and once spent is stored in the same form. For a description of the nuclear fuel cycle (including mining and milling, conversion, enrichment, fabrication, transportation, and spent fuel handling and storage), see DUANE CHAPMAN, ENERGY RESOURCES AND ENERGY CORPORATIONS 201-07, 259-66 (1983).

3. The No New Orders Case assumes a 40-year reactor operating life, with 30% of the reactors having an extended 60-year operating life. The Lower Reference Case assumes that 70% of the reactors will have an extended 60-year operating life. *See* OAK RIDGE, *supra* note 2, at 17. See also figure 1 of this article.

of water, although dry cask storage is emerging as the preferred medium of storage.

Of the 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.[4] This level of radioactivity is of incomparable magnitude and danger, and its storage has been subject to both national security and health concerns.

To illustrate, consider the transuranic isotope plutonium-239 (Pu-239) contained in spent fuel. Current nuclear weapons (as well as the atomic bomb that destroyed the city of Nagasaki, Japan) are made from Pu-239, which is produced in Department of Defense reactors. A nuclear power plant can produce significant amounts of Pu-239. Only eleven to twenty-two pounds of Pu-239 is required to fabricate a small nuclear bomb able to destroy a medium-sized city. The weapons production potential from spent fuel has been an international political and terrorist concern. This is a major factor in U.S. policy in canceling waste fuel reprocessing in order to reduce the potential of terrorist access.[5]

Health concerns further highlight both the magnitude and the eternity of the waste storage problem. It has been estimated that one ten-thousandth of a gram of Pu-239 has a 50% probability of causing lung cancer if inhaled. At a half-life[6] of 24,000 years, 100 kg of Pu-239 would require approximately 700,000 years to decay to this level of radioactivity.[7] Safe storage of such highly radioactive material for a time period that is literally an eternity is the challenge being presented to Native American nations by the federal government.

A. Yucca Mountain Repository

Since the adoption of the Nuclear Waste Policy Act of 1982 (NWPA),[8] the DOE and the nuclear power industry have been attempting to move away from at-reactor storage toward a federally operated system of containerization, transportation, temporary storage, and permanent centralized disposal. The NWPA formalized national waste management and authorized the DOE[9] to

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4. OAK RIDGE, *supra* note 2, at 9.

5. *See* David E. Sanger, *Japan, Bowing to Pressure, Defers Plutonium Projects*, N.Y. TIMES, Feb. 22, 1994, at A2; Matthew L. Wald, *Surplus Plutonium Called Big Threat*, N.Y. TIMES, Jan. 25, 1994, at A13; Stephen Engelberg & Michael R. Gordon, *Intelligence Study Says North Korea Has Nuclear Bomb*, N.Y. TIMES, Dec. 26, 1993, at A1, A8; Edward Cohen, *U.S. Ready to Cease Push for Plutonium as Fuel in Reactors*, N.Y. TIMES, Apr. 7, 1977, at A1, D7.

6. One half-life refers to the time it takes for one half of the nuclei of a radioactive isotope to decay.

7. CHAPMAN, *supra* note 2, at 263.

8. Nuclear Waste Policy Act of 1982, Pub. L. No. 97-425, 42 U.S.C. §§ 10,101-10,226 (1988).

9. Specifically, the Office of Civilian Radioactive Waste Management (OCRWM).

study and site both a repository for permanent disposal and an MRS facility for the purpose of temporary storage, consolidation, and repackaging of waste. The Act provided for funding through the Nuclear Waste Fund, generated by collecting one-tenth of a cent (one mill) per kilowatt-hour from utility companies for nuclear-generated electricity. Upon opening an MRS or repository, the DOE relieves utilities from legal title, management responsibility, and liability to all spent fuel accepted.

Despite the 1982 legislation, centralized spent fuel storage has yet to be sited. After considering various locations for a repository, the 1987 Amendments to the NWPA (the 1987 Amendments) directed the DOE to exclusively study the site at Yucca Mountain, Nevada.[10] Shortly after the 1987 Amendments, the original goal of operating a repository by 1998 was pushed back to 2003. The DOE now estimates that its scientific investigation of the site will conclude by 2001, at a cost of $6.3 billion (year-of-expenditure dollars) and, if the site proves suitable, a repository could be open by 2010.[11] The General Accounting Office (GAO), however, concludes that at its present pace the investigation of Yucca Mountain will take five to thirteen years longer than planned, and cost more than DOE projections.[12]

Despite significant delays in the development of a repository, the DOE has entered into contracts with nuclear utilities to take possession of spent nuclear fuel by 1998. Consequently, considerable emphasis has been placed on siting aboveground temporary storage. In fiscal year 1992, of the $275 million appropriated for the disposal program, the DOE allotted $109 million (40%) to non-Yucca Mountain activities.[13] Specifically, Yucca Mountain funds were competing with funds for the MRS and nuclear waste transportation programs that support the DOE's 1998 goal to accept spent fuel. Of the $166 million remaining for the Yucca Mountain project, $106 million was allotted to "infrastructure activities," leaving only $60 million for activities directly related to repository site investigation.[14]

It would seem the chief objective of the DOE in their current nuclear waste programs is to site temporary aboveground storage. The nuclear power industry and nuclear powered states seem willing to support any effort,

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10. Nuclear Waste Policy Act Amendments of 1987, Pub. L. No. 100-203 (codified at 42 U.S.C. § 10,101 note (1988)). Specifically, Title I of the NWPA of 1982 was amended by adding the new Subtitle E: "Redirection of the Nuclear Waste Program." *See* 42 U.S.C. §§ 10,172-10,172a (1988).

11. RESOURCES, COMMUNITY & ECONOMIC DEV. DIV., U.S. GEN. ACCOUNTING OFFICE, 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 13 (1993) (GAO/RCED-93-124).

12. *Id.* at 4.

13. *Id.*

14. *Id.*

temporary or permanent, as long as it rids them of the liability and responsibility of spent fuel storage. This has translated into further delays and fiscal distraction in the Yucca Mountain project, and a renewed effort in siting an MRS facility.

B. The First MRS Siting Attempt

The history of the first attempt at siting an MRS facility provides a telling contrast with the current voluntary host process. The NWPA did not define the role of MRS facilities, nor did it clearly authorize their construction. Rather, the original Act directed the DOE to study the need for and feasibility of MRS, and to submit to Congress a proposal for constructing one or more facilities.[15] After dismissing the options of "no MRS" or "an MRS just for backup storage," the DOE in 1985 recommended an *integral* MRS facility to improve the management and control of transportation, facilitate spent-fuel consolidation and packaging to simplify the repository facility, and provide a backup in the event of significant delays in constructing the repository.[16]

The DOE's main siting criteria for an MRS during this period included (1) limiting MRS candidacy to Federal lands (preferably DOE and Nuclear Regulatory Commission (NRC) docketed sites), (2) siting within the east-central region of the U.S. to limit transportation impacts, and (3) narrowing the choice to sites with 1100 available acres without known use conflicts (i.e. operating reactors).[17] Of eleven sites identified within the preferred geographic region, the DOE selected three sites in Tennessee for further study. The Clinch River Breeder Reactor site, owned by the Tennessee Valley Authority, was identified as the preferred candidate because of (1) its proximity to the DOE's Oak Ridge Reservation where nuclear activities were compatible with present land usage, (2) an extensive base of environmental data on the site was available, and (3) experienced technical personnel were in supply from the local community.[18]

The GAO, the State of Tennessee, and various citizen's groups raised questions about the general need for an MRS facility. Gov. Lamar Alexander (R-Tenn.) utilized his Safe Growth Cabinet Council (SGCC) to organize a multiagency review of the MRS proposal, and perform an independent technical assessment of DOE's program assumptions. Ultimately, Governor

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15. *See* 42 U.S.C. § 10,161 (1988) (Title I, Subtitle C — Monitored Retrievable Storage).

16. *See* OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT, U.S. DEP'T OF ENERGY, THE NEED FOR AND FEASIBILITY OF MONITORED RETRIEVABLE STORAGE — A PRELIMINARY ANALYSIS (1985) (DOE/RW-0022).

17. OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT, U.S. DEP'T OF ENERGY, SCREENING AND IDENTIFICATION OF SITES FOR A PROPOSED MONITORED RETRIEVABLE STORAGE FACILITY 1-4 (1985) (DOE/RW-0023).

18. 1 OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT, U.S. DEP'T OF ENERGY, MONITORED RETRIEVABLE STORAGE SUBMISSION TO CONGRESS: THE PROPOSAL 13-14 (1987) (DOE/RW-0035/1-Rev 1) [hereinafter PROPOSAL].

Alexander concluded that the MRS "could be operated safely, but the U.S. doesn't really need it," and that he would veto any plans to build an MRS facility in Tennessee (subject to congressional override).[19]

In March 1987, after more than a year of legal action in the federal courts and considerable influence from local community concerns, the DOE submitted its final proposal to Congress for the construction of an MRS facility at the Clinch River site in Oak Ridge, Tennessee.[20] The estimated opening date was 1998, with a storage capacity of 15,000 MTU.[21] The DOE linked the construction and operation schedule to the successful licensing and operation of a permanent repository.[22]

Despite the DOE's attempts to discount the various independent studies, considerable public and intergovernmental pressure led to the adoption of the 1987 Amendments, and Congress "annulled and revoked" MRS plans for all of the proposed sites in Tennessee.[23] MRS had been defeated in potentially the most technically and geographically qualified site in the nation.

MRS, however, remained a storage option, tied to the timetable for construction and operation of a repository. The 1987 Amendments required an independent assessment of the need for an MRS facility by a congressional MRS Review Commission before the DOE could begin survey and evaluation of new sites.[24] Most significantly, Congress created a new avenue for siting an MRS facility with authorization to establish the Office of the NWN, a federal agency working closely with the DOE, but accountable to only the President and Congress.[25]

C. The Current MRS Siting Attempt

The MRS Review Commission issued their report in November 1989, favoring an MRS only if the capacity and schedule of its operation could be divorced from that of the permanent geological repository.[26] Congress, however, remained concerned that an unlinked MRS might be regarded as a "de facto repository" and reduce motivation to continue studying permanent geological disposal. As the amended NWPA stood, construction on one MRS

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19. MICHAEL R. FITZGERALD & AMY SNYDER MCCABE, UNIV. OF TENN. ENERGY, ENV'T, AND RESOURCES CTR., THE U.S. DEPARTMENT OF ENERGY'S ATTEMPT TO SITE THE MONITORED RETRIEVABLE STORAGE FACILITY (MRS) IN TENNESSEE, 1985-1987, at 17-18 (1988).

20. PROPOSAL, *supra* note 18.

21. Metric tons of uranium. MTU is used as a convention as the majority of spent fuel consists of uranium. However, spent fuel also includes other radioactive byproducts such as plutonium.

