ABANDONED MINES, ABANDONED TREATIES: THE FEDERAL GOVERNMENT'S FAILURE TO REMEDIATE ABANDONED URANIUM MINES ON THE NAVAJO NATION

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Native lands have long been exploited in order to meet the energy and resource needs of the United States. Reservations, originally intended to be the permanent homelands for Native nations, quickly devolved into being the nation's sacrificial dumping zones. In particular, uranium mined from the Navajo Nation provided the raw source material necessary for the development of nuclear weapons during times of war. When mine operations ended, mine owners simply walked away from hundreds of toxic and radioactive sites, leaving Navajo communities with contaminated air, land, and water. Today, nearly forty years after mining ended on the Navajo Reservation, funding is available to assess and begin the cleanup process at almost half of the over 500 mines that were left abandoned. Even with the historic amount of funding now available for remediation, more than half of the abandoned mines will still not have funding for cleanup.

The federal Superfund law has been an effective tool in bringing private parties to the negotiating table to pay for cleanup. However, the federal government itself has largely evaded responsibility. This Article argues that the federal government has both a duty of trust and specific treaty obligations owed to the Navajo Nation to provide a

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"permanent home." Even with the 2023 Supreme Court decision in Arizona v. Navajo Nation*, the federal government owes the Navajo Nation a permanent home as expressly agreed to in the 1868 treaty. Further, the federal government's fiduciary obligations extend to protecting tribal trust assets, including air, land, and water.*

INTRODUCTION

With the seventy-fifth anniversary of the Trinity Test in 2020[1] and the Best Picture Award going to Oppenheimer in early 2024,[2] there has been a renewed interest in the U.S. atomic program and dangers to those still suffering from the fallout.[3] Lost in these conversations is the even more sustained injury to the Navajo Nation[4]—the location of no less than 523 abandoned uranium mines.[5] Nearly one hundred years after the California Gold Rush in 1848,[6] a similar mining frenzy occurred in the western United States when uranium was needed for weapons production during the World War II and Cold War.[7]

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1. *75th Anniversary of the Trinity Nuclear Tests*, U.N. HUMAN RTS. OFF. OF THE HIGH COMM'R (July 16, 2020), https://www.ohchr.org/en/press-releases/2020/07/75th-anniversary-trinity-nuclear-tests-16-july-2020 [https://perma.cc/N5KE-SAH6].

2. Linda Holmes, *'Oppenheimer' Wins Oscar for Best Picture*, NPR (Mar. 10, 2024, 10:25 AM), https://www.npr.org/2024/03/10/1235946413/oppenheimer-wins-best-picture-oscar [https://perma.cc/L957-ZDEQ].

3. Radioactive materials, called "fallout," were carried hundreds of miles from the test sites, exposing people to various levels of cancer-causing radiation. *What is a Downwinder?*, UNIV. UTAH HUNTSMAN CANCER INST. (Jan. 15, 2024), https://healthcare.utah.edu/huntsmancancerinstitute/news/2024/01/what-downwinder [https://perma.cc/5Y9L-LCF7]. A "downwinder" is a person who was exposed or presumed to be exposed to radiation from the explosion of nuclear devices at federal test sites in the 1950s and 1960s. *Id*.

4. When a point is specific to the Navajo Nation or its people, the author uses either the term "Navajo" or "Diné" throughout this Article. When referring to Native peoples generally, the terms "Indian," "Native American," "Native peoples," and "Indigenous peoples" are used interchangeably. Although the terms "Indian" or "Indian land" are legal terms of art, the author and the *University of Colorado Law Review* acknowledge that the term "Indian" is outdated and can impose harm to Native peoples in the United States and elsewhere. The author therefore elects to limit the use of the term outside of necessary references: when required as a legal term of art or to reference the body of law in the United States formally known as "Indian law," quotations from statute, case law, or other scholars' work or statutes that use the term.

5. The Navajo reservation is 27,425 square miles and covers parts of Arizona, New Mexico, and Utah. NAVAJO DIV. OF HEALTH & NAVAJO EPIDEMIOLOGY CTR., NAVAJO POPULATION PROFILE: 2010 U.S. CENSUS 4 (2013). For a full discussion of uranium impacts to the Navajo people, see JUDY PASTERNAK, YELLOW DIRT: A POISONED LAND AND THE BETRAYAL OF THE NAVAJOS (2010).

6. Erin Blakemore, *The Sinister History of America's 'Uranium Gold Rush,'* NAT'L GEOGRAPHIC (July 12, 2024), https://www.nationalgeographic.com/history/article/forgotten-american-nuclear-age-uranium-rush [https://perma.cc/9AL7-C68J].

7. OFF. OF RADIATION & INDOOR AIR, U.S. EPA, TECHNICAL REPORT ON TECHNOLOGICALLY ENHANCED NATURALLY OCCURRING RADIOACTIVE MATERIALS FROM URANIUM MINING VOLUME 1: MINING AND RECLAMATION BACKGROUND,

Working in concert with the federal government, some of the nation's oldest and wealthiest corporations scoured the West searching for valuable uranium deposits.[8] Most uranium mining took place in the uranium-rich Colorado Plateau, spanning the states of Utah, Colorado, New Mexico, and Arizona.[9] Western New Mexico, known as the Grants Mineral Belt, produced more uranium than any other district in the world from 1948 to 1978, accounting for more than one-third of all the uranium produced in the United States during that period.[10] Mining companies targeted Native peoples' lands all throughout the West, particularly the Navajo Nation, for extensive mining.[11]

When mining ended on the Navajo Reservation in 1986, most companies abandoned their mines, equipment, and waste piles in place.[12] Mines were left as they were, and the Navajo people were exposed to radioactive contaminants that spread

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at 1-1 (2008) [hereinafter TECHNICAL REPORT], https://www.epa.gov/sites/default/files/2015-05/documents/402-r-08-005-v1.pdf [https://perma.cc/HF7N-PQ86]. Between 1945—the end of World War II—and 1990, the governments of the United States, the Soviet Union, and others constructed nuclear weapons and developed nuclear energy programs which relied on uranium. *See* SCOTT KAUFMAN, PROJECT PLOWSHARE: THE PEACEFUL USE OF NUCLEAR WEAPONS IN COLD WAR AMERICA 8–11 (2013); STEWART UDALL, THE MYTHS OF AUGUST: A PERSONAL EXPLORATION OF OUR TRAGIC COLD WAR AFFAIR WITH THE ATOM 129–47 (1994).

8. These companies included Kerr-McGee, Babbitt Ranches, Burlington Northern and Santa Fe Railway (BNSF), Chevron, El Paso Natural Gas, EnPro Holdings, Homestake, United Nuclear Corporation, and Cyprus Amax, among others. *See infra* Section II.B.

9. TECHNICAL REPORT, *supra* note 7, at ES-2.

10. Douglas Bland & Peter A. Scholle, *Uranium – Is the Next Boom Beginning?*, N.M. EARTH MATTERS, Winter 2007, at 1.

11. *DOE Office of Legacy Management Launches Campaign to Address Abandoned Uranium Mines on Tribal Lands*, OFF. OF LEGACY MGMT., U.S. DEP'T OF ENERGY (July 15, 2024), https://www.energy.gov/lm/articles/doe-office-legacy-management-launches-campaign-address-abandoned-uranium-mines-tribal [https://perma.cc/HF7N-PQ86] (referring to ongoing work with the Navajo Nation, the Pueblo of Laguna, and the Spokane Tribe to remediate abandoned uranium mines).

