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Environmental Racism: Nuclear Waste as an Agent of Oppression?

Annie Boeckers

Abstract

This research seeks to analyze the decision-making processes of managing nuclear waste for countries dealing with this problem, as well as the interplay between national and local governments, private companies, the populace, and native nations. The long-term storage of nuclear waste is a serious global problem, and despite the millions of people enjoying the benefits of nuclear power, most refuse to accept the burdens associated with its waste. The driving question for this research largely ties to how governments attempt to designate who will bear the burden of these wastes. When a problem needs to be solved, yet there are no clear, easy solutions, the weight is often placed on those who are either politically, economically, socially, or geographically disadvantaged. Through a deeper investigation into the global community, Australia, the United States, and the Skull Valley Goshute Tribe, we can see how these issues unfold and how affected communities attempt to fight back.

Keywords: *Nuclear waste, environmental racism, American Indians, sovereignty, government*

The power of nuclear energy has been harnessed by countries around the world, mainly to produce electricity, but its versatility allows for use in other sectors, such as medical, environmental, or military. Nuclear energy is produced when an atom is split in two, a process called nuclear fission, which generates heat. The heat is then used to produce electricity enjoyed by millions of people worldwide.¹ This paper is not as focused on the nuclear energy itself, but rather the nuclear waste it creates and leaves behind in the process.

This research seeks to analyze the decision-making processes of managing nuclear waste for countries dealing with this problem, as well as the interplay between national and local governments, private companies, the populace, and native nations. The long-term storage of nuclear waste is a serious global problem, and despite the millions of people enjoying the benefits of nuclear power, most refuse to accept the burdens associated with its waste.² The driving

¹ "What Is Nuclear Energy - Definition." Nuclear Energy. Accessed April 12, 2018. <https://nuclear-energy.net/what-is-nuclear-energy>.

² Martin-Schramm, James B. "Skull Valley." The Cresset. Accessed April 06, 2018. http://thecresset.org/2006/Martin-Schramm_A2006.html.

question for this research largely ties to how governments attempt to designate who will bear the burden of these wastes. When a problem needs to be solved, yet there are no clear, easy solutions, the weight is often placed on those who are either politically, economically, socially, or geographically disadvantaged. Through a deeper investigation into the global community, Australia, the United States, and the Skull Valley Goshute Tribe, we can see how these issues unfold and how affected communities attempt to fight back.

What is Nuclear Waste?

Nuclear waste is the byproduct of material that nuclear fuel becomes after it is used in a reactor. Inside the reactor, nuclear fuel atoms are snapped in two, releasing nuclear energy which provides about 11% of the world's electricity from about 450 power reactors.³ The leftover smaller atoms, known as fission products, are still dangerously radioactive and remain so for thousands of years. The spent fuel is encased in pellets, enclosed by metal fuel rods. As the metal rods are removed from the reactor, they must remain shielded at all times, as they are so toxic they would provide a lethal dose of radiation within seconds of exposure. The rods are removed underwater, for both cooling and shielding purposes, and immediately transferred to storage pools. After approximately five years, the waste is transferred to dry ventilated concrete containers for long-term storage.⁴

The nuclear material enclosed in the metal fuel rods is classified as high-level waste. High-level waste makes up only three percent of all nuclear waste volume but accounts for ninety-five percent of the radioactive content. Intermediate level waste consists of materials used in the process of generating nuclear energy, such as used filters and steel components from within the reactor. This waste is neither large in volume nor radioactive output, accounting for seven percent and four percent, respectively. The largest contributor to the volume of radioactive waste is categorized as low-level waste and includes work clothing, rags and cloths, medical tubes, and tools from power plant operations. Despite low-level waste contributing to ninety percent of the

³ "Nuclear Power in the World Today." World Nuclear Association. Accessed April 03, 2018. <http://www.world-nuclear.org/information-library/current-and-future-generation/nuclear-power-in-the-world-today.aspx>.