22. *See* PROPOSAL, *supra* note 18, at 2.

23. 42 U.S.C. § 10,162(a) (1988) (Subtitle C of NWPA of 1982 amended).

24. *Id.* § 10,163 (Subtitle C of NWPA of 1982 amended).

25. *Id.* §§ 10,241-10,251 (NWPA of 1982 amended by Title IV).

26. MONITORED RETRIEVABLE STORAGE REVIEW COMM'N, REPORT, NUCLEAR WASTE: IS THERE A NEED FOR FEDERAL INTERIM STORAGE? at xv-xvii (1989) [hereinafter MONITORED].

could commence only upon licensing a repository, and the MRS could store a maximum of 10,000 MTU until a repository was open. The report also recommended construction of a 2000 MTU Federal Emergency Storage Facility and a 5000 MTU User-Funded Interim Storage Facility.[27] Since the report concluded that "no single factor would favor an MRS over the no-MRS option," the DOE renewed efforts to site an MRS with remaining statutory links to the repository's construction and operation.[28]

David H. Leroy, former Idaho Attorney General and Lieutenant Governor, was confirmed as the first U.S. Nuclear Waste Negotiator and the Office commenced operation in August 1990. The Office was headquartered in Boise, Idaho, to promote an image of separatism from Washington politics and past DOE practices. The DOE's siting criteria and procedures changed dramatically, now preferring the approach of the NWN: to solicit a voluntary MRS host through negotiation with a State or Native American Nation.[29] The DOE took the position, from experience with "comparable facilities," that many places within the contiguous United States would be technically feasible.[30] Furthermore, a *negotiated* agreement could include terms that differ from the current statutory linkages to the repository.[31] Thus, the DOE abandoned eastern U.S. location and federal land preference criteria, deemphasized technical qualification concerns, relinquished sole responsibility for siting an MRS facility, and suggested an avenue for divorcing MRS from the schedule of a troubled repository siting.

Originally, the Office of the NWN was to be terminated in January 1993,[32] leaving less than two years to present a voluntary host to Congress. In May 1991, the NWN sent a letter of introduction to all state and territorial governors, tribal and business council chairpersons, governors of Pueblos, and presidents of Native American nations (both federally recognized and unrecognized). In June, feasibility assessment grants from the Nuclear Waste Fund got authorization through the DOE. In October, the NWN invited governors and tribal leaders to apply for grants for the purpose of independent MRS host studies. On October 17th, six days after applying, the Mescalero Apache Tribe of New Mexico took the distinction of receiving the first Phase I grant of $100,000.[33] Twenty Phase I applications followed (see table 1).

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27. MONITORED, *supra* note 25, at xvi.

28. *Id.*

29. OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT, U.S. DEP'T OF ENERGY, PRELIMINARY SITE REQUIREMENTS AND CONSIDERATIONS FOR A MONITORED RETRIEVABLE STORAGE FACILITY at iii (1991) (DOE/RW-0315P).

30. *Id.*

31. OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT, U.S. DEP'T OF ENERGY, ANNUAL REPORT TO CONGRESS 33-34 (1992) (DOE/RW-0335P).

32. 42 U.S.C. § 10,250 (1988).

33. OFFICE OF THE U.S. NUCLEAR WASTE NEGOTIATOR, 1992 ANNUAL REPORT TO CONGRESS 2 (1992) [hereinafter 1992 ANNUAL REPORT].

The express purpose of the grants was to provide financial resources to make a credible decision without having to rely on the federal government for information.[34]

The grant amounts were substantial by tribal standards. Phase II-A offered an additional $200,000 for continued education and feasibility studies. Nine Indian tribes applied, four tribes received grants, and two later withdrew their applications (see table 1). Phase II-B offered up to $2.8 million to continue feasibility studies and education outreach, enter formal negotiations, identify potential sites, and commence an environmental assessment. The Mescalero Apache of New Mexico and the Skull Valley Goshute of Utah both applied at this level and continue to negotiate with the NWN and DOE officials, along with the Fort McDermitt Paiute-Shoshone of Oregon and Nevada and the Tonkawa Tribe of Oklahoma, despite the canceling of Phase II-B funding by Congress.[35]

Potentially over $3 million per applicant could have been spent before the technical feasibility of a site was determined, or any formal agreement was made. A volunteer can drop from the process at anytime, for no reason, before Congress approves an agreement and the Nuclear Regulatory Commission (NRC) authorizes construction.[36]

Upon completion of feasibility studies, a tribe may then enter into formal negotiations with the DOE. Negotiations include details regarding the siting and operation of an MRS, as well as formulating compensation in the form of cash payments and benefits. Benefits outlined in a statutory schedule include $5 million annually until an MRS is opened and $10 million per year from opening to closure.[37] In addition, the NWN has reminded volunteers that the history of the NWPA, MRS siting negotiations in Tennessee, and the Waste Isolation Pilot Project (WIPP) in New Mexico demonstrate possible benefits involving many hundreds of millions of dollars.[38] Additional benefits to offset "potential impacts" include facilities and personnel for any public service or infrastructure addition or improvement.[39] However, if an MRS is eventually constructed under the terms of any negotiations, it seems unlikely that a tribe could then receive any compensation for unforseen damages or delays in transporting waste to a permanent site. Amended statutory language requires that any benefits agreement negotiated with an Indian host must provide a waiver of rights to sue in the event of an accident.[40]

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34. *Id.*

35. *Mescaleros, Northern States Power Pursue Private Spent Fuel Storage*, NUCLEAR ENERGY INFO (Nuclear Energy Inst., Washington, D.C.), Feb. 1994, at 1, 6.

36. 1992 ANNUAL REPORT, *supra* note 33, at 4.

37. 42 U.S.C. § 10,173a(a) (1988).

38. 1992 ANNUAL REPORT, *supra* note 33, at 4.

39. 42 U.S.C. § 10,174a(a) (1988).

40. 42 U.S.C. § 10,173a(b)(5) (1988) (referring to 42 U.S.C. §§ 10,136(c)(1)(B)(ii), (c)(2), 10,138(b)(2)(A)(ii), (b)(3) of the NWPA).

TABLE 1.
MRS GRANT STATUS

Phase I Grants - $100,000 each

Applicant	Date Submitted	Status
1. Mescalero Apache Tribe Mescalero, NM	Oct. 11, 1991	Awarded Oct. 17, 1991 Phase I completed
2. Grant County, ND	Nov. 18, 1991	Awarded Nov. 25, 1991 Commissioners defeated in 3/1/92 recall
3. Chickasaw Indian Nation Ada, OK	Dec. 26, 1991	Awarded Feb. 14, 1992 Withdrawn, 3/31/93, under tribal opposition
4. Fremont County, WY	Dec. 30, 1991	Awarded Jan. 23, 1992; Phase I completed Governor denied Phase II-A application, 8/21/92
5. Prairie Island Indian Comm. Welch, MN	Dec. 30, 1991	Awarded Mar. 18, 1992 Phase I completed
6. The Sac and Fox Nation Stoud, OK	Dec. 30, 1991	Awarded Mar. 4. 1992 Withdrawn, 3/4/93, under tribal opposition
7. Yakima Indian Nation Toppenish, WA	Dec. 30, 1991	Awarded Jan. 23, 1992 Grant expired, 7/23/92, grant money returned
8. Skull Valley Goshute Indians Grantsville, UT	Mar. 19, 1992	Awarded Apr. 17, 1992 Phase I completed
9. Alabama/Quassarte Tribe Eufaula, OK	Mar. 26, 1992	Withdrawn Aug. 13, 1993
10. Eastern Shawnee Tribe Ottawa County, OK	Mar. 26, 1992	Awarded Sep 9, 1992 Phase I completed
11. Lower Brule Sioux Tribe Lower Brule, SD	Mar. 30, 1992	Denied Feb., 1992
12. San Juan County, UT	Apr. 3, 1992	Awarded May 4, 1992 Governor denied Phase II-A application, 1/10/93
13. Ponca Tribe Kay Co., OK	Apr. 6, 1992	Awarded May 4, 1992 Phase I completed
14. Ft. McDermitt Paiute - Shashone Tribe Humbolt Co., NV	May 30, 1992	Awarded July 15, 1992 Phase I completed
15. Apache County, AZ	Mar. 18, 1992	Denied Oct., 1992 Gov.'s office objected in 4/3/92 telephone conv.
16. Tetlin Village Council, AK	Mar. 30, 1992	Denied June 25, 1992
17. Akhiok-Kaguyak Inc./ Akhiok Council, Anch., AK	Mar. 30, 1992	Denied June 26, 1992
18. Apache Devel. Authority Anadarko, OK	Mar. 31, 1992	Denied Oct. 28, 1992
19. Fifield Develop. Corp. Fifield, Wisconsin	Mar. 1992	Denied, not an eligible unit of government
20. Absentee Shawnee, OK	Mar. 31, 1992	Withdrawn by letter dated 6/9/92
21. Caddo Tribe Binger, OK	Apr. 17, 1992	Withdrawn by letter dated 7/16/92

Phase II-A Grants - $200,000 each

Applicant	Date Submitted	Status
1. Mescalero Apache Tribe Mescalero, NM	Mar. 13, 1992	Awarded April 21, 1992 Request for additional II-A funding denied
2. Skull Valley Goshute, UT	Oct. 28, 1992	Awarded Jan. 27, 1993
3. Ft. McDermitt Tribe, OR/NV	Feb. 22, 1993	Awarded June 1, 1993
4. Ponca Industrial Corp., TX Tonkawa Tribe of OK	Mar. 31, 1993	Awarded
5. Eastern Shawnee Tribe, OK	Mar. 24, 1993	Under review
6. Prairie Island Indians, MN	Mar. 30, 1993	Denied June 9, 1993
7. Ute Mtn. Ute Tribe, CO	Mar. 30, 1993	Withdrawn August 9, 1993
8. Miami Tribe, OK	Mar. 30, 1993	Withdrawn June 8, 1993
9. Northern Arapahoe EconomicDevelopment Comm., WY	Mar. 30, 1993	Under review

Phase II-B Grants - $2.8 million each

Applicant	Date Submitted	Status
1. Mescalero Apache Tribe, NM	Aug. 4. 1993	Funding cancelled by Congress
2. Ft. McDermitt Tribe, OR/NV	Aug. 9, 1993	Funding cancelled by Congress

Source: Office of the Nuclear Waste Negotiator, Boise, Idaho.

The date of termination for the Office of the NWN was approaching — January 1993 — and an MRS site had not yet been presented to Congress. However, on October 24, 1992, President George Bush signed into law the Energy Policy Act of 1992.[41] Six of the Act's thirty titles dealt with nuclear energy issues. Most significantly for MRS, the Act extended the Office of the NWN to January 1995,[42] keeping the voluntary host process alive.