12. *See infra* Section II.B. There is continued interest in opening or reopening mines on or near the reservation. *See* Rebecca Tsosie, *Indigenous Peoples and the Ethics of Remediation: Redressing the Legacy of Radioactive Contamination for Native Peoples and Native Lands*, 13 SANTA CLARA J. INT'L L. 203, 221–28 (2015) (describing legal challenges to several proposed uranium projects on the Navajo reservation); *see also* Kate Holland & Tenzin Shakya, *Navajo Nation Faces Possible New Threats After Decades of Uranium Mining*, ABC NEWS (Dec. 7, 2023, 2:10 PM), https://abcnews.go.com/US/navajo-nation-faces-new-threats-after-decades-uranium/story?id=105270472 [https://perma.cc/T8HY-T7QP] (discussing proposed mines by a Canadian company that could jeopardize community water supplies).

throughout the soil, water, and air.[13] This exposure has resulted in negative health consequences to those living near abandoned mines and former mine workers. Federal agencies ignored these problems for decades before they began making plans to remediate the mines.[14] In addition to the delayed action of the federal government, progress on uranium cleanup has been inadequate and severely underfunded. Hundreds of mines remain abandoned on the reservation with virtually no plans for cleanup.[15] Now, funding from various settlement agreements presents an opportunity to make significant progress on an issue that has plagued the Navajo people for generations.[16] Because funding is available only for specific mines, more than half of the mines will remain abandoned.[17]

The federal government has an obligation to remediate the remaining abandoned mines based on both its liability for breaching its fiduciary duties as trustee to the Navajo Nation

13. *See infra* Section I.C.

14. For a letter from the House Committee on Government Oversight and Reform to EPA Region 9 Superfund Program Director Keith Takata requesting a five-year action plan to address uranium issues on the Navajo Nation, see U.S. EPA, HEALTH AND ENVIRONMENTAL IMPACTS OF URANIUM CONTAMINATION IN THE NAVAJO NATION FIVE-YEAR PLAN 45–46 (2008) [hereinafter FIVE-YEAR PLAN], https://www.epa.gov/sites/default/files/2016-06/documents/nn-5-year-plan-june-12.pdf [https://perma.cc/G8L8-N94H].

15. *See infra* Section I.C.

16. *See, e.g.*, Begay v. United States, 591 F. Supp. 991 (D. Ariz. 1984) (bringing claims under the Federal Tort Claims Act for injuries resulting from the federal government's failure to warn miners of known health risks); *see also* Cody Nelson, *'Ignored for 70 years': Human Rights Group to Investigate Uranium Contamination on Navajo Nation*, GUARDIAN (Oct. 27, 2021), https://www.theguardian.com/environment/2021/oct/27/human-rights-group-uranium-contamination-navajo-nation [https://perma.cc/34GS-P82Z] (quoting attorney Eric Jantz) ("There are four generations of Navajo folks who had to deal with existing contamination and who live essentially in the middle of or next door to radioactive waste dumps, . . . [a]nd the federal government has ignored those communities for the last 70 years.").

17. To improve readability, the terms "remediation," "reclamation," and "cleanup" are used interchangeably throughout this Article. "Reclamation" is the process of "returning a mine to a long-term stable condition, or its original contour, to ensure the safe reuse of the site by both current and future generations." TECHNICAL REPORT, *supra* note 7, at ES-4. "Remediation" is the physical, chemical or biological methods of restoring contaminated soil and water. J. Li & Y. Zhang, *Remediation Technology for the Uranium Contaminated Environment: A Review*, 13 PROCEDIA ENV'T SCIS. 1609, 1610 (2012). "Cleanup" is a broad term used by EPA to encompass the comprehensive restoration of contaminated lands, including the policy, legal, and technical decision-making processes to achieve it. *See Abandoned Mines Cleanup,* U.S. EPA, https://www.epa.gov/navajo-nation-uranium-cleanup/abandoned-mines-cleanup [https://perma.cc/J9A3-QS8Q] (last updated June 17, 2024).

and based on its affirmative treaty promises to provide the Diné a permanent home. This Article argues that in the context of abandoned uranium mines on the Navajo Reservation the promise of a permanent home establishes a specific right to the tribe and corresponding duties attach to the federal government.

Part I of this Article provides an overview of the history and legal framework that facilitated extensive uranium mining on the Navajo Reservation, as well as a discussion of uranium contamination and its effects on communities. Part II discusses the liabilities of potentially responsible parties and recent settlement agreements that have generated some funding for cleanup. Part III describes the federal government's trust and treaty obligations to the Navajo Nation, including treaty commitments that guarantee a permanent homeland for the Navajo people—a promise impeded by the lasting impacts of uranium contamination.

I. URANIUM MINING ON THE NAVAJO NATION

A. The History of Uranium Mining on the Navajo Reservation

When uranium mining began on the Navajo Nation in the 1940s, the United States was recovering from the Great Depression and in the midst of fighting in World War II.[18] In addition to the deleterious effects of the economic depression and war, the Navajo people faced tragedies of their own: forced relocation,[19] the Navajo Long Walk,[20] and other policies aimed at destroying the tribe.[21] One of those policies stemmed from

18. The Navajo Nation contributed greatly to World War II. The Navajo Nation Council passed a resolution to support the United States in opposition to the threat of Nazi Germany, and Navajo tribal members joined the armed forces in support of the United States at rates far higher than the general population. Esther Yazzie-Lewis & Jim Zion, *Leesto, the Powerful Yellow Monster: A Navajo Cultural Interpretation of Uranium Mining*, *in* THE NAVAJO PEOPLE AND URANIUM MINING 2 (Doug Brugge et al. eds., 2006). Eventually, over 3,600 Navajo people served in the military during World War II. PETER IVERSON, DINÉ: A HISTORY OF THE NAVAJOS 183 (2002). The Navajo Code Talkers are credited with using the Navajo (Diné) language to create an unbreakable code that led the United States to victory. *Id*. at 185.

19. *See generally* Paul D. Bailey, *The Navajo Wars*, 2 ARIZONIANA 3 (1961) (detailing the history of the Navajo Nation).

20. *Id.*

21. *Id.*

concerns of overgrazing and led to the implementation of the Livestock Reduction Act, where Navajo people were forced to reduce their livestock herds through sale or slaughter.[22] The reduction period was a traumatic period of Navajo history as the drastic reduction in their livestock had immediate and devastating effects on the economic, cultural, and social systems of the Navajo people.[23] In addition, the Navajo Nation government was fairly new after being established as an official body in 1923.[24] Wagons and horses were the primary modes of transportation,[25] and few Navajo people spoke English or had formal Western educations.[26] Few Navajo people had left the reservation before the start of the war, and the people as a whole were grieving and adjusting to life on the reservation.[27] It is in this context that the Navajo uranium experience begins.

