

# **What’s Mine is Yours: An Analysis of the Federal Laws Used to Compensate the Navajo Nation and Remediate Abandoned Uranium Mines and Mills on the Reservation**

**Cody Phillips\***

## *Table of Contents*

INTRODUCTION.....	76
A. Scientific Background on the Dangers of Uranium Radiation	77
B. Historical Background of Uranium Mining on Navajo Lands	79
C. The Harms Left by the Nuclear Procurement Program and the Current State of Affairs on the Navajo Nation .....	83
I. COMPENSATION FOR INDIVIDUALS AND REMEDIATION AT MILL SITES: THE PROMISE AND LIMITS OF URANIUM-SPECIFIC LEGISLATION	85
A. Compensating Individuals: Radiation Exposure Compensation Act.....	85
1. RECA Imposes Too Many Procedural Hoops .....	86
2. RECA Compensation is Too Narrowly Applied.....	88
3. RECA Should Be Amended to Better Achieve Its Purpose .....	89
B. Remediating Mill Sites: Uranium Mill Tailings Radiation Control Act.....	91

---

\* J.D. Candidate, 2021, University of Colorado Law School. The author would like to thank the staff of the *Colorado Natural Resources, Energy & Environmental Law Review* for their work and Professor Sarah Krakoff for her support and guidance.

1. Mill Site Remediation: A Success Story .....	92
2. Limits to UMTRCA .....	95
II. MINE REMEDIATION AND RECLAMATION: WHY AND HOW THE UNITED STATES SHOULD ASSUME LEGAL RESPONSIBILITY .....	95
A. Remediating Abandoned Mines: Comprehensive Environmental Response, Compensation, and Liability Act 96	
1. The United States as a PRP: A Liability Scheme to Compensate for the Lack of a Uranium Mine-Specific Remediation Law .....	99
a. Using Section 9607(f) to Recover Natural Resources Damage from the United States .....	102
b. Learning from RECA and UMTRCA: Furthering the Remediation Scheme .....	104
CONCLUSION .....	106

## INTRODUCTION

The United States monopolized radioactive ore during the Cold War era, incentivized uranium mining on the Navajo Nation, and manipulated the Navajo government into approving mining leases. This Note argues that the United States should remediate the numerous radioactive waste sites on the Navajo Reservation and compensate the Navajo Nation for the associated harms to the Tribe’s health, community, and culture.

Although Congress has created a legal scheme aimed at remediating the harms caused by its uranium procurement program, the Navajo Nation continues to suffer from an abundance of toxic waste sites. This Note explores the laws which make up the federal uranium remediation scheme, analyzes their strengths and weaknesses, and considers how they could be improved.

Part I.A. will analyze how the federal government has attempted to remediate harms to individuals through the Radioactive Exposure Compensation Act, though the law is overly strict and requires improvement to achieve its stated purposes. Part I.B. will discuss how Congress has extended the remediation scheme from individuals to land through the Uranium Mill Tailings Radiation Control, though it too is limited by extreme specificity. Finally, Part II will discuss how the Comprehensive Environmental Response, Compensation, and Liability Act could be used to remediate mine sites even though it was not designed

as a response to the nuclear procurement program and is not best suited to the task.

In analyzing these laws, this Note will explore the relevant history, the current state of affairs, and issues that will likely arise in the near future concerning uranium mining on the Colorado Plateau.

### *A. Scientific Background on the Dangers of Uranium Radiation*

Uranium-238 is a naturally occurring and unstable atom.<sup>1</sup> Over time, its instability causes it to eject bits and pieces of its atomic structure into the surrounding space, fundamentally changing uranium into a different atom.<sup>2</sup> This process is called radioactive decay, and each atomic ejection, called radiation, is a powerful burst of energy capable of impacting the world on a molecular scale.<sup>3</sup> The speed at which an atom decays is measured by its half-life, and uranium-238 has a half-life of 4.5 billion years.<sup>4</sup> While it does not decay quickly, uranium decay is persistent and it will remain radioactive during the length of its half-life.<sup>5</sup> On the Navajo Nation, there are approximately 500 un-remediated uranium mines and four uranium mill sites which emit this radiation.<sup>6</sup> While uranium radiation is dangerous on its own,<sup>7</sup> uranium is harmful for an additional reason.

As the uranium eventually decays its way down the periodic table toward stable lead, it makes an important pit-stop at radon-222.<sup>8</sup> While uranium-238 has a half-life measured in the billions of years, the half-life

---

<sup>1</sup> *Uranium: Its Uses and Hazards*, INST. FOR ENERGY & ENVTL. RES., <https://ieer.org/resource/factsheets/uranium-its-uses-and-hazards/> (last modified May 2012).

<sup>2</sup> *Id.*

<sup>3</sup> *Id.*

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

<sup>6</sup> *Cleaning Up Abandoned Uranium Mines*, EPA, <https://www.epa.gov/navajonation-uranium-cleanup/cleaning-abandoned-uranium-mines> (last updated Aug. 25, 2020) [hereinafter *Cleaning Up Abandoned Mines*]; OFF. OF LEGACY MGMT., U.S. DEP'T OF ENERGY, LM SITES ON NAVAJO NATION LAND (2018), <https://www.energy.gov/sites/prod/files/2019/05/f62/2018NavajoNationBrochure20180619.pdf>.

<sup>7</sup> *Radioisotope Brief: Uranium*, CDC, <https://www.cdc.gov/nceh/radiation/emergencies/isotopes/uranium.htm> (last updated Apr. 4, 2018).

<sup>8</sup> *Radioactive Decay*, EPA, <https://www.epa.gov/radiation/radioactive-decay> (last updated May 28, 2019).

of radon-222 is less than a week.<sup>9</sup> It is extremely unstable. Moreover, radon is a breathable gas.<sup>10</sup>

When radon decays, it emits alpha-radiation.<sup>11</sup> Unlike the comic-book-famous gamma radiation where an atom ejects a high-energy wave, alpha radiation is when an atom expels two protons and two neutrons.<sup>12</sup> Atomically speaking, this is huge. While its size means alpha-radiation cannot penetrate skin, if radon-222 is inhaled, these massive atomic cannonballs shoot into lung tissue and are capable of causing double-strand breaks of DNA.<sup>13</sup> If only a single strand breaks, the cell can use the fully-intact strand as a template to repair the broken one, however, when both strands break, it is much more difficult to completely repair the damage.<sup>14</sup> The greater the damage to DNA, the larger the risk of cancer.<sup>15</sup> This odorless and colorless gas is the second leading cause of lung-cancer in the United States behind smoking.<sup>16</sup> Within the Navajo Nation today, cancer is “the leading cause of death among Navajo females, and the second leading cause of death regardless of sex.”<sup>17</sup>

Despite the dangers of radon, uranium’s radioactive properties make it an extremely valuable source of concentrated energy.<sup>18</sup> Trace amounts of uranium are present in rocks all over the world,<sup>19</sup> but it is only economic to mine where it occurs in high abundance. This makes minerals with high

---

<sup>9</sup> *Radon-222 Decay Chain*, EPA, <https://www.epa.gov/sites/production/files/2018-12/documents/radon-22-decay-chain.pdf> (last visited May 3, 2020) [hereinafter *Radon-222 Decay Chain*].

<sup>10</sup> *Radon*, CDC, <https://www.cdc.gov/radon/> (last updated Jan. 29, 2020).

<sup>11</sup> *Radon-222 Decay Chain*, *supra* note 9.

<sup>12</sup> *Radiation Basics*, NUCLEAR REG. COMMISSION, <https://www.nrc.gov/about-nrc/radiation/health-effects/radiation-basics.html#gamma-x> (last updated Oct. 2, 2017).

<sup>13</sup> See Wei Han & K. N. Yu, *Ionizing Radiation, DNA Double Strand Break and Mutation*, in 4 *ADVANCES GENETICS RES.* 2 (Kevin V. Urbano ed., 2010).

<sup>14</sup> Tomas Aparicio et al., *DNA Double-Strand Break Repair Pathway Choice and Cancer*, 19 *DNA REPAIR* 169, 169 (2014).

<sup>15</sup> *Id.* at 170.

<sup>16</sup> *Health Risks of Radon*, EPA, <https://www.epa.gov/radon/health-risk-radon> (last visited May 3, 2020).

<sup>17</sup> Johnnye Lewis et al., *Mining and Environmental Health Disparities in Native American Communities*, 4 *CURRENT ENVTL. HEALTH REP.* 130, 130 (2017), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5429369/>; NAVAJO CANCER WORKGROUP, *CANCER AMONG THE NAVAJO* 27 (2018), <https://www.nec.navajo-nsn.gov/Portals/0/Reports/Cancer%20Among%20Navajo%202018%20Spread.pdf>.

<sup>18</sup> *Uranium Mining Overview*, WORLD NUCLEAR ASS’N, <https://www.world-nuclear.org/information-library/nuclear-fuel-cycle/mining-of-uranium/uranium-mining-overview.aspx> (last updated May 2020).

<sup>19</sup> *Id.*

levels of uranium—coffinite,<sup>20</sup> carnotite, and uraninite—valuable ores.<sup>21</sup> In the United States, these minerals are found in high abundance on the Colorado Plateau, and specifically, the Navajo Nation.

### *B. Historical Background of Uranium Mining on Navajo Lands*

The Navajo have a long and tragic history with uranium ore. In 1919, after Marie Curie showed the world the power of radioactive material, Congress passed legislation that opened mining on the Navajo Reservation to all United States citizens.<sup>22</sup> This law allowed any prospector to stake a claim on Navajo lands and obtain a mining lease—a property right—from the Office of Indian Affairs.<sup>23</sup> It was unnecessary to consult the Navajo Nation to obtain a lease under these terms.<sup>24</sup> This law remained in place until 1936 when, in a whiplash series of events, Congress closed prospecting on the Navajo Reservation due to a lack of mining activity, only to reopen the lands again in 1938 when private interests in vanadium ore and coal, also located in abundance on the Navajo Nation, increased.<sup>25</sup> The 1938 Indian Mineral Leasing Act<sup>26</sup> gave the Navajo Nation slightly more power over the mineral resources on the reservation than the terms of the 1919 law, and allowed the Tribe to enter into lease agreements with miners, subject to approval by the Secretary of the Interior.<sup>27</sup> For the next sixty-seven years, the Navajo Nation remained open to uranium mining until the Tribe passed legislation banning the practice in 2005.<sup>28</sup>

Although the terms of the Indian Mineral Leasing Act allowed the Navajo Nation to deny a mining lease, there were many factors that made

---

<sup>20</sup> Although the name is a reminder of the deadly nature of this mineral, coffinite was named after Reuben Clare Coffin. Harold T. Morley, *Memorial to Reuben Clare Coffin*, GEOLOGIC SOC'Y AMERICA, <https://www.geosociety.org/documents/gsa/memorials/v04/Coffin-RC.pdf> (last visited May 3, 2020).