⁴ Touran, N. "What Is Nuclear Waste?" What Is Nuclear. Accessed April 03, 2018. <https://whatisnuclear.com/waste.html>.

volume, it is only one percent of the radioactive content. All of this waste must be handled with care and eventually stored at a permanent facility for upwards of 100,000 years.⁵

Nuclear Waste as a Global Problem

Globally, there are currently 450 active nuclear power plants that create nuclear waste.⁶ Not every country in the world is home to a nuclear plant, but it is an ongoing battle to figure out what to do with the waste for the countries that do. International safety standards require long-term waste management facilities to be in areas with low population densities, geological stability, and low flood danger. To date, only one country in the world has successfully sited a permanent storage facility; buried deep under an island in the Baltic, Finland is constructing the world's first permanent nuclear-waste repository, and it is nearing completion. The project began as early as 1980, and Finnish scientists planned to base their project after repositories being designed by the United States, Germany, and other countries that had already started the process.⁷ In reality, every other country has been unable to establish permanent sites due to pushback from the public, state and local governments, or in some cases, native peoples.

Major countries around the world, including Canada, Russia, and Australia, as well as large powers within the European Union such as United Kingdom, France, and Germany, have all been unsuccessful in opening a permanent storage site for nuclear waste. The waste currently remains stockpiled in temporary locations, mainly at the plants where it originates. The problem is becoming more urgent as power plants and temporary storage sites across the world are filling up and were not originally built to hold the radioactive waste for an extended period of time. This practice of spread out temporary storage is not only unsustainable, but it is more dangerous than building long-term depositories deep underground where the material can decay for tens of thousands of years.

However, it is clear that establishing a permanent site is not as simple as it may seem. The permanent site must, first and foremost, fit international safety standards. Next, and arguably the most difficult part, is convincing local governments and communities living near where the

⁵ "What Are Nuclear Wastes and How Are They Managed?" World Nuclear Association. Accessed April 03, 2018. <http://www.world-nuclear.org/nuclear-basics/what-are-nuclear-wastes.aspx>.

⁶ Brünglinghaus, Marion. "Nuclear Power Plants, World-Wide." European Nuclear Society. Accessed April 03, 2018. <https://www.euronuclear.org/info/encyclopedia/n/nuclear-power-plant-world-wide.htm>.

⁷ Curry, Andrew. "What Lies Beneath." The Atlantic. September 11, 2017. Accessed April 03, 2018. <https://www.theatlantic.com/magazine/archive/2017/10/what-lies-beneath/537894/>.

repository might be constructed. A group of protesters in Germany established a camp in Bure to prevent the construction of an underground repository in their town. Those who were born and raised in the community, and surrounding areas say they will not give up and are prepared for a lasting fight. The government has offered money as a form of compensation for communities who take on this responsibility, but the effect of the outreach has been, at best, mixed.⁸ The narrative is astonishingly similar in other countries around the world.

The promise of economic opportunity, specifically money and job creation, has not been enough to persuade local communities who express concerns over safety issues and the danger for the environment. The problem with nuclear waste is any harmful effects may not present themselves right away. The risk of radiation leaks, water contamination, and transportation accidents plague more than the immediate location of the repository. In summary, nobody wants to have the waste, but everyone wants the energy.⁹

Indigenous populations have been disproportionately impacted by the nuclear industry, specifically in Australia and the United States. Tribal sovereignty grants native peoples autonomy in their decision-making and makes indigenous lands exempt from many state laws and many environmental and health regulations. Specifically within the United States, Native communities have a unique government-to-government relationship with the federal government, and any decisions made by American Indian tribes regarding their land and communities are independent from other entities within the American political system. Sovereignty, combined with centuries of oppression and being stripped of their land and resources, places these communities at a tremendous economic and political disadvantage. Many American Indian communities are impoverished and have the lowest employment rate of any racial or ethnic group; some tribes report unemployment as high as eighty-five percent.¹⁰ In the case of radioactive waste storage and disposal, governments and the nuclear industry are able to take advantage of these vulnerabilities. Further, part of the requirements for a long-term repository location include a low public

⁸ Oroschakoff, Kalina, and Marion Sollety. "Burying the Atom: Europe Struggles to Dispose of Nuclear Waste." POLITICO. January 16, 2018. Accessed April 03, 2018. <https://www.politico.eu/article/europes-radioactive-problem-struggles-dispose-nuclear-waste-french-nuclear-facility/>.

⁹ Oroschakoff, Kalina, and Marion Sollety. "Burying the Atom: Europe Struggles to Dispose of Nuclear Waste." POLITICO. January 16, 2018. Accessed April 03, 2018. <https://www.politico.eu/article/europes-radioactive-problem-struggles-dispose-nuclear-waste-french-nuclear-facility/>.