At first, uranium mining on the Navajo Reservation was done covertly by the federal government.[28] The Army needed uranium ore for nuclear weapons development and, in 1942, the U.S. Geological Survey (USGS) completed a classified survey of uranium deposits on the Navajo Nation.[29] This classified study revealed that many of the richest deposits of uranium were located on Navajo Reservation lands within Utah, Arizona, and New Mexico.[30] The USGS survey, along with the establishment of the Atomic Energy Commission (AEC) in 1946, prompted the

22. *See* RUTH ROESSEL & BRODERICK H. JOHNSON, NAVAJO LIVESTOCK REDUCTION: A NATIONAL DISGRACE (1974). The Livestock Reduction Act was passed to address issues of alleged livestock overgrazing. *See id.*

23. The Livestock Reduction program did not acknowledge the matriarchal gender roles in Navajo society and "severely curtailed Diné women's economic power and independence" and "served to undercut Navajo gender egalitarianism." TRACI B. VOYLES, WASTELANDING: LEGACIES OF URANIUM MINING IN NAVAJO COUNTRY 40 (2015) (noting that federal agents did not "seem to appreciate that Navajos might derive more value from their stock than mere economic gain").

24. The Navajo Nation government was first established in 1923 reorganizing into its current three-branch government in 1991. *History*, NAVAJO NATION, https://www.navajo-nsn.gov/History [https://perma.cc/NLW9-ZNUP].

25. THE NAVAJO PEOPLE AND URANIUM MINING, *supra* note 18, at 29.

26. *Id*. at 30.

27. *Id*. at xvi–xvii.

28. Tsosie, *supra* note 12, at 211; *see also* Barbara Rose Johnston et al., *Uranium Mining and Milling: Navajo Experiences in the American Southwest*, *in* THE ENERGY READER 132, 133 (Laura Nader ed., 2010).

29. Johnston et al.*, supra* note 27.

30. Tsosie, *supra* note 12, at 211.

boom of uranium mining on the Navajo Nation.[31] The AEC offered a $10,000 discovery bonus for high-grade deposits of uranium, kicking off a "uranium fever" that lasted for the following decade.[32] During this time, nearly thirty million tons of uranium ore was extracted from Navajo lands.[33]

The federal government was the sole purchaser of the uranium and used it exclusively to advance the development of nuclear weapons.[34] The production of uranium was viewed as a national security issue and a public good that benefitted all Americans.[35] The AEC "managed exploration efforts and product requirements, set price guarantees for ore, and decreed itself the sole buyer and end user."[36] The AEC "controlled the uranium industry. No one else was permitted to own uranium; all that was mined had to be sold to the AEC."[37] Indeed, "the search for uranium has been the only government-induced, government-maintained, government-controlled mining boom in this nation's experience."[38]

Under the 1938 Indian Mineral Leasing Act (IMLA), consent for leases was required from tribes and the Secretary of the Interior.[39] Early leases for Navajo uranium were "approved"

31. The purpose of the Atomic Energy Commission was to manage the development, use, and control of atomic energy for military and civilian use. *Atomic Energy Commission*, U.S. NUCLEAR REGUL. COMM'N, https://www.nrc.gov/reading-rm/basic-ref/glossary/atomic-energy-commission.html [https://perma.cc/GL2R-U883] (last updated Mar. 9, 2021). The AEC was succeeded by the Nuclear Regulatory Commission in 1974. *Id.*

32. Tsosie, *supra* note 12, at 212.

33. EPA has conflicting reports about the exact amount of uranium ore that was extracted from Navajo lands. Recent EPA reports cite the amount of thirty million tons. *See Abandoned Mines Cleanup*, *supra* note 17. Other reports cite the amount of four million tons. *See* U.S. GOV'T ACCOUNTABILITY OFF., GAO-14-323, URANIUM CONTAMINATION: OVERALL SCOPE, TIME FRAME, AND COST INFORMATION IS NEEDED FOR CONTAMINATION CLEANUP ON THE NAVAJO RESERVATION 1 (2014), https://www.gao.gov/assets/gao-14-323.pdf [https://perma.cc/QB7J-6N8J]. This factual discrepancy illustrates the lack of basic information available about the history of uranium mining on the reservation.

34. U.S. GOVERNMENT ACCOUNTABILITY OFFICE, *supra* note 33, at 12.

35. Tsosie, *supra* note 12, at 212; *see also* VOYLES, *supra* note 23, at 70 (quoting AEC Raw Materials Division Assistant Director, Phillip Merritt, "Whether for war or for peace, the search for uranium is of the deepest importance to our national well-being.").

36. Michelle David, Comment, *Clean Up Your Act: The U.S. Government's CERCLA Liability for Uranium Mines on the Navajo Nation*, 90 U. CHI. L. REV. 1771, 1808 (2023).

37. Johnston et al., *supra* note 28, at 134.

38. Herbert H. Lang, *Uranium Mining and the AEC: The Birth Pangs of a New Industry*, 36 BUS. HIST. REV. 325, 325 (1962).

39. Indian Mineral Leasing Act (IMLA), 25 U.S.C. §§ 396a–g (1938).

by the then newly established tribal council. However, Navajo consent was hardly that. The tribal council was a foreign governmental structure that had been forced on the Navajo people. This imposed governmental structure was hardly recognized by the Navajo people.[40] Indeed, the new government "had no real governing power over the local bands and families," as this "centralized governing body was a concept alien to their tradition."[41] Prior to the imposition of the new governmental structure, the traditional form of governance was more local and matriarchal.[42] But after oil was discovered on Navajo lands, the United States and companies seeking to extract resources on Navajo lands needed a "legitimate" governmental body to sign off on lease agreements.[43] Traditional forms of Navajo governance were replaced with a centralized unit of government, modeled after the federal government's three-body system.[44]

Additionally, the Navajo Nation had limited authority to negotiate lease terms.[45] "The AEC or [Bureau of Indian Affairs] often presented pre-negotiated mining contracts to the Navajo Tribal Council as economic development initiatives requiring only a final seal of approval."[46] Essentially, negotiations were more akin to "manipulation and arm-twisting" rather than actual consent.[47]

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40. CARROL J. MCCABE & HESTER LEWIS, U.S. COMM'N ON C.R., THE NAVAJO NATION: AN AMERICAN COLONY 18 (1975).

41. *Id*. *See generally* JERRY MANDER, IN THE ABSENCE OF THE SACRED 277–78 (1991) (describing how the BIA created "fictitious" tribal councils for the specific purpose of approving leases).

42. MCCABE & LEWIS, *supra* note 40, at 17.

43. "The Navajo Nation Council owes its existence to the discovery of oil on the Navajo [R]eservation in 1922." Ezra Rosser, *Ahistorical Indians and Reservation Resources*, 40 ENV'T L. 437, 450 (2010). The Navajo Nation Council "was organized by the Bureau of Indian Affairs in order to produce a 'legitimate' body of Navajo who could lease Navajo lands to oil companies for drilling." *Id.* (quoting GARY WITHERSPOON, NAVAJO KINSHIP AND MARRIAGE 69 (1975)); *see also* ROBERT W. YOUNG, A POLITICAL HISTORY OF THE NAVAJO TRIBE 36 (1978) (referring to a "puppet government" that could be used "as a medium for control of the Tribe").

44. "It is a government structured on Anglo, not Indian concepts." MCCABE & LEWIS, *supra* note 40, at 19.

45. *See* Rosser, *supra* note 43, at 447 ("[I]n practice the United States, until recently, treated the Navajo [R]eservation as an area whose natural resources could be extracted or developed with only a limited say from a government representing the Diné.").