<sup>21</sup> SAM KEITH ET AL., TOXICOLOGICAL PROFILE FOR URANIUM 273 (Feb. 2013), <https://www.ncbi.nlm.nih.gov/books/NBK158806/>.

<sup>22</sup> TERRASPECTRA GEOMATICS, ABANDONED URANIUM MINES AND THE NAVAJO NATION 1–3 (Aug. 2007), [https://www.epa.gov/sites/production/files/2017-01/documents/navajo\\_nation\\_aum\\_screening\\_assess\\_report\\_atlas\\_geospatial\\_data-2007-08.pdf](https://www.epa.gov/sites/production/files/2017-01/documents/navajo_nation_aum_screening_assess_report_atlas_geospatial_data-2007-08.pdf).

<sup>23</sup> *Id.*

<sup>24</sup> “That the Secretary of the Interior . . . under such terms and conditions as he may prescribe . . . [is authorized] to lease to citizens of the United States . . . any part of the unallotted lands within any Indian reservation with the States of Arizona, . . . [or] New Mexico.” H.R. Res. 2480, 66th Cong. § 26 (1919).

<sup>25</sup> TERRASPECTRA, *supra* note 22, at 1–3.

<sup>26</sup> 25 U.S.C. § 396(a) (2018).

<sup>27</sup> *Id.*

<sup>28</sup> Diné Natural Resource Protection Act of 2005, NAVAJO NATION CODE ANN. tit. 18, § 1301 (2005), <https://www.nrc.gov/docs/ML0723/ML072340482.pdf>.

this unlikely. First, in 1938, Congress imposed the Tribal Council, a council responsible for approving or denying mining leases, on the Navajo Nation.<sup>29</sup> The Tribal Council was modeled after an Anglo-style government, a foreign concept to the Tribe, and derived its authority from the United States Congress, not the Navajo Nation or its people.<sup>30</sup> Second, the heavy influence of the United States government, through the Bureau of Indian Affairs (“BIA”) situated in the Department of the Interior, set the agenda for the Tribal Council and cherry-picked potential leases for consideration.<sup>31</sup> The Tribal Council could only agree or disagree with a lease negotiated and approved by the Secretary of the Interior.<sup>32</sup> If the Tribal Council wanted to change the terms of a lease, the new terms needed federal approval, which added layers of red tape to the process and incentivized the Tribal Council to accept harms they would have otherwise rejected.<sup>33</sup> Finally, the Navajo Nation needed the short-term income from mining royalties to continue their traditional and culturally important livestock-based way of life.<sup>34</sup>

While long-term considerations were extremely important, the Navajo were focused on survival. Since the beginning of the 1930s, the federal government had set out to reduce the Tribe’s livestock for the twin goals of avoiding a new dust bowl and modernizing the Navajo Nation’s economy.<sup>35</sup> This systematic livestock reduction reduced the Nation’s independent food supply, material and generational wealth, and cultural resources.<sup>36</sup> These economically and culturally devastating series of events led directly into the new mining boom. The Navajo Nation had no choice but to accept the money that came with the mineral leases; the federal government had made it extremely difficult to say no.

Most importantly, the United States wanted uranium. With the looming nuclear threat following World War II, the United States pursued uranium ore with fervor.<sup>37</sup> In its goal to achieve nuclear independence, Congress passed the Atomic Energy Act of 1946 (“AEA”), which created

---

<sup>29</sup> Becky J. Miles Viers, *Environmental Law: Uranium Mining on the Navajo Reservation*, 7 AM. INDIAN L. REV. 115, 118 (1979).

<sup>30</sup> *Id.*

<sup>31</sup> *See id.* at 119.

<sup>32</sup> Antoinette G. Houle, *Non-Lease Agreements Available for Indian Mineral Development*, 24 NAT. RESOURCES J. 195, 195 (1984).

<sup>33</sup> Viers, *supra* note 29, at 119.

<sup>34</sup> *See id.*; Robert S. McPherson, *Navajo Livestock Reduction in Southeastern Utah, 1933-46: History Repeats Itself*, 22 AM. INDIAN Q. 1, 2 (1998).

<sup>35</sup> *See id.* at 6.

<sup>36</sup> *See id.* at 5–6.

<sup>37</sup> *See* Doug Brugge & Rob Goble, *The History of Uranium Mining and the Navajo People*, 92 AM. J. PUB. HEALTH 1410, 1410–11 (2002).

a “program for Government control of the production, ownership, and use of fissionable material” and created the Atomic Energy Commission (“AEC”) to regulate pursuant to the law.<sup>38</sup> While the United States itself was not mining radioactive ore, the AEA included a legal directive “to purchase, take, requisition, condemn, or otherwise acquire, supplies of source materials.”<sup>39</sup> In other words, the United States legally monopolized the purchase and production of all uranium ore. The result: uranium mining on the Colorado Plateau increased by nearly 150 times between 1948 and 1960, going from 54,000 tons of extracted uranium ore to 8 million.<sup>40</sup> In 1960, uranium was the third most valuable metal mined in the United States.<sup>41</sup>

The federal government’s hunger for uranium caused the market to boom, and mining companies flocked to the Navajo Nation to extract its resources.<sup>42</sup> Mines sprouted up across the Navajo Reservation and their owners depended on the manual labor of Navajo men; many of them likely saw this work as a necessity following the livestock reduction in the 1930s.<sup>43</sup> These jobs were readily available but poorly paid, as mining companies compensated the Navajo laborers at or below minimum wage.<sup>44</sup>

In return for their paychecks, the laborers worked to retrieve the yellow uranium ore from the earth and transport it to mill sites where chemicals were added to the crushed rock to leach out the pure chemical uranium. This process involved crushing the rock, using sulfuric acid to dissolve and leach out uranium, and then solidifying the pure uranium into yellow cake, named for its bright yellow color.<sup>45</sup> Milling created solid radioactive waste, mostly light sandy material, and liquid radioactive waste, called raffinate.<sup>46</sup> The United States failed to adequately plan for the resulting radioactive waste from these processes, making mill sites the

---

<sup>38</sup> Atomic Energy Act of 1946, Pub. L. No. 585, § 1(b)(4), 60 Stat. 756 (1946).

<sup>39</sup> *Id.* § 5(b)(5).

<sup>40</sup> Robert Alvarez, *Uranium Mining and the U.S. Nuclear Weapons Program*, FED’N OF AM. SCIENTISTS 3 (Nov. 14, 2013), <https://fas.org/pir-pubs/uranium-mining-u-s-nuclear-weapons-program-3/>.

<sup>41</sup> *Id.*

<sup>42</sup> *See* Brugge & Goble, *supra* note 37, at 1410–11.

<sup>43</sup> *Id.* at 1411.

<sup>44</sup> *See id.*

<sup>45</sup> *Radioactive Waste From Uranium Mining and Milling*, EPA, <https://www.epa.gov/radtown/radioactive-waste-uranium-mining-and-milling> (last visited Apr. 1, 2020); *Backgrounder on Uranium Mill Tailings*, NUCLEAR REG. COMMISSION (Aug. 12, 2020), <https://www.nrc.gov/reading-rm/doc-collections/fact-sheets/mill-tailings.html>.

<sup>46</sup> *Radioactive Waste From Uranium Mining and Milling*, *supra* note 45.

de facto storage area for literal tons of acidic and radioactive tailings.<sup>47</sup> Some of the solid radioactive mine tailings were used to build homes and other structures on the Reservation while the liquid waste was left to seep into the groundwater.<sup>48</sup>

All the while, there was general scientific certainty that the same properties which made uranium valuable also made it deadly.<sup>49</sup> Radon gas saturated uranium mines and reports of lung cancer in similar operations were well studied and well understood.<sup>50</sup> Marie Curie, who had demonstrated the potential of radioactive materials, had herself died of radiation poisoning in 1934.<sup>51</sup> Yet no one informed the Navajo, nor provided proper ventilation or safety gear, and this information was actively kept a secret from the mine workers.<sup>52</sup> There was not even a word for radiation in the Navajo language as the uranium mines began to bloom across the Colorado Plateau.<sup>53</sup>

The mining continued at a breakneck pace until 1970 when the United States' appetite for uranium was satiated and the AEC ended its procurement program.<sup>54</sup> Over time, private interests in uranium ore stagnated alongside the federal interest, leaving many mines orphaned, unreclaimed, and un-remediated. Mining companies simply left the mines as they were, toxic holes in the ground. Today, more than half the uranium mines from this era, over 500 abandoned mines and five former uranium mills and their associated waste, remain on or adjacent to the Navajo

---

<sup>47</sup> *See id.*

<sup>48</sup> *Contamination and Criticality and H.R. 3405, the Uranium Classification Act of 2019: Hearing on H.R. 3405 Before the Subcomm. on Energy and Mineral Res. for the H. Comm. on Nat. Res.*, 116th Cong. 16–225 (2019) (written statement of Jonathan Nez & Myron Litzer, President & Vice President, Navajo Nation), <https://www.congress.gov/116/meeting/house/109694/documents/HHRG-116-II06-20190625-SD013.pdf> [hereinafter *Contamination and Criticality*].

<sup>49</sup> *See generally* Sigismund Peller, *Lung Cancer Among Mine Workers in Joachimsthal*, 11 HUM. BIOLOGY 130, 130 (Feb. 1939).

<sup>50</sup> Brugge & Goble, *supra* note 37, at 1414.

<sup>51</sup> *Marie Curie Biography*, BIOGRAPHY.COM (Feb. 24, 2020), <https://www.biography.com/scientist/marie-curie>.

<sup>52</sup> Brugge & Goble, *supra* note 37, at 1411.

<sup>53</sup> *Id.*; *Radioactive Waste From Uranium Mining and Milling*, *supra* note 45.

<sup>54</sup> WILLIAM L. CHENOWITH, UTAH DEP'T OF NAT. RESOURCES, THE GEOLOGY AND PRODUCTION HISTORY OF THE URANIUM-VANADIUM DEPOSITS IN MONUMENT VALLEY SAN JUAN COUNTY, UTAH 17 (1991), [https://ugspub.nr.utah.gov/publications/contract\\_reports/CR-91-4.pdf](https://ugspub.nr.utah.gov/publications/contract_reports/CR-91-4.pdf).



Nation.<sup>55</sup> As of April 2020, over 300 mines still lack funding for remediation.<sup>56</sup>

### *C. The Harms Left by the Nuclear Procurement Program and the Current State of Affairs on the Navajo Nation*

While the government's interest in uranium has ebbed, the harms caused by uranium have only compounded. The health of the communities near un-reclaimed mines and mill sites has suffered, and cancer is all-too common on the reservation as the second leading cause of death.<sup>57</sup>

The uranium mill sites, where radioactive materials were stored and concentrated, have had extremely detrimental effects on the Navajo Nation and the environment. None of the former mill sites on the Reservation had ground-lining until the 1990s and the water in many areas is still toxic from the massive volumes of leached radioactive materials.<sup>58</sup> Contaminated water continues to be unsafe, even for washing dishes or laundry.<sup>59</sup>

In 1979, the largest radioactive spill in American history, larger than Three-Mile Island, occurred at General Electric's United Nuclear Corporation ("UNC") Church Rock Mill Site, just across the border from the Navajo Reservation.<sup>60</sup> This spill contaminated the Rio Puerco River, a significant tributary to the Rio Grande.<sup>61</sup> Although the radiation from this spill could be detected as far as 100 river miles downstream, the vast majority of the effects were concentrated on the Navajo Nation.<sup>62</sup> This spill has yet to be fully remediated and is currently behind schedule.<sup>63</sup>

Wind continues to blow radioactive dust from the un-reclaimed mines across the reservation into populated areas, contaminating both

---

<sup>55</sup> *Radioactive Waste From Uranium Mining and Milling*, *supra* note 45.