¹⁰ "U.S. Bureau of Labor Statistics." U.S. Bureau of Labor Statistics. Accessed April 07, 2018. <https://www.bls.gov/>.

occupancy factor and a low traffic area.¹¹ A significant portion of indigenous peoples live in isolated rural areas, making their territory an already prioritized location. The governments and private corporations of Australia and the United States have promised large sums of money to any community that consents to hosting a long-term repository. The argument for some is that an increase in capital combined with the potential for job creation through the construction and continued maintenance of a permanent repository may be a solution to some of the issues that chronically affect Native peoples.¹²

Australia

For two decades, the Department of Industry, Innovation, and Science within the Australian Parliament has been actively attempting to consolidate nuclear waste currently stored at more than 100 temporary sites around the country.¹³ In a six year span from 1998-2004, the federal government focused on placing a national repository on Aboriginal land in South Australia and in the Northern Territory. Each location failed due to resistance from the Adnyamathanha and Yappala Tribes who live in South Australia and the Northern Territory, respectively.¹⁴

An effort to place a long-term repository on Aboriginal land started again in 2012 following the National Radioactive Waste Management Act. The Act established a nationwide volunteer process for siting a facility and allowed a Land Council to volunteer Aboriginal Land on behalf of its Traditional Owners.¹⁵ In 2015, Liberal Party Senator Grant Chapman volunteered Adnyamathanha land without their consultation. As a response, the Adnyamathanha people issued a statement saying "We don't want a nuclear waste dump here on our country and worry that if the

¹¹ International Atomic Energy Agency. "Storage of Radioactive Waste." Accessed April 7, 2018. https://www-pub.iaea.org/MTCD/Publications/PDF/Pub1254_web.pdf.

¹² "Reservations about Toxic Waste: Native American Tribes Encouraged to Turn Down Lucrative Hazardous Disposal Deals." *Scientific American*. Accessed April 07, 2018. <https://www.scientificamerican.com/article/earth-talk-reservations-about-toxic-waste/>.

¹³ Commonwealth Parliament, and Parliament House. "Radioactive Waste Management." Parliament of Australia. May 11, 2017. Accessed April 03, 2018. https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/BriefingBook45p/RadioactiveWaste.

¹⁴ "Radioactive Waste and The Nuclear War on Australia's Aboriginal People." *Radioactive Waste and the Nuclear War on Australia's Aboriginal People | Friends of the Earth Australia*. Accessed April 12, 2018. <https://www.foe.org.au/radioactive-waste-and-nuclear-war-australias-aboriginal-people>.

¹⁵ "National Radioactive Waste Management Act 2012." Department of Industry, Innovation and Science. Accessed April 03, 2018. <https://industry.gov.au/resource/RadioactiveWaste/RadioactivewastemanagementinAustralia/Pages/NationalRadioactiveWasteManagementAct2012.aspx>.

waste comes here it will harm our environment and muda (our lore, our creation, our everything). We call on the federal government to withdraw the nomination of the site and to show more respect in future."¹⁶

In April of 2016 the Commonwealth identified Barndioota, South Australia as a possible site and started the process of acquiring licenses and approvals under Commonwealth legislation. The announcement shocked and outraged the local Adnyamathanha community, who has adamantly opposed the siting of a facility on their land. The proposal includes \$2 million dollars for affected local communities, which is the lowest offer any country has issued as a form of compensation for long-term repositories. The facility is scheduled to be in operation by 2020, however, construction of the repository has not yet begun.¹⁷ The example of Australia not only exemplifies how difficult it is for native populations to resist federal governments, but how easy it can be for governments to ignore the demands of disenfranchised populations.

The Divided States of America

The United States hosts 104 operating nuclear power plants, which continue to generate high-level waste and spent nuclear fuel. To date, 30,000 metric tons of nuclear waste has been generated by the U.S. nuclear industry. The Office of Environmental Management, within the Department of Energy, is responsible for the direction of the nuclear waste and designating an eventual long-term storage location.¹⁸ The battle lines for a permanent nuclear waste storage facility have been drawn not by party but by state. The process becomes increasingly complicated with the addition of American Indian tribes, who are sovereign entities within the United States, meaning they have the power and authority to make decisions pertaining to their lands. American Indian tribes, should, in theory, be equal voices in the decision for a permanent storage facility location. However, previous decision making has had little respect for both American Indian negotiations and their traditional ways of life.

¹⁶ "Radioactive Waste and The Nuclear War on Australia's Aboriginal People." Radioactive Waste and the Nuclear War on Australia's Aboriginal People | Friends of the Earth Australia. Accessed April 12, 2018. <https://www.foe.org.au/radioactive-waste-and-nuclear-war-australias-aboriginal-people>.