46. David, *supra* note 36, at 1810. "Of course, during this process, there was no mention of the potential health or environmental hazards associated with uranium." *Id.* at 1810 n.233.

47. *Id.* at 1813 (describing the coercive nature of lease agreements).

> Despite this statutory commitment to tribal authority . . . the role of the federal government, largely through the Bureau of Indian Affairs (BIA), remained pervasive, and, aside from a tribe's consent to leasing, the federal government largely controlled the details of the lease negotiation process for decades after the passage of the IMLA.[48]

Aside from challenges with the new government structure and the heavy-handed control by federal agencies, uranium companies and prospectors had little regard for tribal sovereignty or tribal property rights. Tribes were viewed as obstacles to developing mines and their rights were consistently undermined.[49] Additionally, "many prospectors were unlikely to know how to seek tribal approval or whether they were even on tribal lands as an initial matter."[50]

After several decades of mining, the federal government had enough uranium reserves and abruptly stopped purchasing new uranium.[51] The private industry kept mines afloat for a few more years before the last mine closed on the Navajo Nation in the late 1980s.[52] As mining ended, many companies abandoned their mines as they were, leaving behind their equipment, materials, open shafts, and exposed waste piles.[53] Towns that had been built on the uranium economy became ghost towns and the Navajo Nation was left with hundreds of abandoned

48. Monte Mills, *New Approaches to Energy Development in Indian Country: The Trust Relationship and Tribal Self-Determination at (Yet Another) Crossroads*, 63 FED. LAW. 50, 52 (2016).

49. *See* VOYLES, *supra* note 23, at 66 (describing how prospectors were led "by AEC encouragement and by word of mouth, directly to the Four Corners area, where Diné and Pueblo land and people were regarded as temporary obstacles to staking claims and developing mines").

50. David, *supra* note 36, at 1810 n.232 (citing VOYLES, *supra* note 23, at 64, 66, 71, 74).

51. TERRASPECTRA GEOMATICS, ABANDONED URANIUM MINES AND THE NAVAJO NATION: NAVAJO NATION AUM SCREENING ASSESSMENT REPORT AND ATLAS WITH GEOSPATIAL DATA 3 (2007) https://www.epa.gov/sites/default/files/2017-01/documents/navajo_nation_aum_screening_assess_report_atlas_geospatial_data-2007-08.pdf [https://perma.cc/98JK-WWHS].

52. *Abandoned Mines Cleanup*, *supra* note 17.

53. *See* VOYLES, *supra* note 23, at 3 (describing abandoned mines that "sit open, poorly covered, or insufficiently marked").

uranium mines,[54] with uranium waste and contamination spreading throughout the air, land, and water.

B. Health Impacts from Uranium Exposure

Exposure to uranium and its byproducts devastated Navajo mine workers, their families, and the broader community. Mine workers and their families were impacted first. The livestock reduction period caused significant economic hardship and forced Navajo people to look to the railroad and mining industry for employment.[55] Working in the uranium mines offered Navajo people a chance to earn money and be close to home. At the beginning of the mining boom, for as little as just over a dollar an hour,[56] Navajo people worked in the mines using only wheelbarrows, shovels, and picks to haul uranium from underground mines.[57] Gloves and other tools were not available,[58] and some workers wore only moccasins on their feet.[59] Clothes were taken home and washed by hand, often mingled with other household laundry, exposing entire families to harmful contaminants.[60]

When mining began on the Navajo Reservation, "there was no scientific doubt that uranium mining was associated with high rates of lung cancer."[61] Instead of informing mine workers of potentially dangerous conditions or enforcing precautions such as ventilation, federal officials "actively discouraged research scientists from public discussion of the probable health hazards of radon in uranium mines."[62] In fact, "it was decided

54. *Abandoned Mines Cleanup*, *supra* note 17. Former mine workers claim there are likely over 1,000 abandoned and partially unreclaimed uranium mines within the Navajo Nation. *See* Doug Brugge & Rob Goble, *The History of Uranium Mining and the Navajo People*, 92 AM. J. PUB. HEALTH 1410, 1411 (2002).

55. THE NAVAJO PEOPLE AND URANIUM MINING, *supra* note 18.

56. *Id.* at 15.

57. *Id.* at 14.

58. *Id.*

59. *Id.* at 13.

60. *Id.* at 18.

61. Brugge & Goble, *supra* note 54, at 1412; *see* Johnston et al., *supra* note 28, at 134 ("Despite government awareness that uranium mining was a dangerous business that posed a high degree of health risk for workers and area residents, this information was not communicated to workers or residents."); *see also* VOYLES, *supra* note 23, at 3 ("High death rates among miners in the uranium-rich Erz Mountains on the border of Germany and the Czech Republic were reported as early as the mid-1500s.").

62. Tsosie, *supra* note 12, at 213 (citing Brugge & Goble, *supra* note 54, at 1410–13).

by . . . [the Public Health Service] under the Surgeon General that the individual miners would not be told of possible potential hazards from radiation in the mines for fear that many miners would quit and others would be difficult to secure because of fear of cancer."[63] The Public Health Service and the Surgeon General recognized that "[t]his would seriously interrupt badly needed production of uranium."[64] Thus, the AEC made the decision to ignore available evidence and sacrifice the health of those working in the mines.[65]

The earliest study of uranium miners on the Navajo Nation began in 1949 by Henry Doyle, a Public Health Service sanitary engineer.[66] Doyle's study of radon in the mines "identified concentrations 4 to 750 times the accepted maximum allowable concentration."[67] The mines did not have mechanical ventilation or crosscuts in the mineshafts, which limited any type of natural ventilation.[68] The federal government did not require safety measures or exposure limits and instead relied on states and mine operators to manage safety conditions.[69] About a decade after mining began, the first cases of lung cancer began appearing in Navajo uranium miners.[70] Mine workers suffered from lung cancer, renal cancer, and other illnesses attributable to having worked directly in the mines.[71]

In response to the pleas and efforts of Navajo widows of former miners who noticed that their husbands were passing away from the same illnesses, Congress passed the Radiation

63. Begay v. United States, 591 F. Supp. 991, 995 (D. Ariz. 1984).

64. *Id.*; *see also* Radiation Exposure Compensation Act (RECA), 42 U.S.C. § 2210.

65. *See* Brugge & Goble, *supra* note 54, at 1410, 1412 (stating that the AEC ignored available evidence that showed inhalation of radon corresponds to high rates of cancer).

66. *See The Uranium Miners*, *in* ACHRE REPORT, DEP'T OF ENERGY: OPENNESS: HUMAN RADIATION EXPERIMENTS: ROADMAP TO THE PROJECT, https://ehss.energy.gov/ohre/roadmap/achre/chap12_2.html [https://perma.cc/E8Q4-ASNN] (last updated Dec. 12, 2012). *See generally*, HENRY N. DOYLE, SURVEY OF URANIUM MINES ON NAVAJO RESERVATIONS, ADVISORY COMMITTEE ON HUMAN RADIATION EXPERIMENTS (1949) (original report).

67. Johnston et al., *supra* note 28, at 134.

68. *Id.*

69. Brugge & Goble, *supra* note 54, at 1414.

70. *Id.* at 1410.

71. *Radiation Exposure Compensation Act*, U.S. DEP'T OF JUST., https://www.justice.gov/civil/common/reca [https://perma.cc/78E5-ZKJU] (last updated Nov. 1, 2024).