<sup>56</sup> *Cleaning Up Abandoned Uranium Mines*, *supra* note 6; *Contamination and Criticality*, *supra* note 48, at 5.

<sup>57</sup> *Contamination and Criticality*, *supra* note 48, at 6.

<sup>58</sup> *The Health and Environmental Impacts of Uranium Contamination in the Navajo Nation: Hearing Before the H. Comm. On Oversight And Government Reform*, 110th Cong. 110-97 (2007) (statement of Mr. Kucinich), <https://www.govinfo.gov/content/pkg/CHRG-110hhrg45611/html/CHRG-110hhrg45611.htm>.

<sup>59</sup> TERRASPECTRA, *supra* note 22, at 2.

<sup>60</sup> JERE MILLARD ET AL., *THE CHURCH ROCK URANIUM MILL TAILINGS SPILL* i (N.M. Env't Improvement Div. ed., 1983), <https://semspub.epa.gov/work/06/1000720.pdf>.

<sup>61</sup> *Id.* at 1.

<sup>62</sup> *Id.*

<sup>63</sup> See *Northeast Church Rock Mine*, EPA, <https://www.epa.gov/navajo-nation-uranium-cleanup/northeast-church-rock-mine> (last visited May 3, 2020).

ground and surface waters relied on by the Navajo people.<sup>64</sup> Studies have indicated that eighty-five percent of Navajo homes are contaminated with uranium and levels of uranium in the bones of the people who live near abandoned mine sites is ninety-five percent higher than the average American population.<sup>65</sup>

Moreover, the Navajo culture has suffered. Tribal ceremonies require water from specific sources which have become unavailable due to radiation.<sup>66</sup> The Navajo are committed to protecting the Earth and maintaining balance with a healthy ecosystem;<sup>67</sup> however, the entire ecosystem has been affected by the radioactive contamination, and many animals have become unfit for consumption due to the bioaccumulation of radioactive materials in their system.<sup>68</sup>

Recognizing the magnitude of harms, in 2005 the Navajo government passed the Diné Natural Resources Protection Act, banning uranium mining and milling on the Navajo reservation “to ensure that no further damage to the culture, society, and economy of the Navajo Nation occurs.”<sup>69</sup>

Today, President Trump threatens to repeat history. In light of decreased demands for American uranium, Trump has proposed \$1.5 billion in 2021’s budget for the purpose of stockpiling domestic uranium.<sup>70</sup> Although the Navajo Nation has passed legislation outlawing uranium mining, proposed mine sites are still adjacent to the reservation and waste can blow into the local communities.<sup>71</sup> In addition, adjacent American Indian communities and reservations, such as the Ute Mountain Ute, Southern Ute, Jicarilla Apache, Hopi, and Hualapai, are all vulnerable to uranium pollution.<sup>72</sup>

---

<sup>64</sup> *Radioactive Waste From Uranium Mining and Milling*, *supra* note 45.

<sup>65</sup> Jacqueline Keeler, *Trump’s Message for Tribes: Let Them Eat Yellowcake*, HIGH COUNTRY NEWS (Dec. 12, 2017), <https://www.hcn.org/articles/tribal-affairs-trumps-message-for-tribes-let-them-eat-yellowcake>.

<sup>66</sup> *Contamination and Criticality*, *supra* note 48, at 7.

<sup>67</sup> *Id.*

<sup>68</sup> Tommy Rock et. al, *Traditional Sheep Consumption by Navajo People in Cameron, Arizona*, 16 INT’L J. ENVTL. RES. & PUB. HEALTH 4195, 4197 (Oct. 2019).

<sup>69</sup> Diné Natural Resource Protection Act of 2005, NAVAJO NATION CODE ANN. Tit. 18, §1301 (2005).

<sup>70</sup> Associated Press, *Trump’s \$1.5B Uranium Bailout Triggers Rush of Mining Plan*, U.S. NEWS (Feb. 14, 2020), <https://www.usnews.com/news/business/articles/2020-02-14/trump-wants-15b-over-10-years-to-revive-us-uranium-mining>.

<sup>71</sup> Keeler, *supra* note 65.

<sup>72</sup> For maps of uranium deposits and reservation locations, compare Bureau of Indian Affairs, *Indian Lands of Federally Recognized Tribes of the United States* (June 2016), <https://www.bia.gov/sites/bia.gov/files/assets/bia/ots/webteam/pdf/idc1-028635.pdf>, with

The history of uranium mining on the Navajo Nation is discriminatory, unethical, and continuing. It is a legacy of the United States government deliberately misleading and harming a discrete people while claiming its actions are completed in pursuit of the public good. Although the United States has recognized the impacts of its actions and has passed laws to help reconcile these harms, there is still a significant amount of work that needs to be done before the reservation is healed of its radiation sickness.

The Navajo Nation's stance on this matter is clear: "It is the Navajo Nation position that the United States is the sole responsible party for cleanup of the remaining 304 abandoned uranium mines on Diné lands. We call upon the United States government to immediately step forward and take responsibility for cleanup of these mines."<sup>73</sup>

This Note will discuss three federal statutes available to the Navajo Nation to achieve this goal, explore how the laws could be used to force the United States to take responsibility for its actions, and propose legislative solutions to supplement gaps in the legal scheme. These laws are: (1) the Radiation Exposure Compensation Act ("RECA"); (2) the Uranium Mill Tailings Radiation Control Act ("UMTRCA"); and (3) the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA").

## I. COMPENSATION FOR INDIVIDUALS AND REMEDICATION AT MILL SITES: THE PROMISE AND LIMITS OF URANIUM-SPECIFIC LEGISLATION

This Part will analyze two pieces of uranium-specific legislation: (1) the Radiation Exposure Compensation Act and (2) the Uranium Mill Tailings Radiation Control Act.

### *A. Compensating Individuals: Radiation Exposure Compensation Act*

In 1990, the federal government officially claimed responsibility for the radioactive mess left behind during the nuclear procurement era by

---

Berge Exploration Inc., *United States Uranium Resources Map*, LIBRARY OF CONG. (1978), <https://www.loc.gov/resource/g3701h.ct004749/?r=0.108,0.229,0.31,0.243,0>.

<sup>73</sup> *Contamination and Criticality*, *supra* note 48, at 5.

enacting the Radiation Exposure Compensation Act (“RECA”).<sup>74</sup> RECA is both a scheme to compensate and an apology, recognizing that individuals were “involuntarily subjected to increased risk of injury and disease to serve the national security interests of the United States,” and that “the United States should recognize and assume responsibility for the harm done to these individuals.”<sup>75</sup>

This law is aimed at providing “one-time benefit payments to persons who may have developed cancer or other specified diseases after being exposed to radiation from atomic weapons testing or uranium mining, milling, or transporting.”<sup>76</sup> Over the past thirty years, the program has meted out \$2.3 billion to more than 36,000 claimants.<sup>77</sup>

Despite its laudable goals, RECA has been described by Stewart Udall as a “bureaucratic legal maze designed to prevent compensation to Navajo miners,”<sup>78</sup> and the statute is slated to sunset in 2022, leaving many otherwise eligible claimants without recourse.<sup>79</sup> While promising, RECA has many shortcomings.

### *1. RECA Imposes Too Many Procedural Hoops*

To receive compensation, a uranium miner, or their family if they are deceased, must show three things. First, they must have documentation proving that the miner worked between 1942 and 1971.<sup>80</sup> RECA is only meant to provide reparations for harms suffered as a result of the federal uranium procurement program, which was repealed in 1972.<sup>81</sup> All work done after that date is considered part of the private market and is not covered by the statute.<sup>82</sup> Second, they must prove that they were exposed to at least forty working level months<sup>83</sup> (“WLMs”) of radiation or a single

---

<sup>74</sup> SCOTT D. SZYMENDERA, THE RADIATION EXPOSURE COMPENSATION ACT (RECA) 8 (Cong. Res. Serv. ed., Jan. 31, 2020), <https://fas.org/sgp/crs/misc/R43956.pdf>.

<sup>75</sup> Radiation Exposure Compensation Act, Pub. L. No. 101-426, 104 Stat. 920 (1990) [hereinafter 1990 RECA].

<sup>76</sup> SZYMENDERA, *supra* note 74, at 1.

<sup>77</sup> *Id.*

<sup>78</sup> After retiring from his position as the Secretary of the Interior, Udall filed numerous lawsuits on behalf of Navajo miners, litigating claims to facilitate recovery. Keith Schneider, *A Valley of Death for the Navajo Uranium Miners*, N.Y. TIMES, May 3, 1991, at B10; *see, e.g.*, *Begay v. United States*, 768 F.2d 1059 (9th Cir. 1985).

<sup>79</sup> SZYMENDERA, *supra* note 74, at 1.

<sup>80</sup> *Id.* at 7.

<sup>81</sup> *Id.*

<sup>82</sup> *Id.*

<sup>83</sup> A working level month is based off the forty-hour work week, 170 hours, and uses time spent near radon concentrations to measure radiation. *Working Level Month (WLM)*,

year working in a uranium mine.<sup>84</sup> For comparison, the Mine Safety and Health Administration currently sets safe radon exposure limits to four WLMs per year.<sup>85</sup> Finally, they must have medical documentation indicating the miner suffered from one of the specific lung illnesses outlined in the statute.<sup>86</sup> Even though uranium toxicity is harmful overall, especially as a kidney toxin, RECA arbitrarily draws the line at lung disease.<sup>87</sup>

In the initial iteration of the statute, before it was amended in 2000, Congress imposed an incredibly high bar for reparations. The current, already elevated exposure threshold of forty WLMs was initially set at 200 WLMs for non-smokers and 300–400 WLMs for smokers,<sup>88</sup> despite the fact that “the overall risk of lung cancer from radon is even higher in smokers and former smokers.”<sup>89</sup> Moreover, the Constitutional and Specialized Torts Section, Torts Branch, of the Department of Justice (“DOJ”) Civil Division, which regulates pursuant to RECA,<sup>90</sup> assumed miners were smokers until proven otherwise, despite regulations demanding all reasonable doubt be resolved in favor of claimants.<sup>91</sup> These original procedures seemed designed to prohibit access to the compensation the statute was explicitly created to facilitate. The bar was ludicrously high.