¹⁷ Commonwealth Parliament, and Parliament House. "Radioactive Waste Management." Parliament of Australia. May 11, 2017. Accessed April 03, 2018. https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/BriefingBook45p/RadioactiveWaste.

¹⁸ "Finding Long-Term Solutions for Nuclear Waste." Energy.gov. Accessed April 03, 2018. <https://www.energy.gov/articles/finding-long-term-solutions-nuclear-waste>.

Legislation as early as 1978 began the process of locating a permanent site for the nation's nuclear waste. The Uranium Mill Tailings Radiation Control Act of 1978 (H.R. 13650) directed the Secretary of Energy to consult with the Environmental Protection Agency, National Regulatory Commission, any affected states, and when necessary, Indian tribes, and the Secretary of the Interior, to designate a processing site for nuclear waste. H.R. 13650, despite its broadness in nature, laid the groundwork for both the siting and negotiation process.¹⁹ The Nuclear Waste Act of 1982 (H.R. 3809) was the next major step in locating a site for the disposal and storage of nuclear waste. H.R. 3809 directed the Secretary of Energy to notify the Governor of the state in which a site is located, or the Indian Tribe on whose reservation a site is located. The bill entitled the state or Indian tribe involved to rights of participation and consultation with respect to the development of the repository, as well as the right to veto a site within their jurisdiction, which could only be overridden by a two-thirds vote in each House of Congress. H.R. 3809 included three potential locations for a permanent repository, including Nevada, Texas, and Washington. The intentions of this bill were to establish a permanent location within two years after the enactment of the Act.²⁰

The main issue with the language not only in these bills, but the larger conversation of establishing a permanent repository in the United States, is the idea of notifying and consulting with "states *or* Indian tribes." As previously mentioned, American Indian tribes are a separate government entity and have a unique nation-to-nation relationship with the United States federal government. Given their sovereignty, the federal government engages in direct negotiation with American Indian tribes, and often does not include state governments from which they are located. The siting and negotiation process to solidify a long-term storage facility has disproportionately affected American Indian tribes in the United States. Much of the nuclear industry has been sited on or near Native Lands, making them victims of environmental racism.²¹ Environmental racism, by definition, is "the placement of low-income or minority communities in the proximity of environmentally hazardous or degraded environments, such as toxic waste, pollution and urban

¹⁹ "H.R.13650 - 95th Congress (1977-1978): Uranium Mill Tailings Radiation Control Act." Congress.gov. November 08, 1978. Accessed April 03, 2018. <https://www.congress.gov/bill/95th-congress/house-bill/13650>.

²⁰ "H.R.3809 - 97th Congress (1981-1982): Nuclear Waste Policy Act of 1982." Congress.gov. January 07, 1983. Accessed April 03, 2018. <https://www.congress.gov/bill/97th-congress/house-bill/3809>.

²¹ LaDuke, Winona. *All Our Relations: Native Struggles for Land and Life*. Haymarket Books, 2016.

decay.”²² As a result, some American Indians’ traditional lifestyle has been completely disrupted by the nuclear industry.²³ The surrounding states have also been affected by the federal government's decisions to place the majority of the nuclear industry in or around native lands. The case of the Yucca Mountain proposal within Nevada illustrates the importance of negotiating with states *and* Indian tribes.

A 1987 resolution to The Nuclear Waste Act of 1982 (H.R. 3809), known as H.R. 3430, eliminated every proposed location for a permanent repository, except for Yucca Mountain, located on Western Shoshone territory within the state of Nevada.²⁴ The resolution also established an Office of Civilian Radioactive Waste Management, within the Department of Energy, to negotiate on behalf of the federal government. The designation of Yucca Mountain for a permanent storage facility was heavily protested by the state of Nevada, the Western Shoshone tribe, as well as American Indian communities across the United States. This region of the country is already particularly sensitive to nuclear issues. In 1951, the United States government appropriated part of the Western Shoshone land for a test site for exploding nuclear weapons. Over 1,000 nuclear devices have been detonated above and below ground, making the Shoshone tribe the most bombed nation on Earth.²⁵ The Yucca Mountain project would add a combined total of 77,000 tons of nuclear waste to a region that has already been discriminated against by the nation’s nuclear industry.²⁶

The state of Nevada argues, as a state with no nuclear energy facilities, it is exceedingly unfair that they are asked to serve as the dumping ground for the rest of the country’s waste as it is a great risk to their citizens.²⁷ For American Indians, the issue goes much deeper than simply the risk to their people. Land has always been a source of wealth and power for indigenous peoples;

²² "Environmental Racism." Your Dictionary. Accessed April 05, 2018. <http://www.yourdictionary.com/environmental-racism>.