Exposure and Compensation Act (RECA) in 1990.[72] RECA recognized the failure of the federal government to warn former miners and mill workers of the known health risks due to uranium exposure and was meant to provide an expeditious, low-cost alternative to litigation.[73] The RECA program has been successful in reaching over 38,000 former mine workers, mill workers, and downwinders who contracted compensable illnesses,[74] but the program did not reach all of the people it intended to. Specifically, many Native American workers have been unable to recover RECA payments because they or their families do not have the required forms of documentation, including birth certificates, marriage certificates, death certificates, or proof of employment.[75] Navajo workers in particular, who often worked in the most hazardous positions, struggled to secure compensation for their illnesses due to the lack of these records.[76] Efforts continue today to expand RCRA legislation to reach more workers who suffer illnesses as a result of working in the mines.[77]

Health impacts eventually reached the general Navajo population as contamination spread. Even now, people living in and around uranium-contaminated areas can be exposed through various pathways, including inhalation of radon from contaminated soils or through ingesting uranium-contaminated

72. *See* Doug Brugge et al., *Introduction* to THE NAVAJO PEOPLE AND URANIUM MINING, *supra* note 18, at xv–xix ("So a lot of the Navajo ladies became widows.").

73. *Radiation Exposure Compensation Act*, *supra* note 71. At least one federal court found, "[t]he weight of the evidence, including medical testimony, statistical data and historical events, leaves no doubt that there is a direct relationship between the high levels of radiation exposure suffered by the underground uranium miners and their excessive incidence of respiratory tract and lung cancer." Begay v. United States, 591 F. Supp. 991, 995 (D. Ariz. 1984).

74. As of 2021, the number of people that had received compensation through the RECA program was 38,521. U.S. DEP'T OF JUST., RADIATION EXPOSURE COMPENSATION ACT TRUST FUND: FY 2023 BUDGET AND PERFORMANCE PLAN 1 (2022), https://www.justice.gov/jmd/page/file/1492106/download [https://perma.cc/J8HQ-PASL].

75. *See* Johnston et al., *supra* note 27.

76. *See* Arlyssa D. Becenti, *Navajo Uranium Miners, Many with Cancer, Just Lost New Compensation in Defense Bill*, ARIZ. REPUBLIC (Dec. 14, 2023), https://www.msn.com/en-us/news/other/navajo-uranium-miners-many-with-cancer-just-lost-new-compensation-in-defense-bill/ar-AA1lwuWR [https://perma.cc/64E7-TDTT].

77. *Id.*

food and water.[78] Health risks are associated with exposure to uranium and uranium-decay products in the air, soil, dust, groundwater, and surface water.[79] Stories of children playing on open radioactive waste piles, mistaking them as mesas or natural mounds, persisted until recent years.[80] Navajo families unknowingly used contaminated earthen material to build their homes, corrals, and other structures.[81] In addition to radiation, exposure to uranium by drinking contaminated groundwater is perhaps one of the most serious threats from past mining.[82] Approximately 30 percent of Navajo Nation residents lack access to regulated water sources and haul water to meet their daily needs.[83] Testing of unregulated water sources used for both livestock and residential use has revealed elevated

78. *Uranium Toxicity: What Are the Routes of Exposure for Uranium?*, AGENCY FOR TOXIC SUBSTANCES & DISEASE REGISTRY, https://archive.cdc.gov/www_atsdr_cdc_gov/csem/uranium/exposure_pathways.html [https://perma.cc/3RSW-H6ZN].

79. *See* Chris Shuey et al., *Overview of the Navajo Birth Cohort Study*, UNIV. N.M. CMTY. ENV'T HEALTH PROGRAM 1, 10 (June 2014), http://www.sric.org/nbcs/docs/NBCS_overview_063014.pdf [https://perma.cc/4H6T-23DQ].

80. Margaret A. Hiesinger, *The House That Uranium Built: Perspectives on the Effects of Exposure on Individuals and Community*, 87 KROEBER ANTHROPOLOGICAL SOC'Y PAPERS 7, 14 (2002). ("When the mines and mills were still open, ore rocks and piles transformed into regular play areas for kids . . . . Again, many of the waste piles still stand in the midst of communities today. Adults often mention locations of water-filled mines and nearby tailing piles where local children play.").

81. U.S. EPA, FEDERAL ACTIONS TO ADDRESS IMPACTS OF URANIUM CONTAMINATION IN THE NAVAJO NATION FIVE-YEAR PLAN SUMMARY REPORT 10–11 (2013) [hereinafter FIVE-YEAR PLAN SUMMARY REPORT], https://www.epa.gov/sites/default/files/2016-07/documents/navajouraniumreport2013.pdf [https://perma.cc/USJ4-DDP2] (describing efforts to remediate homes and other structures with high levels of radon); *see also* Winona LaDuke, *Red Land and Uranium Mining: How the Search for Energy Is Endangering Indian Tribal Lands*, RADCLIFFE Q. (Dec. 1981), *reprinted in* THE WINONA LADUKE READER: A COLLECTION OF ESSENTIAL WRITINGS 132 (Margret Aldrich ed., Voyageur Press 2002) (describing a similar experience in the Pueblo of Laguna, where "[t]he community center, the Jackpile Housing Project, and the tribal council headquarters all had been constructed with radioactive materials from the mine").

82. *See generally* Brief of DigDeep Right to Water Project & Utah Tribal Relief Found. as Amici Curiae in Support of Respondents at 7, Arizona v. Navajo Nation, 599 U.S. 555 (2023) (No. 21-1484) [hereinafter Brief of DigDeep] (describing the current lack of available water on the Navajo reservation).

83. *Id.*

concentrations of both uranium and arsenic that exceed EPA's maximum contaminant limits.[84]

Uranium contamination continues to spread even now, and community members are constantly exposed by living in contaminated areas.[85] A health study of the Navajo Nation found that the closer a person lived to an abandoned uranium mine, there was a correspondingly higher rate of kidney disease, cardiovascular disease, and diabetes.[86] The study showed that the number of abandoned mines within a community is a predictor of certain diseases, including autoimmune diseases, chronic kidney disease, diabetes, and high blood pressure.[87] Other effects from contact with uranium can include various cancers, including lung cancer and bone cancer.[88] Radiation can pass harmful rays through the human body causing tissue damage and negatively affect a person's DNA.[89] Navajo children "have a rate of testicular and ovarian cancer fifteen times the national average, and a fatal neurological disease called Navajo neuropathy has been closely linked to ingesting uranium-contaminated water during pregnancy."[90] Newborn babies on the Navajo Reservation have been born with elevated levels of uranium in their bodies, and residents have experienced an increase in birth defects and issues related to maternal and

84. *Addressing Uranium on the Navajo Nation*, U.S. EPA, https://archive.epa.gov/region9/superfund/web/html/index-14.html [https://perma.cc/5X6A-SNQS] (last updated Feb. 21, 2016); Johanna M. Blake et al., *Elevated Concentrations of U and Co-occurring Metals in Abandoned Mine Wastes in a Northeastern Arizona Native American Community*, 49 ENV'T SCI. TECH. 8506, 8506 (2015).