Even with the more lenient 2000 amendments, the statute seems ill-designed to achieve its lofty goals. One of the largest procedural hoops is proving eligibility for compensation.<sup>92</sup> The standard is firm; without

---

BUNDESAMT FÜR STRAHLENSCHUTZ, <https://www.bfs.de/SharedDocs/Glossareintraege/EN/W/wlm.html> (last visited May 3, 2020).

<sup>84</sup> *Sandoval v. United States Dep’t of Justice*, No. CV-06-278 JC/RLP, 2006 WL 8443578, at \*3 (D.N.M. Sept. 7, 2006).

<sup>85</sup> Annual Exposure Limits, 30 C.F.R. § 57.5038 (2020).

<sup>86</sup> SZYMENDERA, *supra* note 74, at 7.

<sup>87</sup> Olav Axelson & Francesco Forastiere, *Radon as a Risk Factor for Extra-Pulmonary Tumors*, 10 MED. ONCOLOGY & TUMOR PHARMACOTHERAPY 167, 169 (1993).

<sup>88</sup> 1990 RECA, *supra* note 75, § 5.

<sup>89</sup> *Radon and Cancer*, AMERICAN CANCER SOC’Y, <https://www.cancer.org/cancer/cancer-causes/radiation-exposure/radon.html> (last revised Sept. 23, 2015); Radiation Exposure Compensation Act Amendments of 2000, 42 U.S.C. § 2209 note (2018).

<sup>90</sup> SZYMENDERA, *supra* note 74, at 1, 8.

<sup>91</sup> Proof of Employment as a Miner, 28 C.F.R. § 79.43 (2020) (“In the event that reasonable doubt exists with regard to whether a claim meets the requirements of the Act, that doubt shall be resolved in favor of the claimant or eligible surviving beneficiary.”); *Mitchell v. Reno*, No. CIV 97-0946 LH/RLP, 1998 WL 36030146, at \*5 (D.N.M. Nov. 25, 1998) (“Specifically, because the DOJ lacked the required records . . . it presumed Mr. Mitchell was a smoker.”).

<sup>92</sup> *Espinoza v. United States Dep’t of Justice*, 20 F. Supp. 3d 1094, 1097, 1100 (D. Colo. 2013); *Sandoval v. United States Dep’t of Justice*, No. CV-06-278 JC/RLP, 2006

documents, there is no compensation. For example, in *Sandoval v. United States Department of Justice*, despite evidence that a Navajo man had worked in a uranium mine for nineteen years, without unequivocal medical documentation proving he had died of lung cancer, his widow's RECA application was denied.<sup>93</sup> In addition, many required documents were never part of Navajo culture.<sup>94</sup> For example, the Navajo government did not require couples to obtain official marriage licenses until 1940, and even then, marriage ceremonies often forwent official government documentation.<sup>95</sup> Without a tangible license, a widow's burden of proof is impossible to meet.<sup>96</sup> For a law which was meant to help pay for the harms suffered by the Navajo people, it is heavily skewed against the Navajo culture. Although the government apologized for the harms it caused to its citizens and promised compensation, it dangled that recompense just out of reach, and expected the injured to become bureaucratic experts just to receive their dues.

Once approved, the claimant is entitled to \$100,000, a sum that has remained stagnant since RECA was enacted in 1990.<sup>97</sup> If this payment is approved and accepted, it is final and is considered to satisfy "all claims . . . against the United States . . . that arise out of exposure to radiation . . . in a uranium mine" from 1942–1971.<sup>98</sup>

## 2. RECA Compensation is Too Narrowly Applied

While RECA can be a powerful statute for those individuals who both qualify and are able to navigate its bureaucratic maze, it is not the best system for compensation. RECA is narrow and does not provide funds to mitigate the continuing uranium pollution on the Navajo Nation. The law does not compensate the many miners who worked well beyond 1971 in mines created through United States subsidy, and the current harms caused

---

WL 8443578, at \*5 (D.N.M. Sept. 7, 2006); *Howell v. Reno*, 939 F. Supp. 802, 805 (D. Colo. 1996); *Mitchell*, 1998 WL 36030146, at \*7.

<sup>93</sup> *Sandoval*, 2006 WL 8443578, at \*5 ("[F]or one could reasonably speculate that Mr. Sandoval suffered from a compensable illness, having worked in the uranium mines for 19 years where 1 year is sufficient per the RECA. Nonetheless, this Court cannot adjudge it an abuse of discretion on the part of the DOJ to require written medical documentation of a specified, compensable illness and define that term as the DOJ has.").

<sup>94</sup> *Schneider*, *supra* note 78, at B10; Alice Segal, *Uranium Mining and the Navajo Nation – Legal Injustice*, 21 R. L. & Soc. JUST. 355, 385–86 (2012).

<sup>95</sup> Antoinette Sedillo Lopez, *Evolving Indigenous Law: Navajo Marriage*, 17 ARIZ. J. INT'L & COMP. L. 283, 293–95 (2000).

<sup>96</sup> *Schneider*, *supra* note 78, at B10.

<sup>97</sup> SZYMENDERA, *supra* note 74, at 2–3.

<sup>98</sup> Indemnification and Limitation of Liability, 42 U.S.C. § 2210(e) (2018); 1990 RECA, *supra* note 75, § 6.

by un-remediated mines from this era fall outside the bounds of RECA.<sup>99</sup> The United States started a radioactive wildfire in 1942 which continues to burn today despite the arbitrary statutory limit Congress has imposed on compensation.

Uranium mining has not only harmed the physical well-being of Navajo tribal members, but also the mental and spiritual well-being of the Tribe.<sup>100</sup> However, RECA only focuses on individuals and their immediate families; it does not provide any sort of reparation to the Tribe as a whole. While it is important to compensate the individuals that mined the land and \$100,000 is a large sum of money, the entire uranium scheme was only made possible due to the United States reaching into and manipulating the internal workings of the Navajo Nation, a sovereign tribe.<sup>101</sup>

Although its stated purpose is noteworthy, the law has many legal and functional shortcomings. RECA falls short of achieving true justice because it (1) requires compliance with strict procedures which are contrary to its purpose and fail to properly account for the Navajo culture and (2) only provides individual compensation, not community-based compensation or funds for remediation.

### *3. RECA Should Be Amended to Better Achieve Its Purpose*

To achieve its stated goals, RECA requires a legislative overhaul. The Navajo Nation has lobbied for years to amend RECA, and in 2019, Ben Ray Luján, Congressman from New Mexico, introduced an amendment to the statute.<sup>102</sup> Senator Mike Crapo of Idaho introduced a similar amendment around the same time in the Senate.<sup>103</sup>

While there are some key differences between the two amendments, both proposals would fix many of RECA's shortcomings.

Both versions of the amendment greatly broaden RECA's reach, allowing far more individuals to be compensated. One of the key complaints of RECA from the Navajo Nation is the narrow 1942–1971

---

<sup>99</sup> Press Release, Navajo Nation Office of the President and Vice President, Nez-Lizer commend Congressman Ben Ray Luján for introducing bill to expand uranium exposure compensation (July 16, 2019), <https://tinyurl.com/ybos48g5> [hereinafter Nez-Lizer Commend Congressman].

<sup>100</sup> *Contamination and Criticality*, *supra* note 48, at 7.

<sup>101</sup> *See supra* Introduction Part C.

<sup>102</sup> Radiation Exposure Compensation Act Amendments of 2019, H.R. 3783, 116th Cong. (as introduced in House, Jul. 16, 2019) [hereinafter House Amendment]; Nez-Lizer Commend Congressman, *supra* note 99, at 1; SZYMENDERA, *supra* note 74, at 11.

<sup>103</sup> Radiation Exposure Compensation Act Amendments of 2019, S. 947, 116th Cong. (as introduced in Senate, Mar. 28, 2019) [hereinafter Senate Amendment].

window for claim eligibility.<sup>104</sup> Both amendments would expand this timeframe through 1990, adding an additional nineteen years to the compensable window.<sup>105</sup> Beyond increasing work-period eligibility, both proposed amendments broaden the list of compensable illnesses beyond exclusively lung disease, extending recovery to individuals who have suffered from renal diseases as well.<sup>106</sup> Importantly, both amendments move the sunset period for the law back an additional nineteen years (Senate)<sup>107</sup> and twenty-three years (House),<sup>108</sup> providing more time for claimants, many of whom would be newly eligible, to file for recovery.

In addition to extending compensation to more people, these amendments would loosen the overly strict and culturally deficient procedural requirements for documentation. Both versions would force the DOJ to accept declarations and affidavits as evidence of employment, as opposed to specific and precise documentation, like a pay stub, which may never have been issued.<sup>109</sup> The proposed House amendment takes this a step further and would require the Attorney General to promulgate regulations to “take into account and make allowances for the law, tradition, and customs of Indian tribes,” including the required acceptance of evidence from “an elected leader of an Indian tribe,” among other, more culturally proficient sources.<sup>110</sup> The House amendment would be a powerful solution to Udall’s “bureaucratic legal maze,”<sup>111</sup> and would inject much needed flexibility into DOJ’s strict procedural requirements. Notably, this cultural addition is lacking from the Senate’s version of the amendment.

While these proposed amendments would undoubtedly improve RECA’s procedures, there are two areas which have been overlooked. Neither version of this amendment would expand RECA compensation to communities rather than individuals or extend the federal apology to tribes.

Even if a substantial percentage of the residents of a community have received RECA compensation, no RECA funding can be directed

---

<sup>104</sup> Nez-Lizer Commend Congressman, *supra* note 99, at 1; Press Release, Navajo Nation Office of the President and Vice President, Nez-Lizer Admin. reaffirms commitment to former uranium miners and downwinders to support RECA amendments 2 (July 2, 2019), <https://tinyurl.com/yap2wlas>.

<sup>105</sup> H.R. 3783 § 5(a)(2); S. 947 § 5(a)(2).

<sup>106</sup> H.R. 3783 § 5(b); S. 947 § 5(b).

<sup>107</sup> S. 947 § 3.

<sup>108</sup> H.R. 3783 § 3.

<sup>109</sup> *Id.* § 6(a)(3)(A); S. 947 § 6(a)(3)(A); Schneider, *supra* note 78, at A1, B10.

<sup>110</sup> H.R. 3783 § 6(d)(2).

<sup>111</sup> Schneider, *supra* note 78, at B10.



toward the Tribe or be used to remediate the remaining uranium mines to prevent continuing harm.<sup>112</sup> In addition, while the House amendment adds many new states to Congress' apology, neither amendment extends that same apology to any tribe.<sup>113</sup> While the apology on its own would not broaden the statute's scheme or increase monetary compensation, it is telling that tribal communities have been folded into their respective states. Despite these oversights, if enacted, these legislative solutions will be greatly beneficial.

RECA has incredibly laudable goals but has thus far been an imperfect law. It is narrowly applied and requires too much procedure. Legislative change is required to improve RECA and achieve its stated goals. The proposed amendments would both make much needed improvements to the law. However, both would still limit RECA compensation to individuals, not communities, and neither specifically recognizes the Navajo Nation or any other tribe in the apology.