²³ LaDuke, Winona. *All Our Relations: Native Struggles for Land and Life*. Haymarket Books, 2016.

²⁴ "H.R.3430 - 100th Congress (1987-1988): Nuclear Waste Policy Act Amendments Act of 1987." Congress.gov. December 22, 1987. Accessed April 05, 2018. <https://www.congress.gov/bill/100th-congress/house-bill/3430>.

²⁵ "Nuclear War: Uranium Mining and Nuclear Tests on Indigenous Lands." Cultural Survival. September 1993. Accessed April 05, 2018. <https://www.culturalsurvival.org/publications/cultural-survival-quarterly/nuclear-war-uranium-mining-and-nuclear-tests-indigenous>.

²⁶ "Indigenous Anti-Nuclear Statement: Yucca Mountain and Private Fuel Storage at Skull Valley." Indigenous Environmental Network. April 12, 2002. Accessed April 03, 2018. <http://www.ienearth.org/indigenous-anti-nuclear-statement-yucca-mountain-and-private-fuel-storage-at-skull-valley/>.

²⁷ Zhang, Sarah. "Nevada Fights the Latest Attempt to Give It the Nation's Nuclear Waste." The Atlantic. April 26, 2017. Accessed April 03, 2018. <https://www.theatlantic.com/science/archive/2017/04/nuclear-waste-yucca-mountain-hearing-states/524418/>.

they are not only dependent on the environment for natural resources like food and water, but they are also spiritually connected to the land itself. Specifically, with the Yucca Mountain project, we see some of the poorest people in the country refusing to accept a \$91 million dollar settlement, because they want their land even if the federal government has already put radiation on it.²⁸ The Indigenous Environmental Network²⁹, established in 1990, issued an anti-nuclear statement in 2002 in response to the ongoing Yucca Mountain debate. They said “the nuclear industry has waged an undeclared war against our Indigenous Peoples and Pacific Islanders that has poisoned, and placed a disproportionate burden on our communities worldwide.”³⁰ The allocation of Yucca Mountain further supports the notion that American Indian nations across the United States have fallen victim to environmental racism, as Yucca Mountain does not meet international safety standards of geological stability. Within a twenty year span from 1977-1997, there were 621 earthquakes of 2.5 or higher on the Richter scale around Yucca Mountain.³¹ Subsequently, the average shipment distance to Yucca Mountain would be 2,400 miles, affecting approximately 44 states.³² Yucca Mountain was chosen not for scientific but political reasons.

The Yucca Mountain project is still ongoing, despite the Obama administration's attempt to shut down the bill. As of 2017, the Trump administration has signaled it wants to get the project back on track. The White House budget proposal includes \$120 million to restart the process for getting a license to build storage facilities under Yucca Mountain.³³ The project will be met with resistance from Democrats, Republicans, and Native communities. The case of Yucca Mountain is an example of American Indian tribes and states fighting together to abolish the implementation of a repository. The case of the Skull Valley Goshute Tribe exemplifies the complexity of the interplay between the federal government, private sector companies, states, and American Indian tribes.

²⁸ LaDuke, Winona. *All Our Relations: Native Struggles for Land and Life*. Haymarket Books, 2016.

²⁹ The Indigenous Environmental Network is a non-profit organization. They serve as an alliance of Indigenous Peoples whose shared mission is to protect the sacredness of Earth Mother from contamination and exploitation by respecting and adhering to Indigenous Knowledge and Natural Law.

³⁰ "Indigenous Anti-Nuclear Statement: Yucca Mountain and Private Fuel Storage at Skull Valley." Indigenous Environmental Network. April 12, 2002. Accessed April 03, 2018.

³¹ "Indigo Girls Honor the Earth." Cultural Survival. December 1997. Accessed April 06, 2018. <https://www.culturalsurvival.org/publications/cultural-survival-quarterly/indigo-girls-honor-earth>.

³² "Destination(s) for SNF & HLW." Western Interstate Energy Board. Accessed April 03, 2018. <http://westernenergyboard.org/hlrw/the-u-s-nuclear-waste-program/destinations-for-snf-hlw/>.