II. Sovereign Volunteers

Nine of the twelve Phase I grants were awarded to Native American nations, all in the western half of the U.S. All nine of the Phase II-A and both Phase II-B applications were submitted by Native American nations. After two extensions, the deadline for applying for feasibility grants expired in March 1993, and no current extension exists; therefore, if an MRS is to be sited under the voluntary host initiative, it will be on an Indian reservation.

An introduction to the history of colonialism, racism, exploitation, and the near genocide of the Native American nations is too lengthy for this discussion.[43] However, the DOE's current MRS initiative builds on a long history of radioactive activities in Indian country and the loophole of tribal sovereignty. In addition, the current reasons for singling out this sovereign unit of the federal government as a host for waste that not one of fifty states is willing to accept is based on past and current federal Indian policy and the socioeconomic conditions of the reservation system.

A. Federally Defined Sovereignty

Unless authorized by federal law or affected, altered, or diminished by tribal law, Native American nations (or American Indian tribes) retain their sovereign powers, thus states lack civil or criminal jurisdiction over Indians within "Indian country."[44] About the MRS voluntary host program, Chuck Lempesis, chief of staff in the Office of the NWN, asserts: "The Indian tribes in the statute are treated as sovereign entities. Let me put this to rest: There simply is no veto [available to states]."[45]

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41. Energy Policy Act of 1992, Pub. L. No. 102-486, 106 Stat. 2776 (codified at 42 U.S.C. § 13,201 note (Supp. IV 1992)).

42. 42 U.S.C. § 10,250 note (Supp. IV 1993) (amending the NWPA by striking "5 years" and inserting "7 years").

43. For a history of Native American events leading up to the massacre at Wounded Knee in 1890, see DEE BROWN, BURY MY HEART AT WOUNDED KNEE (1970). For an account of the American Indian Movement of the 1960s and 1970s, see PETER MATTHIESSEN, IN THE SPIRIT OF CRAZY HORSE (1983). For a current account of Native American issues, see generally 1-2 CRITICAL ISSUES IN NATIVE NORTH AMERICA (Ward Churchill ed., International Work Group for Indigenous Affairs, Copenhagen, 1989-91).

44. *See* 18 U.S.C. § 1151 (1988) (defining "Indian country").

45. *Who Will Host an MRS? An Indian Tribe, Perhaps*, NUCLEAR ENERGY INFO, Sept. 1993, at 1, 2.

Native American nations have long been held by the United States Supreme Court[46] and international law experts[47] as separate sovereigns. Because the United States Constitution and state constitutions are designed to limit those respective governments, they do not apply to Native American nations or their governing bodies.[48]

The Fort McDermitt Paiute-Shoshone Tribe of Oregon and Nevada (the Fort McDermitt Tribe, third tribe to enter Phase II-A), the State of Oregon, and the United States provide an example of the interplay between state, tribal, and federal jurisdiction (or lack thereof) with regard to a nuclear waste MRS facility. The people that originally inhabited the lands of the current Fort McDermitt Indian Reservation were a band of the Northern Paiute Nation.[49] The governing body of that band, with the influence of other band leaders, exercised unlimited civil and criminal jurisdiction over the band's territory.[50] However, in 1934 Congress enacted the Indian Reorganization

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46. Johnson v. M'Intosh, 21 U.S. (8 Wheat.) 543 (1823) (holding that discovery by the European nations did not extinguish the natives' sovereignty but did necessarily diminish it); Cherokee Nation v. Georgia, 30 U.S. (5 Pet.) 1 (1831) (calling tribes "domestic dependent nations"); Worcester v. Georgia, 31 U.S. (6 Pet.) 515 (1832) (holding that tribes are "distinct community . . . in which the laws of Georgia can have no force . . . but with the assent of the Cherokees themselves, or in conformity with treaties, and with the acts of Congress"); *Ex parte* Crow Dog, 109 U.S. 556 (1883) (holding that treaty provision subjecting Indians to traditional dispute resolution for criminal acts prevented federal court jurisdiction where no other federal law directed otherwise); Talton v. Mayes, 163 U.S. 376 (1896) (holding that because the Cherokee Nation existed prior to the adoption of the U.S. Constitution, the Fifth Amendment's grand jury indictment requirement does not apply to the Cherokee Nation); Williams v. Lee, 358 U.S. 217 (1959) (holding that despite transitory nature of clauses of action resulting from contractual relations, tribal courts have exclusive jurisdiction when contract entered into on reservation); United States v. Wheeler, 435 U.S. 313 (1978) (holding that Double Jeopardy Clause of U.S. Constitution does not bar criminal prosecution in Tribal and Federal courts because the tribe is a distinct sovereign); Oliphant v. Suquamish Indian Tribe, 435 U.S. 191 (1978) (holding that tribal jurisdiction to try non-Indian criminal defendants necessarily was terminated by the dependent relationship created by Tribe's incorporation into the United States); Washington v. Confederated Tribes of Colville Indian Reservation, 447 U.S. 134 (1980) (holding that tribes retain civil jurisdiction to tax non-Indians on reservation lands); Montana v. United States, 450 U.S. 544 (holding that tribe lacked inherent civil authority to regulate fishing by non-Indians on non-Indian lands within reservation boundaries when no important tribal interests were directly affected), *reh'g denied*, 452 U.S. 911 (1981); National Farmers Ins. Co. v. Crow Tribe of Indians, 471 U.S. 845 (1985) (holding that tribal courts can exercise personal and subject matter jurisdiction over non-Indians for acts on reservation lands).

47. *See* Ernest Nys, *Introduction*, *in* FRANCISCI DE VICTORIA, DE INDIS ET DE IVRE BELLI REFLECTIONES (Ernest Nys ed., John P. Bate trans., 1917) (1557) (providing detailed treatment of Victoria and the events leading to the Spanish Emperor's request for advice on the American aborigines).

48. *Wheeler*, 435 U.S. at 323-24.

49. *See* Omer C. Stewart, *The Northern Paiute Bands*, *in* 2:3 ANTHROPOLOGICAL REC. 136 (1939). The traditional name of the Fort McDermitt people was either Atsakŭdökwa tuviwarai ("red butte dwellers") or Kwina riba nomo ("Quinn River people"). *Id.*

50. Atsakŭdökwa tuviwarai or Kwina riba nomo territory comprised about 27,000 square

Act (IRA).[51] The IRA was part of John Collier's[52] attempt to encourage economic development, self-determination, cultural plurality, and the revival of tribalism. The IRA was intended to provide a mechanism for the tribe, as a government unit, to interact with and adapt to modern society.[53]

As a result of the IRA, the members of the Atsaküdökwa or Kwina riba nomo Band of the Northern Paiute Nation voted to adopt a constitution and federal corporate charter,[54] thereby becoming federally recognized as the Fort McDermitt Paiute-Shoshone Tribe. The Tribe (a voluntary member of the Inter-Tribal Council of Nevada, Inc.) has land holdings in both Nevada and Oregon held in trust by the United States (tribal lands).[55]

The governing body of the Fort McDermitt Tribe is its tribal council.[56] The Council's authority is restricted by both tribal law[57] and federal law.[58] The Tribe exercises civil and criminal jurisdiction over its Nevada lands,[59]

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miles in what is now Nevada and Oregon. *Id.*

51. Act of June 18, 1934, ch. 576, 48 Stat. 984 (codified at 25 U.S.C. §§ 461-479 (1988)).

52. Collier, active in the reform movement since 1922, was appointed Commissioner of Indian Affairs by President Franklin D. Roosevelt. *See* FELIX S. COHEN'S HANDBOOK OF FEDERAL INDIAN LAW 146-47 (Rennard Strickland et al. eds., 1982) [hereinafter COHEN].

53. *See id.* at 147.

54. The authority for the enactment and federal approval and ratification of the Fort McDermitt Tribe's constitution (approved by the Secretary of the U.S. Department of the Interior on November 3, 1936) and federal corporate charter (approved by the Secretary of the Department of the Interior on July 2, 1936) is found in §§ 16 and 17, respectively, of the Indian Reorganization Act of 1934 (IRA), ch. 576, 48 Stat. 984. *See* COHEN, *supra* note 52, at 148-49.

55. *See* Ronald E. Johnny, *Can Indian Tribes Afford To Let the Bureau of Indian Affairs Continue to Negotiate Permits and Leases of Their Resources?*, 16 AM. INDIAN L. REV. 203, 204 (1991) [hereinafter Johnny, *Permits and Leases*]. Individual Indians, some not members of the Fort McDermitt Tribe, own fractionated interests in lands owned by Indians also held in trust by the United States (allotted Indian lands). Other Indians have life estates on tribal lands assigned to their tribal member spouses either because the spouse is deceased or by operation of a tribal court divorce decree or other order.

56. *See* FORT MCDERMITT CONST. art. III, § 1.

57. *Id.* art. VI (powers and duties of the Tribal Council), § 1 (enumerated powers and duties); *Id.* art. VI, § 2 (method by which future powers may be secured by the Tribal Council); *Id.* art. VI, § 3 (reserving powers to tribal members); *see also* Corporate Charter of the Fort McDermitt Paiute and Shoshone Tribe of the Fort McDermitt Indian Reservation § 5(b)(1) [hereinafter Corporate Charter] (prohibiting Tribal Council from selling or mortgaging Tribal land); *id.* § 5(b)(2) (restricting Tribal Council to leasing or permitting Tribal land for terms no longer than 5 years); *id.* § 5(b)(3) (prohibiting Tribal Council from taking any action which "in any way operates to destroy or injure the tribal grazing lands of other natural resources of the Fort McDermitt Indian Reservation").

58. For example, the Indian Civil Rights Act of 1968, 25 U.S.C. § 1302 (1988), requires that the Tribe provide most of the rights afforded United States Citizens by the U.S. Constitution and its amendments. The Major Crimes Act, 18 U.S.C. §§ 1153, 3242 (1988), allows the federal government to prosecute Indians in federal court for any of the enumerated crimes (murder, rape, incest, burglary, etc.).

59. In 1953, Congress enacted a law that allowed states, like Oregon and Nevada, to exercise criminal and limited civil jurisdiction in "Indian Country." *See* Act of Aug. 15, 1953, ch. 505,

as set forth in its Constitution[60] and Law & Order Code of 1988-89.[61] However, the State of Oregon, through Public Law 280, exercises criminal and limited civil jurisdiction[62] over the Tribe's Oregon lands because it has not yet retroceded[63] such jurisdiction to the Tribe and United States.