### *B. Remediating Mill Sites: Uranium Mill Tailings Radiation Control Act*

Prior to 1978, federal agencies had no authority to regulate uranium mills after operations had terminated, despite the government's heavy reliance on mill sites for its nuclear procurement program.<sup>114</sup> This poor oversight resulted in many of the impoundments being improperly lined which allowed liquid waste to permeate into the groundwater.<sup>115</sup> In addition, the sandy tailings were used as construction materials for roads,

---

<sup>112</sup> See 1990 RECA, *supra* note 75, §§ 5-6.

<sup>113</sup> H.R. 3783 § 2.

<sup>114</sup> LANCE N. LARSON, LONG-TERM FEDERAL MANAGEMENT OF URANIUM MILL TAILINGS 5 n.16 (Cong. Res. Serv. ed., Aug. 2019), <https://fas.org/sgp/crs/nuke/R45880.pdf> ("As the NRC testified in 1978: 'Historically, the NRC and its predecessor agency have not had regulatory jurisdiction over uranium mill tailings after mill operations are terminated because the tailings are not themselves licensable material. Regulatory control over tailings is exerted indirectly as part of the Commission's licensing of ongoing milling operations pursuant to licensing authority over source materials. Therefore, after operations had ceased at the 22 inactive sites being considered and all licensable quantities of source material removed, the regulatory staff had no further role.'") (quoting *Uranium Mill Tailings Control Act of 1978: Hearing on H.R. 11698, H.R. 1229, H.R. 12938, H.R. 12535, H.R. 13049, and H.R. 13650 Before the H. Subcomm. on Energy and Power of the H. Comm. on Interstate and Foreign Commerce, 95th Cong. 216 (1978)* (statement of Joseph M. Hendrie)).

<sup>115</sup> OFF. OF LEGACY MGMT., U.S. DEP'T OF ENERGY, FACT SHEET: TUBA CITY, ARIZONA, DISPOSAL SITE 2 (2018), <https://www.energy.gov/sites/prod/files/2019/12/f69/TubaCityFactSheet.pdf> [hereinafter FACT SHEET: TUBA CITY, ARIZONA, DISPOSAL SITE].

farmlands, schools, and homes.<sup>116</sup> There are even reports of a uranium mill operator leaving a front-end loader full of tailings for “members of the public to take as much uranium tailings material as they could handle.”<sup>117</sup> Recognizing this regulatory gap and its ensuing harms, Congress passed the Uranium Mill Tailings Radiation Control Act (“UMTRCA”) in 1978, seven years after the federal government had officially ended its legal monopoly on uranium.<sup>118</sup>

This law takes a two-fold approach to dealing with uranium mills: Title I requires the remediation of legacy mill sites created prior to 1978, and Title II licenses new sites so similar harms do not occur again.<sup>119</sup> The statute creates a complex regulatory scheme. The Environmental Protection Agency (“EPA”) is tasked with creating regulations,<sup>120</sup> the United States Nuclear Regulatory Commission (“NRC”)—successor to the AEC—concurs with site remediation plans and provides licenses for mill sites, and the Department of Energy (“DOE”) is responsible for remediating legacy mill sites.<sup>121</sup> The federal government completely pays for Title I legacy site remediation on Indian land, but provides no federal funding to decommission Title II mill sites, despite the fact that Title II licensees have sometimes lacked adequate funding to safely decommission their mills.<sup>122</sup>

### *1. Mill Site Remediation: A Success Story*

For the Navajo Nation, this program has successfully implemented remediation measures for legacy mill sites and has been moderately successful for remediation at Title II mill sites. There are four legacy mills on the reservation: (1) Mexican Hat Disposal Site; (2) Monument Valley Processing Site; (3) Shiprock Disposal Site; and (4) Tuba City Disposal Site.<sup>123</sup> In addition, there is one Title II mill site adjacent to the Navajo reservation, the UNC Church Rock Mill, slated for transition to Title I in

---

<sup>116</sup> LARSON, *supra* note 114, at 6.

<sup>117</sup> *Id.*

<sup>118</sup> *Id.* at 5–6.

<sup>119</sup> *Backgrounder on Uranium Mill Tailings*, *supra* note 45.

<sup>120</sup> See Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings, 40 C.F.R. § 192 (2018).

<sup>121</sup> LYDIA CHANG, STATUS OF LEGACY MILL CLEANUP 7, <https://archive.epa.gov/region9/superfund/web/pdf/uraniummills-lydiachang-usnrc.pdf> (last visited May 3, 2020); *Backgrounder on Uranium Mill Tailings*, *supra* note 45.

<sup>122</sup> LARSON, *supra* note 114, at 19–20.

<sup>123</sup> OFF. OF LEGACY MGMT, U.S. DEP’T OF ENERGY, *supra* note 6.

2025.<sup>124</sup> This site is also a superfund site under CERCLA—discussed in more depth below—and is where the largest radioactive spill in the nation's history occurred.<sup>125</sup>

During their use, each legacy mill site accumulated and improperly stored vast quantities of radioactive materials and dangerous chemicals causing serious environmental contamination.<sup>126</sup> Mills did not use wind shields to keep the sandy uranium tailings from blowing across the area, and wind has scattered these radioactive materials throughout the reservation.<sup>127</sup> In addition, the impoundment pits which stored the liquid waste used to leach uranium from the rocks were not lined with an impermeable clay layer and therefore toxic materials—uranium, nitrite, sulfur, etc.<sup>128</sup>—could leach into the groundwater.

The groundwater near these sites is still largely unsafe and unusable for any purpose.<sup>129</sup> Near the Monument Valley mill site, the Navajo Nation was required to install a domestic water system to provide water to the residents of that region.<sup>130</sup>

The federal government has recognized these harms and remediation is currently ongoing at each of the legacy mill sites.<sup>131</sup> Water is pumped out of the ground table, placed into evaporation pits to separate the water from the harmful pollution, and then pumped back into the aquifer upstream of the mill site, removing radioactive materials from the water

---

<sup>124</sup> U.S. DEP'T OF ENERGY, LEGACY MANAGEMENT: SITE MANAGEMENT GUIDE 13 (Mar. 2018), <https://www.energy.gov/sites/prod/files/2018/05/f51/LM%20Site%20Management%20Guide%20%28March%202018%29.pdf>.

<sup>125</sup> MILLARD, *supra* note 60, at i.

<sup>126</sup> *Radioactive Waste From Uranium Mining and Milling*, *supra* note 45; FACT SHEET: TUBA CITY, ARIZONA, DISPOSAL SITE, *supra* note 115.

<sup>127</sup> *Radioactive Waste From Uranium Mining and Milling*, *supra* note 45.

<sup>128</sup> FACT SHEET: TUBA CITY, ARIZONA, DISPOSAL SITE, *supra* note 115.

<sup>129</sup> *Radioactive Waste From Uranium Mining and Milling*, *supra* note 45.

<sup>130</sup> OFF. OF LEGACY MGMT., U.S. DEP'T OF ENERGY, FACT SHEET: MONUMENT VALLEY, ARIZONA, PROCESSING SITE (2018), <https://www.energy.gov/sites/prod/files/2019/12/f69/Monument%20Valley%2C%20Arizona%2C%20Processing%20Site%20Fact%20Sheet.pdf> [hereinafter FACT SHEET: MONUMENT VALLEY, ARIZONA, PROCESSING SITE].

<sup>131</sup> See FACT SHEET: TUBA CITY, ARIZONA, DISPOSAL SITE, *supra* note 115; FACT SHEET: MONUMENT VALLEY, ARIZONA, PROCESSING SITE, *supra* note 130; OFF. OF LEGACY MGMT., U.S. DEP'T OF ENERGY, FACT SHEET: SHIPROCK, NEW MEXICO, DISPOSAL SITE 2 (2018), <https://www.energy.gov/sites/prod/files/2019/12/f69/ShiprockFactSheet.pdf>; OFF. OF LEGACY MGMT., U.S. DEP'T OF ENERGY, FACT SHEET: MEXICAN HAT, UTAH, DISPOSAL SITE 4 (2020), <https://www.energy.gov/sites/prod/files/2020/06/f75/MexicanHatFactSheet.pdf>.

table.<sup>132</sup> In addition, DOE has created pentagonal storage areas lined with impermeable materials to store waste, pursuant to EPA's regulations, which are designed to last for 1,000 years and DOE's "responsibility for the safety and integrity of the site will last indefinitely."<sup>133</sup>

While the harms caused by the legacy mill sites continue, the federal government has funded and mitigated much of the pollution caused by these sources.<sup>134</sup> The Navajo Nation stated that surface remediation is complete at each of the four mill sites, and the "Mexican Hat site requires no further active ground water remediation."<sup>135</sup> In addition, DOE meaningfully consults with a wide range of Navajo departments, including the Navajo Nation Office of the President, Environmental Protection Agency, Council, and Historic Preservation Department.<sup>136</sup> In the same vein, DOE creates many opportunities for the community to learn and engage in its remediation efforts.<sup>137</sup> This consultation is an important step for DOE to better understand where resources need to be focused and how to balance tribal interests with remediation practices.

One example of the importance of consultation is the Rocky Mountain Bee Plant. Many Navajo tribal members eat the edible seed pods of the Rocky Mountain Bee Plant, a plant that could easily be overlooked when choosing which vegetation to test for uranium contamination or when choosing native plants to revegetate a toxic site.<sup>138</sup>

The International Atomic Energy Agency has heralded DOE on the international stage as an example of doing good work in both remediating

---

<sup>132</sup> OFF. OF LEGACY MGMT., U.S. DEP'T OF ENERGY, FACT SHEET: SHIPROCK, NEW MEXICO, DISPOSAL SITE 2 (2018), <https://www.energy.gov/sites/prod/files/2019/12/f69/ShiprockFactSheet.pdf>.

<sup>133</sup> FACT SHEET: TUBA CITY, ARIZONA, DISPOSAL SITE, *supra* note 115.

<sup>134</sup> *The Uranium Mill Tailings Remedial Action (UMTRA) Program*, NAVAJO UMTRA PROGRAM, <https://www.aml.navajo-nsn.gov/UMTRA> (last visited May 3, 2020); LARSON, *supra* note 114, at 9.

<sup>135</sup> *Id.*

<sup>136</sup> OFF. OF LEGACY MGMT., U.S. DEP'T OF ENERGY, DOC. NO. S09372, COMMUNICATIONS AND OUTREACH PLAN FOR THE NAVAJO NATION URANIUM MILL TAILINGS RADIATION CONTROL ACT SITES 6 (2019), [https://www.energy.gov/sites/prod/files/2019/03/f60/NN\\_Communications\\_and\\_Outreach\\_Plan\\_FINAL\\_20190225.pdf](https://www.energy.gov/sites/prod/files/2019/03/f60/NN_Communications_and_Outreach_Plan_FINAL_20190225.pdf).