³³ Zhang, Sarah. "Nevada Fights the Latest Attempt to Give It the Nation's Nuclear Waste." *The Atlantic*. April 26, 2017. Accessed April 03, 2018.

The Skull Valley Goshute Tribe

The Skull Valley Band of Goshute Indians are a small tribe of 124 members, located on an 18,000 acre reservation in Utah. The tribe has inhabited this area since 1200 AD. A complex relationship with both the state of Utah, and the large populations of Mormons in the area has led to the isolation and public invisibility of the Goshute Tribe.³⁴

In 1994, Congress pulled funding from the Office of Nuclear Waste Negotiator, previously established in the 1987 amendments to The Nuclear Waste Act of 1982. As a result, nuclear energy corporations began pursuing direct negotiations with several American Indian tribes unmediated by the federal government. The Skull Valley Goshute Tribe was presented with an opportunity by Private Fuel Storage to host a monitored retrieval storage (MRS) facility for temporary storage of nuclear waste. The Goshute Leaders argued this was the only chance left for the tribe to survive, and as of 1996, they were the last entity seeking to accept the temporary facility. Suddenly, the seemingly inconspicuous tribe presented a political and ecological threat to both the citizens and politicians of Utah. The decision may have appeared out of the blue for Utah politicians, but for the Goshute tribe this was common practice, as they had never been part of any decision-making processes in the past. The state of Utah has no control over Goshute land, and therefore is unable to prevent them from accepting a facility for nuclear waste. Utah has utilized what is most likely the only prevention measure they can and threatened to close their state borders to any and all nuclear waste being transported to the MRS facility.^{35 36}

The Goshute's declaration of sovereignty and assertion of self-determination was condemned by more than just the state of Utah. The Skull Valley Goshutes were criticized by environmentalists, environmental-justice advocates, other American Indian tribes and organizations, and even some of its own members. The Indigenous Environmental Network, in its *Declaration For a Nuclear Free Great Basin and Indigenous Anti-Nuclear Statement* publicly

³⁴ Ishiyama, Noriko. "Environmental Justice and American Indian Tribal Sovereignty: Case Study of a Land-Use Conflict in Skull Valley, Utah." *Antipode*. February 21, 2003. Accessed April 03, 2018.

³⁵ Ishiyama, Noriko. "Environmental Justice and American Indian Tribal Sovereignty: Case Study of a Land-Use Conflict in Skull Valley, Utah." *Antipode*. February 21, 2003. Accessed April 03, 2018. <http://onlinelibrary.wiley.com/doi/10.1111/1467-8330.00305/epdf>.

³⁶ "Environmental Racism, Tribal Sovereignty and Nuclear Waste · NIRS." NIRS. August 16, 2016. Accessed April 05, 2018. <https://www.nirs.org/private-fuel-storages-proposed-interim-high-level-nuclear-waste-dumpsite-on-the-reservation-of-skull-valley-goshute-tribe-40-miles-west/>.

opposed Private Fuel Storage negotiations with the Skull Valley Goshute Tribe.^{37 38} Further, Tom Goldtooth, the Director of the Indigenous Environmental Network, highlighted the contradiction of using sovereignty as a means for a business deal, especially one that has such harmful implications for the environment. According to this view, American Indians are supposed to be caretakers of the Earth, and subjecting the land to harmful contamination conflicts with their traditional way of life.³⁹ As a response to their critics, the Goshute Tribe Executive Office published a forceful statement arguing that “the charges of ‘environmental racism’ and the need to ‘protect’ and ‘save’ us smack of patronism. This attitude implies we are not intelligent enough to make our own business and environmental decisions. I don’t belong to two nations. I belong to one—The Skull Valley Goshute Nation.”⁴⁰

The statement issued by the Goshute leaders stems from a long history of severe distrust in outside communities. The dire economic situation and isolation is not a result of actions taken by the Goshute tribe themselves but rather a culmination of outside decisions that did not include the Goshute tribe at all. Post-World War II, the United States federal government created “national sacrifice zones” in the American West for the purpose of fulfilling military and industrial interests. Several of these military facilities surround the Skull Valley Goshute Reservation. Over time, these facilities have created a completely toxic environment as a result of open-air nerve agent tests and chemical and biological weapons tests. These facilities have been ignored, and even tolerated, because of the economic benefits they bring to the state of Utah.⁴¹ These actions have pushed the Goshute nation further into isolation, have made their territory completely unusable for farming, and essentially cut off their ability to utilize the land as a resource. The statement issued by the Goshute Tribe appropriately calls out the hypocrisy of the Utah government to not only criticize their decision to host a repository for economic gain but to suddenly want to be consulted on decisions made by the tribe that affect the greater communities of Utah. Lastly, the tribes and

³⁷ "Declaration For a Nuclear Free Great Basin." Indigenous Environmental Network. Accessed April 05, 2018. <http://www.ienearth.org/declaration-for-a-nuclear-free-great-basin/>.