For many tribes, like the Fort McDermitt Paiute-Shoshone Tribe, the effect of the IRA, by adopting an IRA Constitution and Corporate Charter, was to terminate the Tribe's traditional form of government and dispute resolution. It also established a republican form of government and court system negligently conceived; provided self-determination for those families who could elect their family members into office; stifled economic development; and allowed the federal government more authority in intra- and inter-tribal affairs. The IRA also imposed tribal laws codified in the Tribe's constitution and federal corporate charter, that tribal and federal officials neither consider in their deliberations nor abide by.[64]

While constitutions, corporate charters, and law codes vary widely among tribes, the sovereign system of Indian nations as a whole, shaped through years of court cases and federal law, has effectively provided a loophole for studying, and possibly siting, an MRS facility in Indian country. Activities of the three county MRS grant volunteers were discontinued either by a state

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67 Stat. 588 (codified as amended at 18 U.S.C. § 1162 (1988), 25 U.S.C. §§ 1321-1326 (1988), 28 U.S.C. §§ 1360, 1360 note (1988)) (repealing and reenacting section 7 as amended 1968). The popular name of this act, Public Law 280, is applied generally to the statutory scheme for federal delegation to the states of jurisdiction over Indian lands that evolved from this Act and subsequent amendments, repeals, and reenactments. *See* COHEN, *supra* note 52, at 175 & n.254.

In May 1974, by popular vote of the Indian people, Nevada retroceded (relinquished) Public Law 280 jurisdiction over 13 of the 14 tribes Public Law 280 had authorized. In 1989, Nevada retroceded jurisdiction over the last Indian colony in the state.

60. FORT MCDERMITT CONST. art. I.

61. Law & Order Code of the Fort McDermitt Paiute-Shoshone Tribe of Oregon and Nevada ch. 3, § 1 (rescinded 1988) (criminal jurisdiction of tribal court); *id.* ch. 4, § 1 (1988) (civil jurisdiction of tribal court); *id.* ch. 22, § 7 (rescinded 1988) (tribal chairperson's authority).

62. Where applicable, Public Law 280 grants states "jurisdiction over offenses" and "civil causes of action" and provides that state "criminal laws" and "civil laws . . . that are of general application" shall have the same force and effect in Indian Country as they have elsewhere within the state. However, there are sufficient areas not delegated to the states by the statute, particularly regulatory and tax fields. *See* COHEN, *supra* note 52, at 363.

The Act includes specific exceptions of state taxing and certain other jurisdiction over trust and restricted Indian property and of jurisdiction over Indian hunting and fishing. *See* 18 U.S.C. §1162(b) (1988); 25 U.S.C. §§ 1321(b), 1322(b) (1988); 28 U.S.C. § 1360(b) (1988). A possible inference from these exceptions and from the general terms of the Act quoted above was that all other jurisdiction is delegated by the Act. But in Bryan v. Itasca County, 426 U.S. 373 (1976), the Supreme Court rejected this construction and invalidated a state property tax on unrestricted Indian property located in Public Law 280 Indian Country. *See* COHEN, *supra* note 52, at 361-70.

63. *See supra* note 59 and accompanying text.

64. *See* Ronald E. Johnny, The Problems of a Small, Rural, Indian Tribe 7 (1988) (unpublished manuscript, on file with the *American Indian Law Review*); *see also* Johnny, *Permits and Leases*, *supra* note 55, at 207.

governor's or county commission's denial (see table 1). Although governors and state and federal legislators in states with tribes in Phase II-A have opposed an MRS, at this time they have no legal power to stop the studies or, possibly, a siting. The NWPA, in fact, proclaims that the authority of the governor and legislature of each state shall not be applicable with respect to any site located on a reservation.[65]

This avenue of avoiding state, local, and, at times, federal jurisdiction, laws, and environmental quality control has historically been used to the advantage of the solid and hazardous waste industry. Sovereign land offers a minimal permit application process, scant public input or review, little or no government regulatory oversight, exemption from state and local laws, and distance from colonial America. The BIA, an agency with little expertise in environmental analysis, issues permits for waste facilities.[66] Only a handful of tribes have any environmental laws, and these are basically from their own initiative and financing as the EPA has provided limited funding and direction for environmental services on Indian lands.[67]

B. Historically Imposed Economic Vulnerability

The social and economic conditions of Indian country stem from the federally defined sovereignty of Indian nations. These conditions contribute to the willingness of some Indian tribes to study MRS, while not one of fifty states will do so. In 1976, North American Indian populations suffered from the "highest rate of infant mortality on the continent, the shortest life expectancy, the greatest incidence of malnutrition, the highest rate of death by exposure, the highest unemployment, the lowest per capita income, the highest rate of communicable or plague diseases, the lowest level of formal educational attainment."[68]

While some strides have been made, much of the Native people, particularly reservation and trust land populations, are young, poor, uneducated, and unemployed. Table 2 summarizes selected statistics from the 1990 U.S. Census for American Indians, Eskimo, and Aleut as a race, and the most recent data on the Indian Health Service population, comparing both to all races in the U.S. taken as a whole. In the census, some reservations had

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65. 42 U.S.C. § 10,155(d)(6)(C) (1988).

66. *Waste Companies Exploit and Threaten Sovereignty*, AKWESASNE NOTES, Midwinter 1992, at 11 (vol. 23, no. 3).

67. *See Indian Tribal Government Waste Management Act of 1991: Hearing (on S.1687) Before the Senate Select Comm. on Indian Affairs*, 102d Cong., 1st Sess. 1 (1991) (statement of Sen. McCain, vice chairman) [hereinafter *Hearing*].

68. Ward Churchill & Winona LaDuke, *Native America: The Political Economy of Radioactive Colonialism*, *in* 2 CRITICAL ISSUES IN NATIVE NORTH AMERICA 30, 31 (Ward Churchill ed., 1991) (published by the International Work Group for Indigenous Affairs, Copenhagen) (citing BUREAU OF THE CENSUS, U.S. DEP'T OF COMMERCE, A STATISTICAL PORTRAIT OF THE AMERICAN INDIAN (1976)).

TABLE 2.
SOCIOECONOMIC DATA

Category	American Indians, Eskimo, & Aleut	United States - All Races
U.S. Census (1990)		
Total Population	1,959,234	248,709,873
Reservation/Trust Land Population	437,358	807,817
Median Age	22.3	32.9
High School or Higher (25 age +)	65.5%	75.2%
Bachelor's or Higher (25 age +)	9.3%	20.3%
Males (16 age +)		
Unemployed - Civilian	15.4%	6.4%
Not in Labor Force	30.6%	25.6%
Females (16 age +)		
Unemployed - Civilian	13.1%	6.2%
Not in Labor Force	44.9%	43.2%
Median Household Income - 1989$	$20,025	$30,056
Below Poverty Level - All Ages	30.9%	13.1%
- under 5 years old	44.4%	20.1%
Indian Health Service Population (1986-1988)		
Birth Rate (per 1000)	28	15.7
Infant Mortality Rate (per 1000)	9.7	10.1
Age-adjusted Mortality Rates, Percent Higher Than All Races:		
Alcoholism	438%	
Tuberculosis	400%	
Diabetes Mellitus	155%	
Accidents	131%	
Homicide	57%	
Pneumonia & Influenza	32%	
Suicide	27%	

Sources: U.S. DEP'T OF COMMERCE, ECONOMICS AND STATISTICS ADMIN., BUREAU OF THE CENSUS, CENSUS 1990; U.S. DEP'T OF HEALTH AND HUMAN SERV., PUB. HEALTH SERV., INDIAN HEALTH SERV., TRENDS IN INDIAN HEALTH 1991.

per capita incomes as low as $1325 and civilian unemployment rates and poverty levels as high as 100%. Of the reservations that also have trust lands, accounting for over one-half of Native American populations on reservations and trust lands, average per capita income was just under $5000, compared to $14,420 for all U.S. citizens.[69]

69. BUREAU OF THE CENSUS, U.S. DEP'T OF COMMERCE, CENSUS 1990: 1990 CENSUS OF POPULATION AND HOUSING: SUMMARY SOCIAL, ECONOMIC, AND HOUSING CHARACTERISTICS tbl. 5, at 228 (1990 CPH-5-1). The $5000 figure was calcuated from data taken from this publication by way of CD-ROM.

The BIA supports any economic development opportunities and to some tribal councils an MRS facility may be viewed as nothing more than fast cash and jobs. However, the history of radioactivity in Indian country suggests that the hazards and permanence of nuclear waste will likely remain long after the benefits are gone.

C. Native America and the Nuclear Era[70]

Over one-half of all U.S. uranium deposits lie under reservation land. In the past, the Secretary of the Interior was authorized to lease tribal mineral resources for national defense purposes.[71] In return for mining rights, the large energy consortiums have historically paid royalty fees and employed Indians in substandard working conditions.[72] By 1980, the sovereign Navajo nation had forty-two uranium mines and seven mills located on or adjacent to reservation or trust land.[73] In the Four Corners area (the corners of Arizona, Colorado, New Mexico, and Utah) there were approximately 2500 mines, with as many as 3000 Navajo men employed during the uranium boom of the late 1940s through the 1970s.[74] As of 1979, some 5163 uranium claims existed in the Black Hills in South Dakota and Wyoming, sacred lands to the Lakotas and bordering current reservation populations; 214,747 acres of private land in the area are also under mining leases.[75]

The environmental consequences of uranium mining, atomic bomb testing and production, and radioactive waste disposal on or near reservation lands have been disastrous. Estimates conclude that over twenty-two million tons of mine tailings, or waste byproducts, have been left at twenty-four locations in nine western states since the 1950s, and that 220 acres of tailings have contaminated the Four Corners region alone.[76]

Tailings, retaining 85% of the original ore radioactivity, often found their way either directly or indirectly into major Indian water resources. The Kerr-McGee Churchrock mine on the Navajo reservation discharged some 80,000 gallons of radioactive water per day from its primary shaft during the early 1980s, directly contaminating local and downstream potable water supplies. In June 1980, eighteen years after 200 tons of radioactive mill tailings washed into the Cheyenne River, an indirect source of potable water for the Pine

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70. For a more detailed discussion of this section, see Jon D. Erickson & Duane Chapman, *Sovereignty for Sale: Nuclear Waste in Indian Country*, AKWE:KON J., Fall 1993, at 3.

71. *See* JOHN REDHOUSE, AN OVERVIEW OF URANIUM AND NUCLEAR DEVELOPMENT ON INDIAN LANDS IN THE SOUTHWEST 1 (Redhouse/Wright Productions, Albuquerque, N.M., 1992).

72. *See* Churchill & LaDuke, *supra* note 68, at 32.

73. *Id.*

74. Susan E. Dawson, *Navajo Uranium Workers and the Effects of Occupational Illnesses: A Case Study*, 51 HUM. ORGANIZATION 389, 390 (1992).