<sup>137</sup> *Id.* at 9–11.

<sup>138</sup> Jamie deLemos et al., *Lessons from the Navajo: Assistance with Environmental Data Collection Ensures Cultural Humility and Data Relevance*, 1 PROGRESS CMTY. HEALTH P'SHIPS 1, 4 (2007), <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2719896/>.

radioactive places and incorporating the local population into those procedures.<sup>139</sup>

As such, it seems like UMTRCA is fulfilling its purpose for legacy mill sites. It seems that the magnitude of the continuing harms is a reflection of the egregious nature of the harms, and not a reflection of an inadequate regulatory scheme. Essentially, no matter how good the doctor, certain injuries will take a long time to heal.

## 2. *Limits to UMTRCA*

UMTRCA's success comes from its high level of specificity. The law only focuses on mills—not mines, people, or culture.<sup>140</sup> In addition, funding for remediation on the Navajo reservation is directly tied to the federal government, and there are only four legacy mill sites on the Navajo reservation, unlike the hundreds of still un-remediated mines.<sup>141</sup>

While this focus makes UMTRCA effective, it also limits available remedies, and does not create any legal avenue for the Navajo people to recover, individually or as a Tribe, or to force remediation of legacy mines. This law is an important tool to deal with the intense concentration of radioactive materials at old mill sites, but it is limited. For the uranium issue to be truly solved, other legislative schemes are required.

## II. MINE REMEDIATION AND RECLAMATION: WHY AND HOW THE UNITED STATES SHOULD ASSUME LEGAL RESPONSIBILITY

This Part provides: (1) an overview of the Comprehensive Environmental Response, Compensation, and Liability Act; (2) an analysis of how the United States could be considered a potentially responsible party under CERCLA liability; and (3) an exploration of how new legislation could be used to fill gaps in CERCLA's legal scheme.

---

<sup>139</sup> See INT'L ATOMIC ENERGY AGENCY, REMEDIATION OF LAND CONTAMINATED BY RADIOACTIVE MATERIAL RESIDUES 4, 27–28 (2014), <https://www-pub.iaea.org/MTCD/Publications/PDF/Pub1612web-85932495.pdf>.

<sup>140</sup> See generally Uranium Mill Tailings Radiation Control Act, 42 U.S.C. §§ 7901–7942 (2018).

<sup>141</sup> See *supra* Introduction Part A.

*A. Remediating Abandoned Mines: Comprehensive Environmental Response, Compensation, and Liability Act*

There is a significant cost that comes with reclaiming and remediating abandoned mines. On the Navajo Nation, DOE estimates that reclamation averages \$76,000 for an abandoned uranium mine, while remediation, the extra step of decontaminating toxic waste, is far more expensive.<sup>142</sup> EPA roughly estimates that the combined costs of reclamation and remediation for the smallest mines is between \$24,000 and \$106,000, for medium sized mines is between \$166,000 and \$1,000,000, and for large mines, which extracted over 100,000 tons of ore, is in the millions, ranging from \$5,560,000 to \$17,200,000.<sup>143</sup> Both EPA and DOE admit that the high end of remediation is likely underestimated.<sup>144</sup> As comparison to other major uranium mines, DOE estimates that it cost \$13 million to remediate the Lucky Lass uranium mine in Oregon, \$2.7 million to remediate the Juniper uranium mine in California, and \$205 million to remediate the Midnite Mine in Washington, including long-term water treatment.<sup>145</sup>

When it comes to paying this price, the most appropriate available legal tool is the Comprehensive Environmental Response, Compensation, and Liability Act (“CERCLA”), also called Superfund. Unlike RECA and UMTRCA, CERCLA was not developed as a response to the nuclear procurement program, but rather as the catch-all toxic waste cleanup statute.<sup>146</sup> Its goals are to track down major environmental polluters and make them pay for their harmful actions, though it does not impose punitive damages.<sup>147</sup> In addition, it provides a trust, the Superfund, which EPA can use to remediate environmentally contaminated areas.<sup>148</sup>

There are two ways a toxic site can fall under the purview of CERCLA: either it is listed on the National Priorities List (“NPL”), or there is a threatened or actual release of a hazardous substance.<sup>149</sup> Without one of these two events, CERCLA remediation cannot happen. And,

---

<sup>142</sup> OFF. OF LEGACY MGMT., U.S. DEP’T OF ENERGY, DOC. NO. S10859, DEFENSE-RELATED URANIUM MINES COST AND FEASIBILITY TOPIC REPORT vi, 7 (2014), [https://www.energy.gov/sites/prod/files/2017/07/f35/S10859\\_Cost.pdf](https://www.energy.gov/sites/prod/files/2017/07/f35/S10859_Cost.pdf).

<sup>143</sup> *Id.* at vii.

<sup>144</sup> *Id.*

<sup>145</sup> *Id.* at 7.

<sup>146</sup> *Superfund: CERCLA Overview*, EPA, <https://www.epa.gov/superfund/superfund-cercla-overview> (last updated June 4, 2018).

<sup>147</sup> *Id.*

<sup>148</sup> *Id.*

<sup>149</sup> *Id.*

unless a site is listed on the NPL or part of settlement negotiations, it is not eligible for money out of the Superfund.<sup>150</sup>

CERCLA has two main avenues of attack. First, it determines which sites are eligible to be listed on the NPL using EPA's hazardous ranking system.<sup>151</sup> This system allocates points based on the magnitude of harm to people through water, air, and soil pollution, and then applies a complex formula combining each factor.<sup>152</sup> For example, every well within 1,320 feet of an abandoned uranium mine on the Navajo Nation is worth 100 points.<sup>153</sup> Currently, none of the abandoned mines in the Navajo Nation have enough points to be listed on the NPL, although the UNC mill is just across the border and was listed in 1981.<sup>154</sup> Importantly, because none of the abandoned mines on the reservation are on the NPL and many do not have settlement agreements, many are not eligible for money from the Superfund trust.<sup>155</sup>

Second, CERCLA creates a powerful liability scheme to obtain remediation funds. CERCLA ascribes liability to Potentially Responsible Parties ("PRPs") using four categories: (1) owners or operators of a facility; (2) past owners and operators when the hazardous wastes were deposited; (3) generators and arrangers who created or arranged for hazardous waste to go to a site; and (4) transporters, who selected the site.<sup>156</sup> Once EPA brands an entity as a PRP, it is subjected to the incredible power of CERCLA liability. Liability is strict, retroactive, joint, and several.<sup>157</sup> Even if a PRP took every conceivable precaution, if its actions somehow contributed to the pollution, it is liable.<sup>158</sup> Most importantly, any one PRP can be held liable for one hundred percent of costs associated with cleanup, damages to natural resources, and costs of

---

<sup>150</sup> *Superfund Site Assessment Process*, EPA, <https://www.epa.gov/superfund/superfund-site-assessment-process> (last updated June 19, 2018).

<sup>151</sup> EPA, HAZARD RANKING SYSTEM GUIDANCE MANUAL 1 (1992), <https://semspub.epa.gov/work/11/189159.pdf>.

<sup>152</sup> *Id.* at 32.

<sup>153</sup> TERRASPECTRA, *supra* note 22, at 12.

<sup>154</sup> See *Superfund National Priorities List (NPL) Where You Live Map*, EPA, <https://www.arcgis.com/apps/webappviewer/index.html?id=33cebcdfdd1b4c3a8b51d416956c41f1> (last visited Apr. 1, 2020); U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-19-123, EPA SHOULD IMPROVE THE RELIABILITY OF DATA ON NATIONAL PRIORITIES LIST SITES AFFECTING INDIAN TRIBES 56 (2019), <https://www.gao.gov/assets/700/696541.pdf>.

<sup>155</sup> Susie Neilson, *Feds Give Navajo Uranium Contract to Firm with Sketchy Past*, HIGH COUNTRY NEWS (Nov. 25, 2019), <https://www.hcn.org/issues/51.20/indigenous-affairs-feds-give-navajo-uranium-clean-up-contract-to-firm-with-sketchy-past>.

<sup>156</sup> *Superfund Site Assessment Process*, *supra* note 150.

<sup>157</sup> *Superfund Liability*, EPA, <https://www.epa.gov/enforcement/superfund-liability> (last updated July 18, 2019).

<sup>158</sup> *Id.*

certain health assessments, even if multiple PRPs contributed to the waste at a site.<sup>159</sup>

CERCLA is not only powerful when it is used, it is powerful when it is not.<sup>160</sup> The potential liability for a PRP is so great that it brings many environmental contaminators to the negotiating table. In fact, EPA “prefers to reach an agreement with a potentially responsible party (PRP) to clean up a Superfund site instead of issuing an order or paying for it and recovering the cleanup costs later.”<sup>161</sup>

This legal tool has played a major part in remediating uranium mines across the Navajo Nation and played an important role in getting Cyrus Amax and Western Nuclear to settle in 2017 for nearly \$270 million for their uranium mines.<sup>162</sup>

There is a lot of money at stake with these cleanups, and EPA uses CERCLA money to hire contractors to remediate the toxic waste sites.<sup>163</sup> Recognizing this potential, the Navajo Nation has implored the EPA to preferentially hire Navajo contractors and businesses in order to boost the Navajo economy.<sup>164</sup> In this way, CERCLA could be expanded beyond just reclaiming land and be used as a tool that would help the Tribe as a whole. EPA has done some good work here and has awarded a nearly \$1 million dollar contract to a small Navajo-woman-owned business to improve access roads to abandoned mines, but the vast majority of funds have been given to other businesses.<sup>165</sup> Eighty-five million has been awarded to Tetra Tech, a worldwide company which made \$3.1 billion in revenue in 2019.<sup>166</sup>

---

<sup>159</sup> *Superfund Liability*, EPA, <https://www.epa.gov/enforcement/superfund-liability> (last updated July 18, 2019).

<sup>160</sup> *Negotiating Superfund Settlements*, EPA, <https://www.epa.gov/enforcement/negotiating-superfund-settlements> (last updated July 15, 2019).

<sup>161</sup> *Id.*

<sup>162</sup> ENVTL. PROT. AGENCY, ABANDONED URANIUM MINE SETTLEMENTS ON THE NAVAJO NATION (Apr. 2018), [https://www.epa.gov/sites/production/files/2018-05/documents/navajo\\_nation\\_settlement\\_fact\\_sheet-2018-04-18.pdf](https://www.epa.gov/sites/production/files/2018-05/documents/navajo_nation_settlement_fact_sheet-2018-04-18.pdf).

<sup>163</sup> OFF. OF LEGACY MGMT., *supra* note 142, at vii.

<sup>164</sup> Press Release, The Navajo Nation Office of the President and Vice President, Nez-Lizer urge federal EPA to prioritize Navajo contractors in uranium mine clean-up efforts (Jan. 23, 2020), <https://tinyurl.com/seohyo2>.