³⁸ "Indigenous Anti-Nuclear Statement: Yucca Mountain and Private Fuel Storage at Skull Valley." Indigenous Environmental Network. April 12, 2002. Accessed April 03, 2018.

³⁹ "Statement Against Toxic Nuclear Colonialism by Tom Goldtooth, Executive Director, IEN." Indigenous Environmental Network. July 25, 2009. Accessed April 03, 2018. <http://www.ienearth.org/statement-against-toxic-nuclear-colonialism-by-tom-goldtooth-executive-director-ien/>.

⁴⁰ Ishiyama, Noriko. "Environmental Justice and American Indian Tribal Sovereignty: Case Study of a Land–Use Conflict in Skull Valley, Utah." *Antipode*. February 21, 2003. Accessed April 03, 2018.

⁴¹ Ishiyama, Noriko. "Environmental Justice and American Indian Tribal Sovereignty: Case Study of a Land–Use Conflict in Skull Valley, Utah." *Antipode*. February 21, 2003. Accessed April 03, 2018.

Indigenous organizations around the country who expressed criticism of the Goshute Tribe for their application of sovereignty and convicted the siting of the repository to be environmental racism may have been pure with their intentions, but these organizations did not defend the tribe during a long history of environmental racism from the state of Utah. The Goshute tribe was physically isolated and culturally invisible until they came to their own defense and asserted their sovereignty in order to do what they felt was best for their tribe.

As a community with as few as 124 members, The Skull Valley Goshute Tribe was pushed to a point where taking on nuclear waste was their last viable economic opportunity and means of survival. The poverty and isolation had led to such desperation that the tribe looked into selling bottled water from springs on the reservation, but concluded that few would want to buy water they fear may be laced with toxic substances from nearby military facilities.⁴² The Goshute land is already inconceivably toxic, and the addition of a nuclear waste repository likely would not make a noticeable difference. In 1996, the Goshute Nation signed a lease with Private Fuel Storage; they agreed to lease 820 acres of Goshute land for up to twenty-five years, with the option for a twenty-five year extension. In return they would receive about \$250 million in compensation for the storage of 4,000 casks of spent nuclear fuel.⁴³ However, public pressure in 2007 forced the Goshute tribe to forego plans to offer their land.⁴⁴

The declaration of sovereignty by the Goshute Nation not only creates a debate between states and American Indian communities over nuclear waste, but it sparks a debate over the meaning of sovereignty more broadly. The objections from state governments on the declaration of American Indian sovereignty and attempts to slow or even stop decisions made by tribes both directly and indirectly challenge the legitimacy of sovereignty itself. Utah attempting to assert influence and control over the Goshute Tribe undermines the entire notion of sovereignty and the government-to-government relationship established in past treaties or political agreements.

The issue is that the definition of sovereignty is very subjective and able to be interpreted and applied in a multitude of ways. To some, the meaning of sovereignty is more than just

⁴² Martin-Schramm, James B. "Skull Valley." *The Cresset*. Accessed April 06, 2018. http://thecresset.org/2006/Martin-Schramm_A2006.html.

⁴³ "Environmental Justice Case Study: Accepting Money for Nuclear Waste in Skull Valley, Utah." Skull Valley Justice Page. Accessed April 06, 2018. <http://www.umich.edu/~snre492/ibrown.html>.

⁴⁴ "Reservations about Toxic Waste: Native American Tribes Encouraged to Turn Down Lucrative Hazardous Disposal Deals." *Scientific American*. Accessed April 07, 2018. <https://www.scientificamerican.com/article/earth-talk-reservations-about-toxic-waste/>.

autonomy and the right to make decisions. As a response to the Goshute tribal leaders' decision to accept an MRS facility, members of the tribe stated "sovereignty means who we are, and we need to protect who we are."⁴⁵ The argument for the "protection of who we are" is extremely dynamic. For the opposition it can imply the protection of the current tribe members, the protection of the Earth, and the protection of future generations within the tribe. For the leaders of the tribe, they are able to argue that the economic prosperity is protecting current and future members of the tribe by alleviating the cycle of poverty. In sum, regardless of how sovereignty is defined, state and federal governments do not, and should not, have the authority to challenge it.