85. *See generally* Petition, Eastern Navajo Diné Against Uranium Mining v. United States, Case 14.544, Inter-Am. Comm'n H.R., Report No. 67/21, OEA/Ser.L.V/II, doc. 72 (Petition 654-11) (filed May 13, 2011), https://nmelc.org/wp-content/uploads/2021/07/endaum_final_petition_with_figures-1.pdf [https://perma.cc/E28V-WC5E] (describing the ongoing contamination as a public health and environmental crisis).

86. Shuey et al., *supra* note 79, at 10.

87. *Hearing before the H. Subcomm. on Nat'l Parks, Forests, & Pub. Lands*, 110th Cong. 5 (2008) (written statement of Chris Shuey, Director, Uranium Impact Assessment Program, Southwest Research and Information Center), https://www.biologicaldiversity.org/programs/public_lands/mining/pdfs/Shuey-Written-Statement.pdf [https://perma.cc/7DSQ-73GQ].

88. *Id.*

89. *Radiation Basics*, U.S. EPA, https://www.epa.gov/radiation/radiation-basics [https://perma.cc/28XP-N46R] (last updated Oct. 1, 2024).

90. VOYLES, *supra* note 23, at 4.

fetal health.[91] These health impacts are the result of the extensive mining on the reservation and the federal government's subsequent failure to adequately address the lasting environmental contamination.

C. Current Efforts to Address Uranium Contamination

Currently, there are more than ten thousand abandoned uranium mine waste sites located throughout the western United States.[92] EPA has yet to characterize and assess thousands of these mines to determine whether they pose any negative consequences to people or the environment. According to EPA, there are 523 abandoned uranium mines on the Navajo Nation.[93] The federal government has identified funding to begin the assessment and cleanup at 236 of those mines.[94] Each of these mines contribute to the extensive radioactive waste that remains on the reservation. For every four pounds of uranium that was extracted, nearly a thousand pounds of radioactive waste was generated.[95] The USGS estimates that the total amount of waste rock generated by the "approximately 4,000 operating conventional mines in their data files is between one billion and nine billion metric tons of waste, with a likely estimate of three billion metric tons."[96]

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91. *Navajo Birth Cohort Study Initiated in 2010 to Address the Impacts of Uranium Exposure on Child Health Outcomes*, SW. RSCH & INFO. CTR. (Oct. 14, 2021), http://www.sric.org/nbcs/docs/NBCS%20update%20for%20TCRHCC%2010%2014%202021.pdf [https://perma.cc/7795-EH66]; *see also* Sara S. Nozadi et al., *Prenatal Metal Exposures and Infants' Developmental Outcomes in a Navajo Population*, 19 INT'L J. ENV'T RSCH. & PUB. HEALTH 425 (2022) (describing negative impacts on neurodevelopment in infants due to uranium exposure).

92. Blake et al., *supra* note 84.

93. U.S. EPA, ABANDONED URANIUM MINE SETTLEMENTS ON OR NEAR THE NAVAJO NATION (2022) [hereinafter ABANDONED URANIUM MINE SETTLEMENTS], https://www.epa.gov/system/files/documents/2023-02/epa-factsheet-abandoned-uranium-mine-settlements-on-the-navajo-nation.pdf [https://perma.cc/8F8C-749M]. Some experts cite 524 abandoned uranium mines. *See* Chris Shuey, *Uranium Doesn't Grow on Trees: Impacts of the Front End of the Nuclear Cycle on Indigenous Communities*, SW. RSCH. & INFO. CTR. (Nov. 8, 2023), https://www.eli.org/sites/default/files/files-general/2023-11-08%20Chris%20Shuey%20Presentation.pdf [https://perma.cc/Q3KN-73VH].

94. ABANDONED URANIUM MINE SETTLEMENTS, *supra* note 93.

95. Tsosie, *supra* note 12, at 215–16.

96. TECHNICAL REPORT, *supra* note 7, at ES-2.

In addition to mines, there are four legacy uranium mill sites spread throughout the Navajo Reservation.[97] In the uranium processing sequence, after uranium is mined it is taken to a mill for processing.[98] Uranium mills process raw uranium ore by turning it into "yellowcake"[99] before it is taken to a conversion facility where the uranium can further be prepared for use.[100] Because mills handle ore straight from the mines and produce concentrated uranium, the waste from these facilities is extremely hazardous and requires long-term surveillance and monitoring.[101] Uranium mills on the Navajo Reservation include the Mexican Hat Disposal Site in Utah, the Monument Valley Processing Site in Arizona, the Shiprock Disposal Site in New Mexico, and the Tuba City Disposal Site in Arizona.[102] There is another former mill site immediately adjacent to the reservation and within a Navajo community, the UNC Church Rock Mill in New Mexico.[103]

Progress towards cleanup has been slow and severely underfunded. In 2008, more than twenty years after uranium production ended on the Navajo Nation, the House Committee on Government Oversight and Reform (the "Committee") directed EPA, the BIA, the Department of Energy, the Nuclear Regulatory Commission, and the Indian Health Service (collectively "the agencies")[104] to create a five-year plan that set specific cleanup objectives and specific timeframes for achieving

97. FIVE-YEAR PLAN, *supra* note 14, at 43.

98. *Conventional Uranium Mills*, U.S. NUCLEAR REGUL. COMM'N, https://www.nrc.gov/materials/uranium-recovery/extraction-methods/conventional-mills.html [https://perma.cc/W9AP-CY9G] (last updated May 17, 2021).

99. Yellowcake is the solid form of mixed uranium oxide, which is produced from uranium ore in the uranium recovery process, named yellowcake due to its rich yellow color. *Yellowcake*, U.S. NUCLEAR REGUL. COMM'N, https://www.nrc.gov/reading-rm/basic-ref/glossary/yellowcake.html [https://perma.cc/2MX4-EFA8] (last updated Mar. 9, 2021).

100. *Conventional Uranium Mills*, *supra* note 98.

101. *See generally id*. Legacy mill site remediation is generally governed by the Department of Energy under the Uranium Mill Tailings Radiation Control Act (UMTRCA). Pub L. No 95-604, 92 Stat. 3021 (1978).

102. FIVE-YEAR PLAN, *supra* note 14, at 23.

103. *Church Rock Mine Site Review*, N.M. ENV'T DEP'T., https://www.env.nm.gov/former-mines-mills/home/church-rock-mill-site-review [https://perma.cc/59HC-Y6AE]. Nationally, there is only one currently operating uranium mill, the White Mesa Mill, sited just outside the Ute Mountain Ute Reservation in Blanding, Utah. *White Mesa Uranium Mill*, GRAND CANYON TRUST, https://www.grandcanyontrust.org/white-mesa-uranium-mill [https://perma.cc/YLL6-WMSY].

104. FIVE-YEAR PLAN, *supra* note 14, at 4.

those objectives.[105] The Committee also tasked the agencies with identifying any new authorities and funding that would be necessary to achieve those objectives.[106] The five-year plan was the first in a series of plans intended to prioritize and move forward with cleanup. The five-year plan was followed by a summary report, a second five-year plan, and a ten-year plan.[107] The following provides an overview of those plans and details how federal, tribal, and state agencies have worked together to develop plans, identify priorities, and move forward with remediating uranium contamination.