75. *See* Churchill & LaDuke, *supra* note 68, at 36.

76. *See* Dawson, *supra* note 74, at 391 (citing Christopher McLeod, *Uranium Mines and Mills Have Caused Birth Defects Among Navajo Indians*, 12 ENERGY RESOURCES 49 (1985)).

Ridge Reservation in South Dakota, the Indian Health Service found gross alpha levels in reservation well water to be as high as fourteen times the national standard.[77] The largest spill of radioactivity in U.S. nuclear industry history occurred on July 16, 1979, when the United Nuclear uranium mill tailings dam broke, releasing more than ninety-six million gallons of tailings liquids into the Rio Puerco, a major water source for Navajos and their livestock. The acidic tailings (pH of 1) and 1100 tons of tailings solids contaminated the river some forty miles beyond the dam, staining the streambed with yellow and green chemical salts.[78] The nuclear impact on Indian populations also includes effects from weapons testing and storage,[79] and the speculation of military nuclear waste dumping on federally seized Indian lands.[80]

For the Navajo and other affected tribes the health effects have been more than coincidental. Despite epidemiological evidence linking uranium mining with occupational illnesses[81] and correspondingly high rates of death, cancer, and birth defects, decades of lawsuits have proven unsuccessful in gaining compensation for Navajo miners. Inability to prove the causal relationship between uranium exposure and disease, which often occurs years after the initial exposure, has been the major holdup.[82]

Congress has recently issued a formal apology and promised compensation to the families of killed and injured uranium miners, and victims of downwind

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77. *See* Churchill & LaDuke, *supra* note 68, at 37. Alpha levels refer to the emission of alpha particles as a nucleus decays. An alpha particle consists of two protons and two neutrons which have the ability to ionize neutral atoms and thus serve as a basis for detection of radiation levels, with the commonly used Geiger counter. *See* JERRY D. WILSON, TECHNICAL COLLEGE PHYSICS ch. 31 (3d ed. 1992).

78. W. Paul Robinson, *Uranium Production and Its Effects on Navajo Communities Along the Rio Puerco in Western New Mexico, in* THE PROCEEDINGS OF THE MICHIGAN CONFERENCE ON RACE AND THE INCIDENCE OF ENVIRONMENTAL HAZARDS (Bunyan Bryant & Paul Mohai eds., Univ. of Mich. School of Natural Resources, Ann Arbor, Mich. 1990). Mill tailings result from the process of extracting uranium from ore at a uranium mill. The process involves either an acid or an alkaline leach, thus resulting in highly acidic tailings and chemical staining. Mill tailings from both processes consist of slurries of sand and clay-like particles called slimes. Tailings are pumped into tailings impoundment ponds for disposal. *See* OAK RIDGE, *supra* note 2, at 147 (Chapter 5, Uranium Mill Tailings from Commercial Operations); *id.* at 155 (Table 5.4, Typical Characteristics of Uranium Mill Tailings).

79. Bernard Nietschman & William LaBon, *Nuclearization of the Western Shoshone Nation, in* 1 CRITICAL ISSUES IN NATIVE NORTH AMERICA (Ward Churchill ed., International Work Group for Indigenous Affairs, Copenhagen, 1989).

80. MATTHIESSEN, *supra* note 43, at 428-29.

81. *See* Dawson, *supra* note 74, at 390-91 (citing Cooley Butler et al., *Histopathologic Findings of Lung Cancer in Navajo Men: Relationship to U Mining*, 51 HEALTH PHYSICS 365 (1986); Leon S. Gottlief & L.A. Husen, *Lung Cancer Among Navajo Uranium Miners*, 81 CHEST 449 (1982); NAT'L INST. OF ENVTL. HEALTH SCIENCES AND NIOSH, RADON DAUGHTER EXPOSURE AND RESPIRATORY CANCER QUANTITATIVE AND TEMPORAL ASPECTS (National Technical Information Services, Springfield, Va., 1971); McLeod, *supra* note 76.

82. *See* Dawson, *supra* note 74, at 391.

exposure. The 1990 Radiation Exposure Compensation Act[83] appropriated $100 million for partial restitution to individuals who developed lung cancer or other respiratory diseases as a result of open air nuclear weapons testing in Nevada or uranium mining. Miners or, if deceased, their surviving family member(s) are eligible for $100,000 payments. Thus far 1112 miners or their families have filed; 328 claims have been approved, 121 were denied, and 663 are pending. But according to the Office of Navajo Uranium Workers, only fifty-four of the approved claims were for Navajos, and Navajos are again facing bureaucratic and legal difficulties in filing claims.[84]

III. Council Solidarity and External Influence: The Case of the Mescalero Apache

Despite the apparent economic vulnerability of many Native American nations, the majority of tribes have not looked favorably upon accepting waste. The Western Governors' Association reported that "half of surveyed tribes had been approached to host (solid waste) facilities and all but four rejected these offers almost immediately."[85] The NWN solicited responses from 573 tribal leaders and received only nineteen applications. Six of these applicants withdrew under tribal opposition — two before the grant was awarded, two after being awarded the grant (although they later returned the $100,000), and two during Phase II. In New Mexico, out of twenty-two tribes, only the Mescalero Apache applied, taking the distinction of being the first Phase I, II-A, and II-B applicant. Investigation into internal and external influences on the Mescalero's decisions can lend insight into the voluntary host process.

The decision to study MRS, pursue a negotiated agreement, and allocate grant and benefits package money is ultimately at the discretion of the Mescalero tribal council and, in particular, subject to the long-standing reign (over thirty-five years) and influence of tribal council president, Wendell Chino. Whether Chino's unmarred election record is legitimate has been subject to tribal debate. Elections are coordinated by an election committee appointed by Chino, and votes have always been counted in secrecy, despite tribal opposition.[86] His power as president is also deeply rooted in the tribe's BIA approved constitution.[87] The president serves in the legislative and

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83. Radiation Exposure Compensation Act of 1990, Pub. L. No. 101-426, 104 Stat. 920.

84. Keith Schneider, *A Valley of Death for the Navajo Uranium Miners*, N.Y. TIMES, May 3, 1993, at A1, B10.

85. *Hearing*, *supra* note 67, at 2 (statement of Sen. McCain, vice chairman).

86. Telephone Interview with Francine Magoosh, Mescalero Tribe member (June 1993).

87. Based on the OFFICE OF INDIAN AFFAIRS, U.S. DEP'T OF THE INTERIOR, REVISED CONSTITUTION OF THE APACHE TRIBE OF THE MESCALERO INDIAN RESERVATION (approved Mar. 25, 1936, rev. Jan. 12, 1965) (the year Chino officially came to power) (as amended May 31, 1985) [hereinafter MESCALERO CONST.].

executive departments,[88] appoints judiciary members,[89] and heads the court of appeals.[90] In particular, the president establishes committees, acts as contracting officer, holds veto power, grants pardons, and directs the tribal police.[91] A referendum on a council decision is possible with a petition signed by 30% of the voters, but it can't affect contracts or agreements with third parties who are not members of the Tribe, such as the DOE.[92] A recall of a member of the tribal council or an amendment to the constitution are possible but at Chino's discretion, the result of his immense constitutional duties and powers. The few tribal members who initially publicly spoke out against the Tribe's MRS studies have all since been fired from their reservation jobs, some of which were federal positions with the BIA.[93]

In a letter from Wendell Chino to David Leroy, the former NWN, the Tribe's president describes their motives to study MRS as

> first, because we were asked 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.[94]

At a December 1991 meeting of the National Congress of American Indians, David Leroy referred to the "timeless wisdom" and the "[N]ative American culture and perspective" that made Indians the best candidate for spent fuel storage.[95] The majority of the Mescalero tribal membership disagree. Francine Magoosh and other tribal members estimate that as much as 95% of the tribe opposes the MRS studies. She expresses shame over her tribe's actions, not patriotic duty or reverence for nature.[96]

Donalyn Torres, at a Chaves County Commission meeting, outlined the tribe's apprehensions about speaking out as being based on fear of job sanctions or attacks on relatives.[97] In the August 1993 issue of the Mescalero Council's *MRS Newsletter*, the Council reported that any agreement entered

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88. *Id.* art. XXII, § 1.
89. *Id.* art. XXVI, § 1.
90. *Id.* art. XXVI, § 2.
91. *Id.* art. XXII, § 1.
92. *Id.* art. XIV.
93. *See* Magoosh, *supra* note 86.
94. Letter from Wendell Chino, Tribal Council President, Mescalero Apache Tribe, to David H. Leroy, U.S. Nuclear Waste Negotiator (Oct. 11, 1991) (on file with the *American Indian Law Review*).
95. David 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, Cal. at 9 (Dec. 4, 1991) (transcript on file with the *American Indian Law Review*).
96. *See* Magoosh, *supra* note 86.
97. *Skeen Against Mescaleros Study in N-Waste Site*, ALBUQUERQUE J., Jan. 25, 1992, at D3.

into between the tribe and the DOE will be "submitted to the membership of the Mescalero Apache Tribe for ratification."[98] It is uncertain if such an election would involve secret ballots and open counting.

The nuclear power industry has been particularly influential in tipping Chino's decision in their favor. The Mescalero council's main consultant, Pacific Nuclear of Federal Way, Washington, designs and constructs storage containers for spent fuel. It is unclear whether consultants initiated the current Native American involvement, and how the Phase I and II funds are divided between consultants, tribal leadership, and the education of tribe members.[99]

The U.S. Council for Energy Awareness and the Edison Electric Institute, both pro-nuclear Washington lobbyists, have also assisted the Mescalero council with informational and financial resources. They financed two trips to nuclear plants and spent fuel dry storage facilities at the Oconee plant in South Carolina, the Surry plant in Virginia, and the spent fuel railroad transportation facility of the H.P. Robertson plant in South Carolina. The first trip was for the tribal council and the second for officials from surrounding communities and local press.[100] No one traveled to a spent fuel dry consolidation facility because a commercial facility does not exist in the U.S.

Besides negotiating a benefits package, the federal government has a particular influence that could dramatically effect the ultimate outcome: the use of non-Indian adjacent federal land. Of the three sites originally suggested as possible MRS candidates in Mescalero territory, two are on non-Indian land and one straddles the reservation border.[101] One site is adjacent to the federal property of White Sands Missile Range. As part of a negotiated agreement, land could be given to the Tribe to be held in trust for the purpose of an MRS facility. In addition, in the event that a voluntary host is not found, the Mescalero's tenure with the MRS initiative could in effect ease a forced siting on adjacent federal land.