Conclusions and Recommendations

The establishment of a permanent storage facility for nuclear waste has proven to be an issue for the United States and the international community alike. The first challenge is finding a geographical location suitable for storing waste for as long as 100,000 years, while also complying with international safety standards. The second is overcoming opposition and protest from the public, state and local governments, and Native Tribes in the United States and Australia. There remains no definitive conclusion on this matter, despite there being unanimous agreement worldwide that the construction of a long-term repository is both safer and more sustainable than the current practice of storing waste at temporary facilities within the power plants.

My recommendations for siting and constructing a permanent repository for nuclear waste are consistent with the international safety standards, and I support the countries whose search operates on a consent or negotiation-based process with affected communities. Therefore, the Yucca Mountain project should not be an option for the United States. Not only is the site geologically unfit, neither the state of Nevada, or, more importantly, the Western Shoshone Tribe have consented to taking on the nuclear waste.

The case of the Skull Valley Goshutes is far more complicated. I fully support the notion of sovereignty for American Indians, as well as their right to self-determination, but I am in no position to decide how either should be interpreted or applied. American Indian tribes are faced with a difficult decision, and they have a right to make that on their own. I am, however, concerned with the decision-making process and believe that regardless of the outcome, American Indians

⁴⁵ Ishiyama, Noriko. "Environmental Justice and American Indian Tribal Sovereignty: Case Study of a Land-Use Conflict in Skull Valley, Utah." *Antipode*. February 21, 2003. Accessed April 03, 2018.

have a right to be well-informed on all sides of the issue. The federal government, state governments, and American Indian tribes should work in collaboration with private sector companies to work out a solution. The responsibility largely falls on the shoulders of the federal government to initiate and lead this discussion. As part of the government-to-government relationship, the federal government should engage in direct conversation with American Indian tribes, in order to ensure proper information is provided and discussed. Additionally, the federal government has the same responsibilities for state governments, and the entire country more broadly. When the federal government does not uphold its role as a trustee of Native nations, private companies are able to assert themselves in direct conversations with tribes. The problem with unmediated negotiations with private companies, both for nuclear industry and environmental groups, is they clearly have a particular set of interests, and may not provide a comprehensive outlook on the issue.

The decision for American Indians is largely between economic opportunity and ensured personal and environmental safety within their communities. To reiterate, American Indian tribes are rightfully allowed to make this decision on their own. However, in my professional opinion, the promise and incentive of money and jobs is a short-term solution to long-term health problems and risks. The nuclear waste stored in the repository will be a constant threat to the surrounding communities for years and years into the future, outlasting any amount of money. Further, I am skeptical about the ability of the construction and maintenance of the repository to actually create jobs for American Indians, like it is proposed. Due to the toxicity of the nuclear waste, humans may not be involved in the actual construction and maintenance of a facility; the jobs may be done by robots in order to avoid the companies being liable for any accidents, injuries, or deaths. Subsequently, any jobs done by humans would likely be highly skilled, requiring an advanced education, specialty training, and experience in the field. Given there is little to no evidence to support otherwise, I think private companies are more likely to bring in people who already possess the skills they need, instead of investing time and money into the education and training of American Indians in order to successfully do these jobs.

In the end, the nuclear waste must be consolidated at a permanent repository somewhere in the countries from which it originates, within a reasonable and foreseeable timeframe. We have reached a point where even a complete termination of nuclear energy power plants around the world would not change this fact, because something must be done with the waste that has already

been produced. This is not to suggest that shifting to alternative energy sources is not a good idea; in fact, moving forward, it is probably the best solution, but it will not solve the problems created by past behavior. The siting of repositories on lands home to economically, politically, and geographically disadvantaged communities without negotiation and consent is exceptionally shameful, but passing the problem on to future generations is an unfair and undeserved burden as well. As this waste continues to accumulate, I predict there will be significant efforts made by both the United States and the global community to determine a permanent location within the next five to ten years. The definition of insanity is doing the same thing over and over again but expecting a different result; only time will tell if past behaviors persist into future decision making, or if lessons learned from previous mistakes will guide decision makers towards a more transparent and inclusive siting and locating process.

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