The intent of the first five-year plan was to develop a coordinated and effective response to the longstanding issue of uranium contamination on the Navajo Reservation.[108] The five-year plan did not result in immediate solutions to the uranium problem, but federal agencies for the first time seriously studied the issue to better understand the scope of the problem. The Committee specifically directed the agencies to address the following objectives:

> (1) assess structures and water sources that are likely to be contaminated;
>
> (2) remediate structures found to be contaminated above safe levels;
>
> (3) provide alternative water supplies for residents consuming contaminated water;
>
> (4) create a tiered assessment of abandoned mines, with more detailed assessments of those most likely to pose environmental or health problems;
>
> (5) remediate the Northeast Church Rock mine site and additional high-priority abandoned mine sites;

105. *Id.* at 92.
106. *See id.*
107. Other plans specific to various regions were also created. *See* U.S. EPA, 2024–2028 GRANTS MINING DISTRICT FIVE-YEAR PLAN DRAFT FOR PUBLIC COMMENT, https://www.epa.gov/system/files/documents/2023-10/2024-2028-gmd-five-year-plan-draft-for-public-comment-with-addendum.pdf [https://perma.cc/5SB4-MX6S].
108. FIVE-YEAR PLAN, *supra* note 14, at 4.

(6) remediate the Tuba City Highway 160 site;

(7) remediate the Tuba City Dump;

(8) remediate groundwater contamination at three former mill sites; and

(9) conduct at least one study of health risks faced by individuals residing near mill sites or abandoned mine sites.[109]

In creating the five-year plan, EPA consulted the Navajo Nation.[110] Together, the agencies determined the most urgent problems to be prioritized in the first year, including the assessment and cleanup of potentially contaminated structures, testing water sources with suspected uranium contamination, requiring mitigation of contaminated soils at the Northeast Church Rock mine site, and assessing the risk to drinking water supplies at the Tuba City Dump.[111] These priorities were intended to address the problems most immediately impacting the health of Navajo people, including issues related to living in contaminated housing structures and drinking contaminated water.[112] The agencies estimate that between 1997 and 2007, the agencies had collectively spent more than $161 million on uranium-related cleanup activities on Navajo lands.[113] The report indicated that the cost of uranium reclamation would likely exceed the agencies' available budgets.[114] Overall, the first five-year plan was an initial step towards more fully understanding the scope of the issue.

In 2012, members of Congress requested that the agencies provide an update and summary of their progress on the objectives identified in the five-year plan.[115] In a report titled "Federal Actions to Address Impacts of Uranium Contamination in the Navajo Nation, Five Year Plan Summary Report," the agencies reported that they had surveyed 878 potentially

109. *Id.* Community members can be credited for their advocacy in ensuring sites of concern were specifically named.
110. *Id.*
111. *Id.* at 5.
112. *Id.* at 4.
113. *Id.* at 12.
114. *See id.* at 6, 19.
115. FIVE-YEAR PLAN SUMMARY REPORT, *supra* note 81.

contaminated structures and had demolished, rebuilt, or provided financial compensation for forty-three structures that had excess levels of radon.[116] The agencies and partnering Navajo Nation programs identified twenty-nine unregulated water sources with elevated levels of uranium and other radionuclides in excess of federal EPA drinking water standards.[117] The Navajo Nation and EPA began a public outreach program to warn residents of the dangers of drinking from those water sources.[118] The agencies initiated programs to pipe water to homes and to implement a pilot water hauling program to reach residents that live in remote areas.[119] Detailed assessments of several abandoned mines were done, and cleanup plans were created for high priority sites, including the Northeast Church Rock mine site, the Tuba City Highway 160 site, and the Tuba City Dump.[120] Health assessments were reported as ongoing.[121]

Importantly, the five-year plan required the federal agencies to gather data to determine the extent of contamination. EPA assessed 521 mines.[122] Only 71 of those mines were emitting radiation at levels that posed little or no current health threat to residents.[123] EPA observed contamination greater than twice the level of naturally occurring uranium at 403 mine sites on the Navajo Nation.[124] EPA considered this to be evidence of an observed hazardous release, potentially eligible for investigation under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).[125] Of the 403 mine sites that were releasing radiation at hazardous levels, approximately 226 mine sites had radiation levels higher than ten times background levels,[126] and 177 mine sites were releasing radiation at rates between two and ten times background levels.[127] Seventy mines

116. *Id.* at 11.
117. *Id.* at 4.
118. *Id.*
119. *Id.* at 4.
120. *Id.* at 5.
121. *Id.*
122. *Id.* at 29 fig.4.
123. *Id.* at 24.
124. *Id.* at 6, 7.
125. *Id.* at 6; *see* Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. §§ 9601–9628.
126. FIVE-YEAR PLAN SUMMARY REPORT, *supra* note 81, at 24.
127. *Id.*

were within a quarter mile of potentially inhabited structures.[128] U.S. EPA and Navajo Nation EPA began outreach to residents in these areas to warn them of the hazards associated with long-term exposure to soils at the mines and to warn residents against using materials from these sites for homes, corrals, and other structures.[129] The agencies also began short-term actions to protect residents, including putting up fences and signs where necessary.[130] EPA's assessments detailed in the Progress Report, specifically the 403 mine sites where hazardous releases were observed, validated the decades of concern that residents had about the lack of remediation at abandoned uranium mine sites and potential impacts to their health.[131] To conduct these emergency actions, the agencies reported spending nearly $110 million on cleanup.[132]

The agencies then developed a second five-year plan. The second five-year plan, "Federal Actions to Address Impacts of Uranium Contamination in the Navajo Nation," focused on continuing the goals identified in the first five-year plan, with the primary goal of protecting human health.[133] These goals included ensuring that people were not living in contaminated housing structures and that residents were warned about contaminated water resources. From 2014 to 2018, the Navajo Nation EPA set a goal of scanning one hundred homes a year to determine whether the levels of radon within the home posed a health risk to the occupants.[134] The Navajo Nation referred high-risk, high-priority homes to EPA for further action.[135] Moreover, the agencies aimed to complete water projects that had been approved for funding in the first five-year plan.[136]

One of the biggest challenges to providing safe water to Navajo residents includes the price caps that limit how much money the federal government may spend on providing water

128. *Id*. at 25.
129. *Id.*
130. *Id*.
131. *Id*.
132. *Id*. at 8.
133. U.S. EPA, FEDERAL ACTIONS TO ADDRESS IMPACTS OF URANIUM CONTAMINATION IN THE NAVAJO NATION 4 (2014), https://www.epa.gov/sites/default/files/2016-06/documents/nn-five-year-plan-2014.pdf [https://perma.cc/KXS9-AKGZ].
134. *Id.*
135. *Id.* at 5.
136. *Id*. at 6.

infrastructure to individual homes.[137] According to the Indian Health Service, "76 percent of the [water] projects are economically infeasible, exceeding the [Indian Health Service] cost caps of $84,500 per home for water and wastewater in Arizona, $81,000 per home in Utah, and $80,000 per home in New Mexico."[138] The rural nature of the Navajo Nation and the distance from potable water sources to homes often make water access challenging.[139] The second five-year plan noted that even with their continued efforts, due to these challenges, Navajo residents might continue to haul water from unregulated water sources with high levels of uranium and other contaminants.[140] Additionally, water sources used for livestock are not regulated.[141] This poses a significant risk, as many Navajo people rely on livestock for subsistence, and the effects of consuming livestock exposed to uranium is unknown.