The DOE has also funded Indian organizations and consultants to educate the Mescalero and other tribes about radioactive waste. As a result of an agreement dating back to 1984, the National Congress of American Indians

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98. *Mescaleros to Take Next Step*, MRS NEWSLETTER: A PERIODIC UPDATE ON THE MESCALERO APACHE FEASIBILITY STUDY (Mescalero Apache Tribe, Mescalero, N.M.), Aug. 1993, at 1.

99. For example, the Ponca Industrial Corporation (PIC) applied on behalf of the Tonkawa Tribe of Oklahoma after losing their Ponca Tribe client. Shelly Davis, *Ponca Want Accounting for MRS $$$*, NEWS FROM INDIAN COUNTRY, May 1993, at 7; *Tribe Applies for Grant for Nuclear Waste Study*, TULSA WORLD, Apr. 4, 1993, at A13. The Tonkawa was the last tribe to receive a phase II-A grant (see table 1 of this article) and one of four tribes still negotiating with the NWN and the DOE.

100. Telephone Interview with Felix Killar, Director of Nuclear Waste Program, U.S. Council on Energy Awareness (March 1993).

101. Tony Davis, *Indians' N-dump Proposal Scares Ruidoso Tourist-Wooers*, ALBUQUERQUE J., Jan. 2, 1992, at A1, A8 [hereinafter Davis, *Proposal*].

(NCAI) has received hundreds of thousands of dollars in DOE grants to "assist tribes in the program study of nuclear waste sites."[102] In 1989, the DOE was the NCAI's largest contributor, with grants totaling $355,000. The Council of Energy Resource Tribes (CERT), funded by the Federal Administration for Native Americans, has held conferences with government and industry promoters of nuclear waste storage in an effort to "pinpoint tribal traditions that would help build 'consent' on nuclear waste storage."[103]

The history of *temporary* radioactivity supports the likely case of permanent radioactivity. Nuclear reactors were originally planned to be decommissioned at the end of their useful lives. Decommissioning plans included disassembly, decontamination, and restoration of the reactor site. Of the sixteen commercial nuclear power plants permanently shut down to date, only one has been decontaminated (see table 3). The others store reactors on site, and will remain radioactive for hundreds of thousands of years if not decommissioned. As stated previously, a negotiated agreement could effectively break the statutory linkages of an MRS approval to a repository licensing — allowing the possibility of permanent MRS storage.

In addition, despite claims, the number of jobs that would be available to tribe members remains unclear. Construction and control of an MRS would fall strictly under DOE jurisdiction. Past DOE estimates of the employment skill mix of an MRS facility concluded "an approximately even mix of professional white collar and skilled blue collar and craft employees" would be necessary.[104] A survey of MRS jobs likely available to members of the Fort McDermitt Tribe, which contradicts statements of tribal officials[105] and tribal consultants,[106] finds that the number and quality of jobs available tribal members is no better than currently exists in the town of McDermitt.[107]

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102. Juan A. Avila Hernandez, *How the Feds Push Nuclear Waste Onto Indian Lands*, S.F. WEEKLY, Sept. 23, 1992, at 1, 13.

103. *Id.*

104. U.S. DEP'T OF ENERGY, RESPONSE TO CLINCH RIVER MRS TASK FORCE MEMORANDUM NO. 11, at 2 (1985) (on file with the *American Indian Law Review*).

105. *See* Spencer Heinz, *Nuclear Nation*, SUNDAY OREGONIAN, June 27, 1993, at A1 (implying that 1500 construction and 750 permanent reservation jobs could be created for reservation and local residents); *see also* Susan Brockus, *Board Hears Details of Nuclear Waste Storage Plan*, HUMBOLDT SUN (Winnemucca, Nev.), June 18, 1993, at 1 (implying that 450 reservation jobs could be created for reservation and local residents).

106. *See* Susan Guyette, Santa Fe Planning Group, Report to the Office of the Nuclear Waste Negotiator and the MRS Policy Committee, Ft. McDermitt Reservation 1 (Apr. 28, 1993) (on file with the *American Indian Law Review*) (advising that "the potential of MRS jobs for tribal members . . . is . . . 210 jobs with short-term training, and additional if longer term training is undertaken").

107. *See* Ronald E. Johnny, Can Indian Tribes Dance with the Federal Government: Siting a Temporary Spent Nuclear Fuel MRS Facility in Indian Country: Can Indian Tribes Dance with a 900-Pound Gorilla (the Federal Government)? at 10-17, 22-24, 26-39 (Feb. 28, 1994) (unpublished manuscript, on file with the *American Indian Law Review*); *see also* Ronald E. Johnny, *Showing Respect for Tribal Law: Siting a Nuclear Waste MRS Facility*, AKWE:KON J.,

IV. Nuclear Economics and National Safety

The economic and safety justifications of the MRS option are of concern not only to a directly affected Indian reservation, such as the Mescalero or Fort McDermitt Tribe, but to the United States as a whole.

The most significant factor in the economics of storage is the declining nature of the nuclear power industry. No new orders for reactors have been placed in nearly fifteen years, and of the 139 orders placed between 1971 and 1978, 107 were canceled.[108] As more plants age and come off-line, a declining nuclear power capacity must be reconciled with a resulting decline in expected waste accumulation. Under the DOE's No New Orders Case, graphed in figure 1, the cumulative spent fuel inventory begins to flatten by the year 2030. The amount of future waste will affect the economics of central storage compared to at-reactor storage. The possibility of premature reactor shutdowns also affects future waste totals. Fifteen of the sixteen permanent reactor shutdowns occurred without attaining the expected thirty years of full service (see table 3), significantly reducing cumulative waste totals. The DOE No New Orders Case assumes all remaining reactors will achieve at least forty years of operation, and 30% will have extended lifetimes of sixty years. These assumptions may be optimistic given the high incidence of premature shutdowns. Furthermore, if projected reactor efficiency improvements occur, less waste will result for given levels of electricity generation, or vice versa.

Previous research by Duane Chapman[109] compared the economics of spent fuel storage for a No New Orders Case with an Expansion Case.[110] Under the No New Orders Case, the end of the nuclear era occurs with the shutdown of the last reactor (assuming thirty-year lifetimes, rather than forty-year lifetimes), with a national cumulative waste total of 87,449 MTU.[111] The Expansion Case reaches 126,642 MTU of waste by 2020, with both nuclear plant operations and waste production accelerating beyond the thirty-year time frame.[112] Using DOE and industry cost estimates, centralized and at-reactor *dry* storage are compared (see figure 2). Given the no-new-orders status quo,

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Spring 1994, at 16.

108. *Historical Profile*, *supra* note 1, at 1-3.

109. Duane Chapman, *The Eternity Problem: Nuclear Power Waste Storage*, 8 CONTEMP. POL'Y ISSUES 80 (1990).

110. *Id.* at 82-83 (citing 2 OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT, U.S. DEP'T OF ENERGY, ANALYSIS OF THE TOTAL SYSTEM LIFE CYCLE COST FOR THE CIVILIAN RADIOACTIVE WASTE MANAGEMENT PROGRAM 16 (1987)).

111. *Id.* at 81-82.

112. *Id.*

TABLE 3.
STATUS OF SHUTDOWN REACTORS WITH COMMERCIAL ENERGY PRODUCTION

		Generation History				Decomissioning
Reactor Name	Capacity	First Year	Last Year	Duration Years	Apparent Shutdown Mode	Status
Shippingport	72 MWe	1957	1982	25	Depreciation, High Production Cost	Decontamination
Dresden 1	220 MWe	1960	1978	18	Maintenance Economics	Storage
Yankee Rowe	167 MWe	1961	1991	30	Maintenance Economics	Storage
Indian Point 1	275 MWe	1962	1974	12	Safety Economics; No ECCS	Storage
Humboldt Bay	65 MWe	1963	1976	13	Safety Economics; Earthquake Protection	Storage
Hallam	76 MWe	1963	1964	1	Maintenance Economics	Entombment
Pathfinder	58 MWe	1966	1967	1	Maintenance Economics	Storage
Fermi 1	61 MWe	1966	1971	5	Severe Accident	Storage
Hanford-N	860 MWe	1966	1988	22	Reduced Need for Nuclear Weapons	Storage
San Onofre-1	436 MWe	1968	1992	24	Unwilling to Invest in Upgrade	Storage
LaCrosse	51 MWe	1969	1987	18	Safety Economics	Storage
Rancho Seco	913 MWe	1975	1989	14	Maintenance Economics; Closed by Utility Election	Storage
Trojan	1095 MWe	1976	1992	16	Maintenance and Regulatory Economics	Storage
Three Mile Island	961 MWe	1978	1979	1	Severe Accident	Storage
Fort St. Vrain	330 MWe	1979	1989	10	Maintenance Economics	Storage
Shoreham	809 MWe	1986	1988	2	No Evacuation Plan	Storage

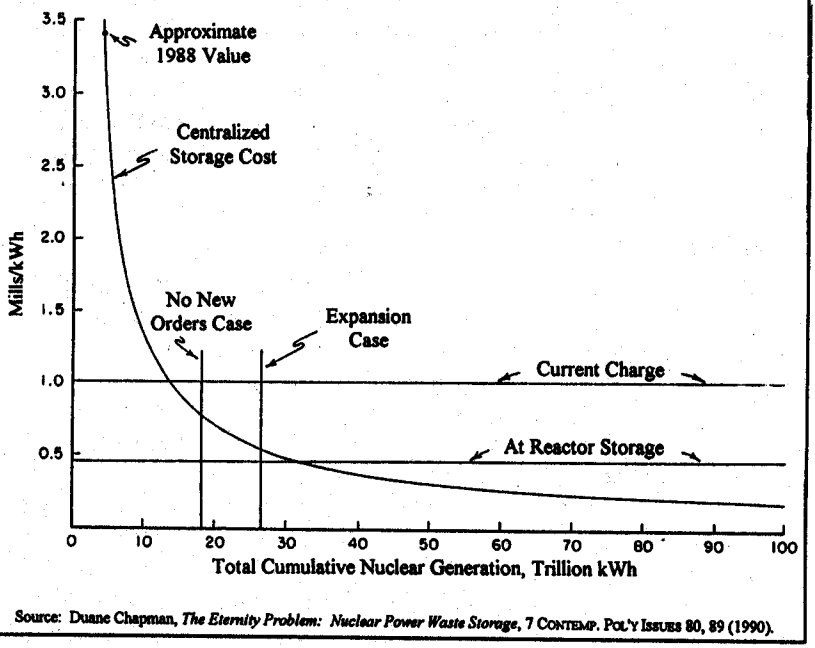
Note: ECCS=emergency core cooling system
MWe=megawatt-electric capacity

Considers only reactors with at least 50 MWe capacity for civilian nuclear power. The Shoreham unit achieved criticality and produced power, but closed before it could begin commercial operation. The Hanford Unit was used for defense material production, but the by-product steam was used to produce commercial electricity. Formal shutdown status may occur several years after last generation. Capacity shown is installed when unit first generates electricity.