<sup>165</sup> Margot Perez-Sullivan, *U.S. EPA Awards Clawson Excavating, Inc. a \$918,911 Contract for Road Improvements in Cove, Az*, EPA (Mar. 26, 2018), <https://archive.epa.gov/epa/newsreleases/us-epa-awards-clawson-excavating-inc-918911-contract-road-improvements-cove-ariz.html>.

<sup>166</sup> Margot Perez-Sullivan, *EPA Awards Tetra Tech Inc. \$85 Million Contract to Assess Navajo Abandoned Uranium Mines*, EPA (Oct. 11, 2017), <https://archive.epa.gov/epa/newsreleases/epa-awards-tetra-tech-inc-85-million-contract-assess-navajo-abandoned-uranium-mines-0.html>.



Despite its potential strength, CERCLA has failed to completely remediate the uranium mines on the Navajo Nation.<sup>167</sup> As of the last updated report, EPA has identified PRPs for only seventy-four mines, while a whopping 449 are orphaned.<sup>168</sup> This is mainly due to the fact that many of the original mining companies have declared bankruptcy or have been sold, liability and all, to other companies that lack the necessary assets to fully pay for remediation.<sup>169</sup> In addition, without a court order or a settlement, none of the abandoned mines on the Navajo Nation can receive funds from the Superfund trust because settlement money is site specific<sup>170</sup> and none of the mines are on the NPL.<sup>171</sup>

Even with this incredible liability scheme, without something more, the uranium mines on the Navajo Nation will continue to remain unremediated hazards.

*1. The United States as a PRP: A Liability Scheme to Compensate for the Lack of a Uranium Mine-Specific Remediation Law*

Although CERCLA is the law best suited to remediating abandoned uranium mines, unlike RECA and UMTRCA, the statute was not developed to respond to the harms of the nuclear procurement era. In fact, Congress has not passed any specific law aimed at remediating abandoned

---

<sup>167</sup> As of April 2020, Navajo Abandoned Uranium Mines were added to the EPA Administrator's Superfund Emphasis List. This does not guarantee new funding or add any sites to the NPL but is a recognition that these sites need increased attention as the EPA moves toward creating a new ten-year plan. *Administrator's Emphasis List*, EPA, <https://www.epa.gov/superfund/administrators-emphasis-list> (last updated Aug. 12, 2020); Margot Perez-Sullivan, *EPA Releases Eighth Update to the Administrator's Superfund Emphasis List, Navajo Abandoned Uranium Mines Added*, EPA (Apr. 15, 2020), <https://www.epa.gov/newsreleases/epa-releases-eighth-update-administrators-superfund-emphasis-list-navajo-abandoned>.

<sup>168</sup> ENVTL. PROT. AGENCY, FEDERAL ACTIONS TO ADDRESS IMPACTS OF URANIUM CONTAMINATION IN THE NAVAJO NATION 41 (Jan. 2013), <https://www.epa.gov/sites/production/files/2016-07/documents/navajouraniumreport2013.pdf>.

<sup>169</sup> See *Eastern Abandoned Uranium Mine Region*, EPA, <https://www.epa.gov/navajo-nation-uranium-cleanup/eastern-abandoned-uranium-mine-region> (last updated May 13, 2019).

<sup>170</sup> DAVID M. BEARDEN, COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT 23 (Cong. Res. Serv. ed., Jun. 14, 2012), <https://fas.org/sgp/crs/misc/R41039.pdf>.

<sup>171</sup> U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-14-323, URANIUM CONTAMINATION: OVERALL SCOPE, TIME FRAME, AND COST INFORMATION IS NEEDED FOR CONTAMINATION CLEANUP ON THE NAVAJO RESERVATION (May 2014), <https://www.gao.gov/assets/670/662964.pdf>.

uranium mines.<sup>172</sup> Without this specificity, despite EPA's recent successes, CERCLA has failed to completely solve the problem and there are still hundreds of abandoned mines on the Navajo Nation without a clear path to remediation.<sup>173</sup>

CERCLA does not take responsibility for the harms of the nuclear procurement era, like RECA, and is not specifically tailored to uranium harms, like UMTRCA. Instead, CERCLA works by tracking down PRPs and forcing them to pay remediation costs. However, because many PRPs cannot be located or cannot pay for remediation,<sup>174</sup> these uranium mines have fallen through a significant gap in CERCLA's liability scheme. Because it is unlikely that EPA will find a viable PRP for all the abandoned uranium mines, it is unlikely that private companies will eventually pay to remediate all the abandoned uranium mines. Rather, the United States should claim responsibility for these mines and remediate them. However, because Congress has not passed legislation to this purpose, the Navajo Nation must use CERCLA against the United States to force remediation. Essentially, the Navajo Nation must claim that the United States is a PRP for every abandoned uranium mine on the reservation. This argument is by no means a stretch.

Although private corporations were responsible for obtaining mining leases, it was the United States that all but forced the Navajo Nation to approve them. Private corporations operated mines, but the United States was the sole purchaser of the product.<sup>175</sup> Private corporations are ultimately responsible for abandoning these toxic sites on the Navajo land, but it was the United States government that purposefully incentivized these practices.<sup>176</sup> The United States was not an innocent bystander but an active, monopolistic participant in the uranium mining that occurred across the Navajo reservation. Simply put, the United States is liable under CERCLA for the damage uranium mining has caused to the Navajo

---

<sup>172</sup> SMRCA was amended in 2006 to allow its funds, normally for coal mine remediation, to be used for noncoal mines. However, these funds are directly linked to tonnage of coal mines in an area and are not appropriated based on uranium sites. *See Use of Surface Mining Control and Reclamation Payments for Non-Coal Projects: Hearing on H.R. 4817 Before the Subcomm. on Energy and Mineral Resources of the H. Comm. on Nat. Res.*, 111th Cong. (2010) (statement of Glenda Owens, Deputy Director, Office of Surface Mining Reclamation and Enforcement, U.S. Dep't of the Interior).

<sup>173</sup> *Contamination and Criticality*, *supra* note 48, at 1.

<sup>174</sup> *Eastern Abandoned Uranium Mine Region*, *supra* note 169.

<sup>175</sup> *See supra* Section I.B.

<sup>176</sup> *See supra* Introduction Part B.

Nation. Moreover, this type of federal liability has been explicitly upheld by numerous courts.<sup>177</sup>

Under CERCLA, the United States has both owner and arranger liability. Private companies may have physically mined, milled, and accumulated waste, but the United States was a *partial owner* of each site due to its trustee role with the Navajo Nation where it “reviewed and approved permits and leases, included various oversight powers in the permits and leases, advised the Nation on its uranium regulation activities, and collected rents and royalties for the Nation’s benefit.”<sup>178</sup> In addition, the United States *arranged* for uranium mining in the 1950s because it “created financial incentives, promoted uranium mining on the Colorado Plateau, approved construction of [mills and mines], and purchased uranium ore and concentrate.”<sup>179</sup> Moreover, the United States received considerable benefit from the mines for supplying its nuclear weapon needs during the Cold War—an additional factor courts weigh when allocating liability.<sup>180</sup>

Because of the joint and several liability scheme of CERCLA, a court could find that the United States is one hundred percent responsible for the costs of remediation for nearly every single mine dug on the Navajo reservation. However, while the federal government may be described as

---

<sup>177</sup> See *Lockheed Martin Corp. v. United States*, 35 F. Supp. 3d 92, 97 (D.D.C. 2014) (awarding 0% of the cost of remediation for past contamination for the three facilities to the government, but after finding Lockheed Martin as the sole operator of the sites, equitably allocating future response costs to the government in ranges of 29%, 24%, and 19%); *Cadillac Fairview/California, Inc. v. Dow Chemical Co.*, 299 F.3d 1019 (9th Cir. 2002) (finding the government 100% responsible for the cleanup costs associated with a synthetic rubber facility because the government was found liable as an owner, operator and arranger of the site and there existed an agency relationship between the government and corporation); *United States v. Shell Oil Co.*, 294 F.3d 1045 (9th Cir. 2002) (affirming the district court’s allocation of 100% of the cleanup costs for benzol waste associated with the production of aviation fuel during World War II to the United States because it was found to be an arranger); *TDY Holdings, LLC v. United States*, 372 F. Supp. 3d 1091, 1093–94 (S.D. Cal. 2019) (awarding 5% and 10% of the cleanup costs associated with two chemical contaminants to the United States because of its limited role in the introduction of the contaminants to the site); *United States v. Newmont USA Ltd.*, No. CV-05-020-JLQ, 2008 WL 4621566 (E.D. Wash. Oct. 17, 2008) (awarding the United States Government one-third of the cleanup responsibility under CERCLA because of the government’s knowledge of the environmental problems associated with open-pit mining and uranium production and the benefits it received from the production during the Cold War, coupled with the fact that the United States had authority to inspect the mining operations and its environmental impacts).

<sup>178</sup> *El Paso Nat. Gas Co., LLC v. United States*, 390 F. Supp. 3d 1025, 1054 (D. Ariz. 2019).

<sup>179</sup> *Id.* at 1054–55.

<sup>180</sup> *Id.* at 1053–56.

a PRP, there are a few legal hurdles to legally classify it as one. The Navajo Nation may take a few different legal approaches under CERCLA to recover from the federal government, but this Note will focus on one: recovering natural resources damages under Section 9607(f).

*a. Using Section 9607(f) to Recover Natural Resources  
Damage from the United States*

The Navajo Nation could bring a natural resources damages claim under 42 U.S.C. Section 9607(f).<sup>181</sup> These claims allow trustees of natural resources—federal, state, and tribal governments—to bring suit against PRPs and recover damages for costs to the environment.<sup>182</sup> In 2003, a similar case was brought through counterclaims against the United States for incentivizing damages to natural resources caused by mining and serves as a useful analog for this complex legal claim.<sup>183</sup>

To succeed in this claim, the Tribe must: (1) link the United States to each waste site; (2) demonstrate that injuries to natural resources are traceable to particular releases of hazardous substances from those sites; and (3) prove that those injuries fall within the statute of limitations.<sup>184</sup> Essentially, the main issues are causation, timing, and recoverability.

Expertise is required to prove causation. The Navajo Nation must trace the cause of any damage to natural resources to a particular release of a hazardous substance that originates from a specific mine site.<sup>185</sup> Proving causation becomes especially difficult when there are hundreds of mines, each polluting identical toxins. In these instances, “where releases of hazardous substances have been comingled,” courts use the “contributing factor” test which requires evidence that “at least some of the injury would have occurred if only the Defendant’s amount of release had occurred.”<sup>186</sup> This test is highly fact-specific. Moreover, Department of the Interior’s regulation for measuring natural resource damages is extremely technical.<sup>187</sup> These fact-heavy technical requirements weigh the scale against the Navajo Nation as courts tend to give preferential

---

<sup>181</sup> For an in-depth analysis of a tribal claim, see *Coeur D’Alene Tribe v. Asarco Inc.*, 280 F. Supp. 2d 1094 (D. Idaho 2003).