Sources: Duane Chapman, *The Eternity Problem: Nuclear Power Waste Storage*, 7 CONTEMP. POL'Y ISSUES 80, 90 (1990); *World List of Nuclear Power Plants*, NUCLEAR NEWS, Mar. 1993; NIAGARA MOHAWK POWER CORP., DECOMMISSIONING COST ESTIMATING AND TRAINING (Feb. 1993); U.S. DEP'T OF ENERGY, ENERGY INFO. ADMIN., MONTHLY ENERGY REVIEW, (Jan. 1993); personal communications.

at-reactor storage is significantly less costly than centralized storage. Even with the expansion case, the cost of the two options are about the same.[113]

FIGURE 2.
COMPARISON: CENTRALIZED AND AT REACTOR STORAGE



Source: Duane Chapman, *The Eternity Problem: Nuclear Power Waste Storage*, 7 CONTEMP. POL'Y ISSUES 80, 89 (1990).

Although this analysis was tailored to a repository, by default an *integrated* MRS is also uneconomical. In addition, if the millions of dollars already spent on siting efforts are included in the cost of centralized storage, at-reactor storage becomes even more favorable.

A second factor works in the favor of at-reactor storage. To date, only one of the sixteen shut-down commercial reactors has been decontaminated (see table 3). Barring dismantlement or decontamination of reactors, continued on-site storage renders such areas radioactive for hundreds of thousands of years. Storing radioactive spent fuel on already radioactive sites seems more logical than contaminating another site and increasing the probability of transportation-related exposure. Furthermore, if a permanent repository does open, waste from at-reactor sites would be transported only once, rather than twice.

113. *Id.* at 88, 91-92.

A major concern voiced by utilities is the expense of maintaining and adding additional wet storage facilities. Cost estimates for maintaining current spent fuel storage pools range from $2 million to $8 million per year per facility.[114] However, these estimates fail to account for the projected use of current dry storage technologies in place of wet storage. Dry Cask Storage Technology (DCST) is emerging as the preferred method of on-site spent fuel storage for utilities that exhaust existing storage capacity.[115] DCST is currently used commercially at Virginia Power Company (Surry), Carolina Power and Light (Robinson), Duke Power (Oconee), and Colorado Public Service Co. (Ft. St. Vrain). Compared to pool storage, DCST is considered equally safe, more economical, simpler and easier to maintain, and more flexible. Over 70% of all nuclear utilities are studying or planning to use DCST.[116]

A full scale discussion of safety issues is beyond the scope of this article. However, original plans for an integrated MRS facility included the repackaging and consolidation of spent fuel in a dry environment.[117] The only U.S. experience with anything beyond storage in a dry environment has been in research and development (i.e., the Dry Rod Consolidation Technology Project at the Idaho National Engineering Laboratory (INEL)).[118] It is unclear if an MRS facility would be responsible for consolidation and repackaging before final disposal, but such processes are dissimilar from the dry storage facilities that the Mescaleros and other tribes toured. They pose significantly higher risks by increasing handling and possibility of exposure to radioactive materials.

In addition, although no major transportation accidents with spent fuel have occurred to date, the siting of a temporary storage facility in a western state will increase transportation significantly and make a second trip necessary

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114. Letter from Steven P. Kraft, Director of Nuclear Waste and Transportation, Edison Electric Institute, to J. Dexter Perch, Assistant Comptroller General, General Accounting Office 2 (Dec. 23, 1991) (on file with the *American Indian Law Review*).

115. David L. Feldman, On-Site Interim Storage of Spent Nuclear Fuel: Emerging Public Issues, in High Level Radioactive Waste Management, Proceedings of the Third International Conference, Las Vegas, Nev. at 143, 143 (Apr. 12-16, 1992). The majority of spent fuel is currently stored on-site, at nuclear power plants, in large pools of water. Many utilities are exhausting their pool space and will either have to build additional pools, continue to consolidate spent fuel rods in existing pools, and/or use dry storage technology. Once spent fuel is sufficiently cooled in water (i.e., about 5 years), dry storage entails placing bundles of spent fuel rods into stainless steel canisters and then into concrete vaults. The entire process is controlled remotely to minimize occupational exposure. *See id.* at 144-45; *see also* INTERNATIONAL ATOMIC ENERGY AGENCY, TECHNICAL REPORTS SERIES NO. 345, CONCEPTS FOR THE CONDITIONING OF SPENT NUCLEAR FUEL FOR FINAL WASTE DISPOSAL 47 (1992) [hereinafter IAEA] (giving a detailed analysis of the procedure).

116. Feldman, *supra* note 115, at 144-45.

117. *See* IAEA, *supra* note 115, at 47, 49.

118. *Id.* at 49; Feldman, *supra* note 115, at 147.

before long-term disposal. Only four of the country's operating commercial nuclear reactor sites are located west of Dallas, Texas.[119]

V. The New Administration Versus State and Indian Opposition

To complicate the apparent rush for an MRS site, a new federal administration entered the picture in 1993 and appointed Hazel O'Leary as the new Secretary of Energy. In testimony before Congress, she has asserted the need for MRS or a permanent repository, and has argued for taking the Nuclear Waste Fund off-budget to shield it from being used to help reduce the federal budget deficit.[120] As Energy Secretary, O'Leary has expressed the need to quickly reach an understanding with a sovereign entity over siting an MRS facility.[121]

However, with the cancellation of Phase II-B funds (up to $2.8 million per tribe) by Congress,[122] O'Leary and the Clinton Administration's nuclear waste negotiator, Richard Stallings, a former congressman from Idaho, have lost the final, largest carrot for soliciting an Indian volunteer. Stallings has now initiated a new strategy in redefining an MRS as a high-tech science park and adding possible amenities such as research laboratories to help entice both a tribe and the state where the sovereign is located.[123] Negotiations continue between the NWN and four tribes.[124]

Miller Hudson, chief consultant to the Mescalero, asserts that the Tribe has every intention of reaching an agreement with the new NWN over siting an MRS.[125] However, the Tribe, as well as nuclear utilities, have grown impatient with the DOE and the new NWN. Most recently, the Mescalero signed an agreement with the Northern States Power Company of Minnesota (NSP) as a first step toward establishing a private MRS facility.[126] NSP has agreed to take the lead role amongst the nation's utilities in developing a private MRS facility with the Mescalero.[127]

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119. *World List of Nuclear Power Plants*, NUCLEAR NEWS, Mar. 1993, at 41, 41-60 (calculating site locations from results from survey sent to each utility or agency operating nuclear power facilities as of Dec. 31, 1992).

120. *Clinton Picks NSP's Hazel O'Leary to Head DOE*, NUCLEAR NEWS, Feb. 1993, at 27.

121. Ed Lane, *O'Leary's Nuclear Waste Plans Becoming Clearer*, ENERGY DAILY, Mar. 5, 1993, at 3.

122. *Mescaleros*, *supra* note 35, at 1.

123. *See* Spencer Heinz, *Nuclear Waste May Go to Oregon*, OREGONIAN, Feb. 28, 1994, at B1, B4.

124. *Id.* The Fort McDermitt Tribe of Oregon and Nevada, the Mescalero Apache of New Mexico, the Skull Valley Goshute of Utah, and the Tonkawa Tribe of Oklahoma. *See id.*

125. Telephone Interview with Miller Hudson, Chief MRS Consultant to the Mescalero Apache Tribe (June 1993).

126. *NSP Signs Nuclear Storage Deal With N.M. Tribe*, ST. PAUL PIONEER PRESS, Feb. 4, 1994, at 1A.

127. *U.S. Utility Executives Discuss Proposal for Private Spent Nuclear Fuel Storage Facility*, PROJECT NEWSLETTER: A PERIODIC UPDATE ON THE MESCALERO APACHE SPENT FUEL

It should be noted that Secretary O'Leary was most recently the executive vice president for corporate affairs at the NSP, and has also served as president of Northern States Power Gas Company. During her tenure with the NSP she was their chief lobbyist and was involved with the utility's effort to set up dry-cask storage of spent fuel for the Prairie Island nuclear plant next to a Sioux reservation in Minnesota.[128]

As happened in Tennessee in the mid-1980s, opposition to spent fuel storage has grown in New Mexico. Gov. Bruce King opposed the MRS studies from the outset, contending that New Mexico has done more than its share to address the nation's nuclear waste problem through its Waste Isolation Pilot Project (WIPP).[129] Under the 1987 Amendments, the Secretary of Energy, in evaluating a potential MRS site, is directed to consider the extent to which an MRS facility would "unduly burden a State in which significant volumes of high-level radioactive waste resulting from atomic energy defense activities are stored."[130] The WIPP is currently expected to start a several year "test phase" in which up to 4250 fifty-five-gallon drums of high-level nuclear weapons waste will be accepted.[131] WIPP is designed to store over six million cubic feet of this waste, quantities seemingly sufficient to "unduly burden" New Mexico with additional nuclear waste at an MRS.

Most communities neighboring the Mescalero tribe have adopted formal resolutions against an MRS siting and have gathered thousands of signatures on petitions. The Village of Ruidoso, a neighboring tourist community, has requested a congressional hearing and investigation of the DOE's nuclear waste management program.[132] U.S. Sen. Pete Domenici (R-N.M.) and Sen. Jeff Bingaman (D-N.M.) have both played a role in slowing the MRS process[133] and canceling Phase II-B funding. Specifically, Senator Bingaman's position on the Senate Appropriations Committee was key to passing the appropriations bill on October 26, 1993, which killed Phase II-B.[134] Despite such widespread opposition, the presence of the WIPP, and the Governor's assurance from the former NWN that the siting process would halt if the State opposed,[135] the Mescalero Apache are the furthest along in the MRS siting process.

STORAGE STUDY (Mescalero Apache Tribe, Mescalero, N.M.), Mar. 1994, at 1 (vol. 3, no. 33).

128. *See Clinton*, *supra* note 120, at 27; Thomas W. Lippman, *For the Energy Nominee, an Arms Gap*, WASH. POST NAT'L WKLY. ED., Dec. 28, 1992-Jan. 3, 1993, at 15.

129. Telephone Interview with Ray Powell, Environmental Advisor to New Mexico Governor Bruce King (March 1992).

130. 42 U.S.C. § 10,164(7) (1988).

131. Don Hancock, *WIPP Decision Coming in 1993*, PERSPECTIVE (Hanford Educ. Action League, Spokane, Wash.), Winter 1993, at 19.