<sup>182</sup> U.S. GOV’T ACCOUNTABILITY OFFICE, GAO/RCED-96-71, SUPERFUND: OUTLOOK FOR AND EXPERIENCE WITH NATURAL RESOURCE DAMAGE SETTLEMENTS I (APR. 1996), <https://www.gao.gov/assets/230/222624.pdf> [hereinafter OUTLOOK FOR AND EXPERIENCE WITH NATURAL RESOURCE DAMAGE SETTLEMENTS]; Liability, 42 U.S.C. § 9607 (2018).

<sup>183</sup> See *Coeur D’Alene Tribe*, 280 F. Supp. 2d 1094.

<sup>184</sup> OUTLOOK FOR AND EXPERIENCE WITH NATURAL RESOURCE DAMAGE SETTLEMENTS, *supra* note 182, at 4.

<sup>185</sup> *Coeur D’Alene Tribe*, 280 F. Supp. 2d at 1124.

<sup>186</sup> *Id.*

<sup>187</sup> Injury Determination Phase – Injury Definition, 43 C.F.R. § 11.62 (2009).

deference to agency expertise on issues involving the interpretation of technical data.<sup>188</sup>

Timing presents the most complex legal hurdle for the Navajo Nation. For natural resources damages claims, the statute of limitations tolls the moment damage is discovered and lasts only for three years.<sup>189</sup> Although Section 126(d)(2) of CERCLA carves out a slightly longer exception for tribes, some of the mines on the Navajo Nation are well beyond the statutory limit for suit.<sup>190</sup> In addition, CERCLA bars recovery for natural resources damages which “occurred wholly before the enactment date.”<sup>191</sup> As such, the Navajo Nation can only make a claim for damages which occurred after 1980 and are within the statute of limitations.

Despite these timing barriers, there are methods of bringing suit to recover partial damages. With every new incidence of a hazardous substance release, including the “ongoing releases of hazardous substances from . . . waste rock piles” and “passive movement and migration of hazardous substances by mother nature,” a new damaging event has occurred.<sup>192</sup> Therefore, every time there is a new release of radioactive materials from a mine, Navajo Nation can file a claim.<sup>193</sup>

Recoverability is similarly limited. In theory, the Tribe can recover enough damages to completely “restore natural resources,”<sup>194</sup> but only for the damages which occurred after the enactment of CERCLA and within the statute of limitations. In addition, “in the case of damages to an Indian tribe occurring pursuant to a Federal permit or license,” damages are only recoverable if the permit was “inconsistent with the fiduciary duty of the United States with respect to such Indian tribe.”<sup>195</sup> Although the permits were technically issued by the Tribal Counsel, a key part of the PRP argument is the heavy influence the United States had over the permitting procedures.<sup>196</sup> As such, this may force the Navajo Nation to prove what is and is not consistent with the fiduciary duty of the United States, another

---

<sup>188</sup> See generally Emily Hammond Meazell, *Super Deference, the Science Obsession, and Judicial Review as Translation of Agency Science*, 108 MICH. L. REV. 733 (2011).

<sup>189</sup> 42 U.S.C. § 9613 (2018).

<sup>190</sup> 42 U.S.C. § 9626 (2018); see *supra* Introduction Part A.

<sup>191</sup> 42 U.S.C. § 9607(f)(1); *Coeur D'Alene Tribe*, 280 F. Supp. 2d at 1111.

<sup>192</sup> *Coeur D'Alene Tribe v. Asarco Inc.*, 280 F. Supp. 2d 1094, 1106–13 (D. Idaho 2003).

<sup>193</sup> *Id.* at 1113.

<sup>194</sup> OUTLOOK FOR AND EXPERIENCE WITH NATURAL RESOURCE DAMAGE SETTLEMENTS, *supra* note 182, at 3.

<sup>195</sup> 42 U.S.C. § 9607(f)(1).

<sup>196</sup> See *supra* Section II.A.1.

legal hurdle to recoverability and a claim the Supreme Court has recently narrowed.<sup>197</sup>

Moreover, the federal government's PRP liability arises from this same trustee relationship with the Tribe.<sup>198</sup> Under CERCLA, recovery from trustees is limited to whatever is in the trust.<sup>199</sup> For cases involving American Indians, the courts have interpreted this to mean that recovery from the United States does not come from tribal assets, but instead comes from the United States treasury and is limited to the value of the Indian trust assets—tribal lands and their revenues.<sup>200</sup> As of 2017, the Navajo Nation had about \$3.28 billion in its Master Trust Program.<sup>201</sup> While that is a significant amount and an equivalent number pulled from the United States treasury would cover much of the remediation cost,<sup>202</sup> this trustee relationship is a complicating factor, and a potential barrier to complete recovery under Section 9607(f).

In sum, for the Navajo Nation to be compensated under the natural resource damage provision, it must show that the United States is a PRP, that specific mines caused more than a negligible amount of damage to natural resources, and that those damages all occurred after 1980 and within the statute of limitations. Despite the size of these legal barriers, this route has led to compensation for the Coeur D'Alene Tribe and presents a viable opportunity for partial recovery to the Navajo Nation.

*b. Learning from RECA and UMTRCA: Furthering the Remediation Scheme*

CERCLA is an effective tool for cleaning hazardous waste sites.<sup>203</sup> However, because it was not tailored to fix the harms from the nuclear procurement era, the Navajo reservation will be stuck with un-remediated uranium mines for years to come. For this reason, Congress should pass a new law which brings uranium mines into the legal remediation scheme first created through RECA and furthered in UMTRCA. To better achieve

---

<sup>197</sup> See *United States v. Navajo Nation*, 556 U.S. 287, 289 (2009); *Significant Indian Cases*, DEP'T OF JUSTICE, <https://www.justice.gov/enrd/significant-indian-cases> (last updated May 12, 2015).

<sup>198</sup> See, e.g., 42 U.S.C. § 9607(n)(5)(i) (2018); *El Paso Nat. Gas Co., LLC v. United States*, 390 F. Supp. 3d 1025, 1059 (D. Ariz. 2019).

<sup>199</sup> 42 U.S.C. § 9607(n).

<sup>200</sup> *United States v. Newmont USA Ltd.*, 504 F. Supp. 2d 1050, 1076 (E.D. Wash. 2007).

<sup>201</sup> Bill Donovan, *Nation's Trust Funds Looking Good*, NAVAJO TIMES (Jan. 4, 2018), <https://navajotimes.com/reznews/nations-trust-funds-looking-good/>.

<sup>202</sup> See *supra* Section II.A.

<sup>203</sup> *CERCLA Overview*, *supra* note 146.

its purposes, this law should learn from RECA and UMTRCA by copying their positive attributes and improving upon any ineffective areas.

In spite of its procedural burdens, RECA has many strengths and 6,618 uranium miner claims, worth \$661,074,560, had been approved as of May 2020.<sup>204</sup> Beyond compensation, one of RECA's strongest features is the federal apology. By acknowledging the United States' responsibility for the harms caused during the nuclear procurement era, Congress clearly articulated its desire to take responsibility for the problem and pass legislation to fix it.<sup>205</sup> Like RECA, this law should include such an apology and extend it to the American Indian tribes which bore the brunt of the harms.<sup>206</sup> In addition, this law will be focused on uranium mines, an issue which disproportionately affects American Indian tribes.<sup>207</sup> For this reason, a new law should improve on RECA's strict bureaucratic burdens and must include procedural flexibility and cultural awareness.<sup>208</sup>

The federal government accepted responsibility for harms to individuals in RECA and extended this responsibility to land in UMTRCA. Both laws were reactionary and were meant to help fix the health and land issues caused by the nuclear procurement era. Because of their origin, both laws similarly guarantee federal funding to achieve their goals.<sup>209</sup> A statute to remediate uranium mines would be born for the same purpose and should tie-in federal funding in a similar manner. In addition, DOE has demonstrated effective techniques for meaningful tribal consultation, and its methodologies should be used as a guide for this new statute.<sup>210</sup>

UMTRCA and RECA are singularly focused. A new law should improve on this by additionally seeking to compensate harmed cultural communities. This could be done, for example, by including provisions for remediating cultural sites, not just uranium mines, and through the hiring of local businesses which could boost the regional economy.

Finally, this law should work with CERCLA's liability scheme, remediating mines while still searching out private PRPs to pay. Private mining companies' responsibility should not be ignored, but waiting for private PRP funding before taking meaningful action has proven to be an ineffective remediation strategy. Action must be taken while these mining

---

<sup>204</sup> *Awards to Date*, DEP'T OF JUSTICE, <https://www.justice.gov/civil/awards-date-0512020> (last updated May 1, 2020).

<sup>205</sup> 1990 RECA, *supra* note 75.

<sup>206</sup> *See generally* Johnnye Lewis et al., *supra* note 17.

<sup>207</sup> *Id.*

<sup>208</sup> *See supra* Section I.A.1.

<sup>209</sup> *See supra* Sections I.A, I.B.

<sup>210</sup> *See supra* Section I.B.1.

companies are searched out, otherwise, these abandoned uranium mines will continue to persist.

## CONCLUSION

Absolutely no one wants an abandoned and un-remediated uranium mine in their backyard. The Navajo Nation houses over five hundred of them. These mines are the direct result of federal government's hunger for uranium ore and its willingness to directly interfere with a sovereign tribe to obtain it. Although the United States has recognized and apologized for the harms its procurement scheme has caused, many of the mines from this period remain toxic hazards which continue to cause suffering.

Congress passed two laws focused on remediating and compensating: RECA and UMTRCA, which, in conjunction with CERCLA, create a legal scheme that could potentially remediate this uranium legacy. However, a simple count of the leftover uranium mines on the reservation clearly shows that these laws have come up short.

Although RECA does compensate some individuals, the law focuses solely on a specific time frame for a specific group of people who carry specific diseases. By ignoring tribal culture, its complex web of red tape and numerous requirements makes recovery difficult.

UMTRCA, in contrast, has been relatively successful at remediating legacy mill sites and monitoring and controlling new sites. However, this success is limited by the law's narrow focus. Because the law only encompasses mill sites—not mines or people—this tool can only be used to remediate specific areas of land.

Finally, CERCLA, while not a response to the nuclear procurement era, has the potential to recover millions for remediation purposes. However, while CERCLA provides a few avenues for the Navajo Nation to force recovery from the federal government, legal hurdles make complete remediation unlikely. As such, Congress should pass new legislation specifically aimed to remediate the abandoned uranium mines left over from the nuclear procurement era.

Although the federal government is actively working to help remediate its uranium legacy, its efforts have fallen short of true justice. Congress has passed laws with extraordinary potential for remediation, but the task is incomplete. In response, laws should be amended and promulgated to better achieve their specific purposes and compensate more fully for the associated harms of uranium. As the Trump administration moves towards incentivizing uranium mining on the Colorado Plateau for the 2021 fiscal year, this toxic legacy must not be



2021]

What's Mine is Yours

107

forgotten, and these legislative tools must be amended, expanded, and wielded correctly.