132. Village of Ruidoso, N.M., Res. 92-37 (Dec. 15, 1992).

133. Chuck McCutcheon, *Bill Could Hurt Waste-Dump Search, Official Says*, ALBUQUERQUE J., July 31, 1992, at B3.

134. Telephone Interview with Grace Thorpe of the Sac and Fox Nation of Oklahoma and founder of the National Environmental Council of Native Americans (Jan. 18, 1994).

135. Telephone Interview with Ray Powell, *supra* note 129.

At the tribal level, opposition has been very effective when the people's voice has been allowed to be heard, as evident by the six tribal MRS study cancellations. In a case similar to the Mescalero's, on-reservation opposition of the Fort McDermitt Tribe has been quieted through threats to job security and social service benefits as well as threats of physical violence. The current tribal council and hired consultants also intend to reach an agreement with the NWN. The Fort McDermitt Tribal Council, in its Phase I application, advised the DOE that one of its Phase I objectives was to put the issue of siting MRS on tribal lands to a vote of the people.[136] However, after receiving Phases I and II-A funding (a total of $300,000), the Fort McDermitt Council decided to wait for the $2.8 million in Phase II-B funding before allowing tribal members to vote on siting an MRS facility on tribal lands.[137] Moreover, the Tribal Council falsely asserted in their Phase II-A application that they had "accomplished the stated objectives for Phase [I] and then some,"[138] because they had not allowed tribal members to vote on continued MRS study as they stated they would allow in their Phase I application.[139]

Fifty-four of the Fort McDermitt Tribe's members (a substantial number, considering that about sixty votes put the former chairman into office) have approached former tribal chairman Ronald E. Johnny about how to keep an MRS facility off the Fort McDermitt reservation. One of two avenues would seem sufficient.

As provided by the 1987 Amendments, the Tribe cannot use its Nevada lands for an MRS facility.[140] Overruling MRS on Oregon land hinges on the fact that Oregon has yet to retrocede its limited jurisdiction over the Tribe;[141] under Public Law 280 state courts hearing civil causes of action under Public Law 280 are required to apply tribal laws, including customary laws, wherever they are "not consistent with any applicable civil laws of the State."[142] The importance of this section depends in part on whether the statute applies the laws of the cities, counties, or other state subdivisions. The Act provides that those civil laws of the state "that are of general application to private persons or private

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136. *See* U.S. DEP'T OF ENERGY, NOTICE OF FINANCIAL ASSISTANCE AWARD, STUDY THE FEASIBILITY OF SITING A MONITORED RETRIEVABLE STORAGE FACILITY, ATTACHMENT A (APPLICATION NARRATIVE) 2 (1992) (awarded to Fort McDermitt Tribe) [hereinafter ATTACHMENT A].

137. *See* Brockus, *supra*, note 105, at 3 (quoting Fort McDermitt MRS Project Director Ernestine Coble).

138. *See* Volume III — Technical Application: Application Narrative (Feb. 15, 1993), Fort McDermitt Paiute-Shoshone Tribe Monitored Retrievable Storage (MRS) Phase II-A Feasibility Study Grant Request at 13 (Feb. 19, 1993).

139. As of this date, to Mr. Johnny's knowledge, tribal members have not been given an opportunity to vote.

140. 42 U.S.C. § 10,165(g) (1988) (stating that no MRS facility may be constructed in the State of Nevada).

141. *See supra* text accompanying notes 44-67.

142. *See* 25 U.S.C. § 1322(c) (1988); 28 U.S.C. § 1360(c) (1988).

property shall have the same force and effect within such Indian country as they have elsewhere within the State."[143] Since tribal law does not regulate the storage of nuclear waste on a temporary or permanent basis,[144] it seems plausible that any laws of the State of Oregon regulating such activity, through Public Law 280, would be applied if an MRS facility were to be built on the Oregon lands of the Fort McDermitt Tribe.[145] Thus, Oregon law relating to the MRS application process, public input, and review and oversight would apply.

A second avenue for opposing an MRS facility at Fort McDermitt dates back to the adoption of an IRA constitution and federal corporate charter by tribal members in 1936. These organic documents place stringent limitations on the authority of the Fort McDermitt Tribal Council, prohibiting them from selling or mortgaging tribal lands,[146] leasing or permitting tribal lands for longer than five years,[147] or taking any action "which in any way operates to destroy or injure the tribal grazing lands or other natural resources of the Fort McDermitt Indian Reservation."[148] The Fort McDermitt Law & Order Code also places limits on the authority of the Tribal Council.[149] Simply put, Fort McDermitt law would seem to preclude the siting of a 450-acre MRS facility in Fort McDermitt Indian country. Federal officials are not only participating in a waste of valuable resources by allowing the Tribe to continue its MRS studies, but are attempting, by active participation, to circumvent the will of the Fort McDermitt people as set forth in their Constitution and Federal Corporate Charter.

Assuming that Oregon does not retrocede its Public Law 280 jurisdiction and tribal members do not amend their organic documents, members who oppose the MRS project would likely have a stronger case in the Fort McDermitt Tribal Court to stop the MRS studies. Financially, a civil action in the Fort McDermitt Tribal Court would be quicker and cheaper.

Although attention has been given to the Mescalero Apache and Fort McDermitt Tribes, the other two tribes remaining in the process shouldn't be ignored. For instance, at the Skull Valley Goshute reservation (the only other tribe to apply for Phase II-B funding), the site being considered borders a hazardous and toxic waste incinerator, a nerve gas plant, and a magnesium mine, and the uninhabited land is currently leased as a rocket motor testing

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143. *See* 25 U.S.C. § 1322(a) (1988); 28 U.S.C. § 1360(a) (1988); COHEN, *supra* note 52, at 366.

144. *See generally* LAW & ORDER CODE OF THE FORT MCDERMITT PAIUTE-SHOSHONE TRIBE OF OREGON AND NEVADA (1988-89).

145. *See* Carole E. Goldberg, *Public Law 280: The Limits of State Jurisdiction Over Reservation Indians*, 22 UCLA. L. REV. 535 (1975).

146. *See* FORT MCDERMITT CONST. art. VII, § 2; Corporate Charter, *supra* note 57, § 5(b)(1).

147. Corporate Charter, *supra* note 57, § 5(b)(2).

148. *Id.* § 5(b)(3).

149. *See* Law & Order Code of the Fort McDermitt Paiute-Shoshone Tribe of Oregon and Nevada ch. 22, § 7 (1988-89) (setting specific limits on Tribal Chairperson's authority).

ground. The Goshute, after touring various nuclear facilities in Japan, France, Great Britain, and Sweden, as well as the typical U.S. stops, feel that an MRS facility is an ideal candidate to replace the tribe's current lease (90% of the tribe's economic base), which expires in 1995.[150]

Furthermore, the Mescalero Apache have opened the way for private negotiations with nuclear utilities and sovereign tribes. In addition, the entire voluntary host process has resulted in a role model for other governments to explore exploiting the sovereignty and socioeconomics of indigenous peoples in order to site unwanted nuclear waste storage. For instance, the Meadow Lake Cree Tribal Council of Saskatchewan, Canada, have recently commissioned a feasibility study for siting a permanent geological repository for spent fuel disposal.[151]

VI. Conclusions

The 1987 Amendments terminated a plan for an MRS facility for spent nuclear fuel at Oak Ridge, Tennessee. Oak Ridge was arguably the most technically and geographically qualified location in the United States. A major factor in the decision to cancel this plan was opposition by the State of Tennessee. The current program to site an MRS on an American Indian reservation, however, lies outside the jurisdiction of state and local governments because of the sovereign rights of Indian tribes.

The Indian nation voluntary host program fails to justify its purpose to enhance the safety and cost effectiveness of spent fuel storage and management. Those involved in the MRS decision-making process should consider the following:

(1) The need for MRS has not been adequately demonstrated. Centralized storage, in general, is more costly than at-reactor storage, and is illogical as reactor sites will most likely remain contaminated.

(2) The site selection process is flawed, affecting an economically disadvantaged population, and exploiting their sovereign environmental planning rights and lack of technical qualifications.

(3) Tribal membership are not informed about the problems of MRS management: liability, site security, terrorism, and health.

(4) A negotiated agreement with an Indian tribe could result in substantial cash and social program benefits to the tribe. However, the extent of tribal job opportunities in nuclear waste is unclear and the indirect adverse effects on tribal and surrounding industries could be excessive.[152]

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150. Telephone Interview with Danny Quintanna, MRS Director for the Skull Valley Goshutes (June 1993).

151. *Meadow Lake Cree of Saskatchewan Study Construction of a Spent Fuel Repository*, MRS NEWSLETTER: A PERIODIC UPDATE ON THE MESCALERO APACHE FEASIBILITY STUDY (Mescalero Apache Tribe, Mescalero, N.M.), Dec. 1993, at 1.

152. The public's perception of nuclear waste has caused a backlash from the tourist and real

(5) Public opposition is widespread in states where tribes are considering MRS. In the State of New Mexico alone, the Governor, numerous congresspeople, local governments, residents, businesses, and many of the Mescalero Apache tribal members oppose an MRS facility.

(6) Current MRS siting attempts are all in the western half of the U.S., although most of the commercial reactors are in the East. This significantly increases risks associated with transportation of spent fuel.

(7) A negotiated agreement in the authors' judgement has a high probability of becoming a permanent MRS in Indian country, a prospect not intended by Congress or being conveyed to current Indian volunteers.

(8) In some cases, tribal organic documents, limitations expressed on tribal council authority, and current tribal laws may limit the tribal governing body's constitutional authority to apply for and receive MRS study funding and/or authorize the siting of an MRS facility on tribal lands.

(9) The voluntary host program has had the unfortunate consequence of encouraging a private MRS siting on Indian lands. This creates a precedence for other countries to exploit their native groups by storing nuclear waste on sovereign territories.

The siting of an MRS on an Indian reservation is unethical and dangerous. MRS may possibly be defeated on a case-by-case basis at each reservation in the program. However, a change in national policy would be most effective. An amendment to the Nuclear Waste Policy Act of 1982 is recommended that revokes the voluntary siting process, terminates the Office of the Nuclear Waste Negotiator, and supports the continuance of safe storage, responsibility, liability, and dry cask development at utility reactor sites. This should be an interim policy, until a comprehensive federal nuclear waste program is developed for all related nuclear waste forms: military, reactor decommissioning, spent fuel, hospital, and other waste.[153]

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estate industries for the Mescaleros. The Mescaleros themselves own and operate a $30 million ski area, a $20 million luxury resort complex, and two fishing lakes; *see* Davis, *Proposal*, *supra* note 101, at A1.

153. *See* Duane Chapman, *Decommissioning and Nuclear Waste Policy: Comprehensive or Separable?*, 12 ENERGY J. 247 (1991) (Special Issue — Nuclear Decommissioning Economics).