In the second five-year plan, the federal EPA and Navajo Nation EPA committed to continuing cleanup efforts at nine mine sites with elevated radiation.[142] In addition, the agencies committed to conducting preliminary assessments and site investigations at seven mine sites in watershed areas and evaluating whether those mines were suitable for listing on the Superfund National Priorities List (NPL).[143] Importantly, the agencies would continue efforts to identify responsible parties to pay for investigation and cleanup of mine sites.[144]

Subsequently, EPA, in partnership with the Navajo Nation, developed a ten-year plan in 2020. The ten-year plan primarily continued the work identified in the two previous five-year plans

137. *Id.* at 7.

138. *Id.*

139. HEATHER TANANA ET AL., WATER & TRIBES INITIATIVE, UNIVERSAL ACCESS TO CLEAN WATER FOR TRIBES IN THE COLORADO RIVER BASIN 14–15 (2021).

140. *Id.* at 16.

141. *See id.* Residents often haul water for domestic, livestock, and agricultural uses. For further discussion of water issues impacting the Navajo Nation, see Brief of DigDeep, *supra* note 82.

142. U.S. EPA, *supra* note 133, at 8.

143. *Id.* at 10. In March 2024, EPA listed the Lukachukai Mountains Mining District on the National Priorities List (NPL), or the Superfund List. Sites included on the NPL are eligible to receive federal funding for long-term, permanent cleanup. This is the first time a mine on the Navajo Nation has been listed on the National Priorities List. *EPA Adds Sites to the Superfund National Priorities List, Including the Lukachukai Mountains Mining District in Navajo Nation*, U.S. EPA [hereinafter *EPA Adds Sites*], https://www.epa.gov/newsreleases/epa-adds-sites-superfund-national-priorities-list-including-lukachukai-mountains [https://perma.cc/KN74-CPLP] (last updated Mar. 5, 2024).

144. U.S. EPA, *supra* note 133, at 10.

and prioritized the work for the agencies through 2029.[145] The ten-year plan focuses on site investigation and cleanup at the mine sites where funding has been secured.[146] EPA had an initial goal of assessing one hundred mines, including forty-six priority mines, by 2022.[147] The pandemic and lack of disposal options for the waste delayed much of the work.[148] By the end of 2023, just thirteen mine inventories had been completed. For those sites that continue to pose an imminent and substantial endangerment to human health and the environment, EPA is conducting time-critical response actions.[149]

Since the first cleanup plan in 2008, the understanding of the extent of contamination has greatly improved by conducting on-the-ground assessments and surveys. Some concrete actions have been taken, such as putting up signs warning residents of dangers and providing remedies for those living in homes built with contaminated materials. However, the waste from the 523 abandoned mines remains largely as it has since 1986.

Undertaking the cleanup objectives identified in the first five-year plan, the second five-year plan, and the ten-year plan is a significant effort that requires collaboration between tribal, state, and federal governments, as well as impacted communities. In addition to collaboration, additional funding is necessary to remedy the problem. The agencies have contributed some resources, but a substantial amount of funding is needed to fully execute the cleanup plans. Available remedies under CERCLA may provide long overdue relief to impacted communities. The following Part provides an overview of funding generated under CERCLA through existing settlement agreements and identifies the gap in funding that the federal government should be liable for.

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145. U.S. EPA, TEN-YEAR PLAN FEDERAL ACTIONS TO ADDRESS IMPACTS TO URANIUM CONTAMINATION ON THE NAVAJO NATION 2020–2029 (2021) [hereinafter TEN-YEAR PLAN], https://www.epa.gov/sites/default/files/2021-02/documents/nnaum-ten-year-plan-2021-01.pdf [https://perma.cc/2DWK-24QU].

146. *Id.* at 9.

147. *Id.* at 18.

148. U.S. EPA, ANNUAL PROGRESS UPDATE: FEDERAL ACTIONS TO ADDRESS URANIUM CONTAMINATION ON NAVAJO NATION 3 (2023), https://www.epa.gov/system/files/documents/2023-11/ten-year-plan-2022-2023-progress-update-nnaum-2023-10-11.pdf [https://perma.cc/BBP2-D87Y].

149. *Id.* at 18.

II. CERCLA AS A PARTIAL REMEDY IN HOLDING POLLUTERS ACCOUNTABLE

Determining the total amount of funding needed for uranium cleanup is a difficult task. The majority of mine sites have either undergone only an initial assessment or have not yet been fully assessed to determine the full nature of contamination at the site and what it might cost to remediate that particular site.[150] EPA cannot calculate costs of cleanup until it thoroughly assesses the character and extent of contamination. Additionally, final costs will largely depend on the final remedy selected, including whether waste will stay in its current location (capped in place)[151] or moved to another location for permanent disposal.[152] The distance between its current location and its final destination, the transportation method selected, and the personnel and supplies needed to design and construct or rehabilitate a disposal facility all factor into the final cost for each site.[153] The off-site remedy generally favored by local communities is much more expensive than a cap-in-place remedy.[154] While costs will vary from mine to mine and the final remedy ultimately selected, the Navajo Nation Abandoned Mine Land Program estimates an average reclamation cost of approximately $76,000 per mine.[155] Mine

150. TEN-YEAR PLAN, *supra* note 145, at 4 (comparing 523 mine sites with preliminary screening to only 113 mines that have been assessed to determine the amount and extent of contamination).

151. U.S. EPA, COMMUNITY GUIDE TO CAPPING (2021), https://semspub.epa.gov/work/HQ/401585.pdf [https://perma.cc/8NPS-XNEX].

152. *Excavation and Off-Site Disposal*, FED. REMEDIATION TECH. ROUNDTABLE, https://www.frtr.gov/matrix/Excavation-and-Off-Site-Disposal [https://perma.cc/CUP5-TVFY].

153. *See e.g.*, OFF. OF SOLID WASTE & EMERGENCY RESPONSE, U.S. EPA, GUIDANCE ON CONDUCTING NON-TIME-CRITICAL REMOVAL ACTIONS UNDER CERCLA 43 (1993) https://www.ensafe.com/wp-content/uploads/1993_EECA-Guidance.pdf [https://perma.cc/98RB-M3Z5] (listing the types of costs that should be considered, including direct costs, indirect costs, and annual post-removal site control costs).

154. *See generally id.* (detailing factors affecting costs). Marjorie Childress, *Cleanup of Abandoned Mines Stirs Demand for Workers*, UNDERSCORE NATIVE NEWS (Apr. 5, 2022), https://www.underscore.news/land/cleanup-of-abandoned-uranium-mines-stirs-demand-for-workers [https://perma.cc/C43H-FFTM] (quoting Valinda Shirley, Executive Director of the Navajo Nation EPA) ("The position has always been off-site disposal. And taking [the waste] across the street, literally across the street, does not work for the Navajo people.").

155. OFF. OF LEGACY MGMT., U.S. DEP'T OF ENERGY, DEFENSE-RELATED URANIUM MINES COST AND FEASIBILITY TOPIC REPORT 7 (2014),

sites with more extensive contamination or those sites requiring continued surveillance can be significantly more expensive, upwards of hundreds of millions of dollars for one site.[156]

The total costs to remediate all of the abandoned mines on the Navajo Reservation have been and will continue to be substantial. To date, millions of dollars have gone towards the planning, assessment, and emergency response of uranium cleanup. The agencies estimate that between 1997 and 2007, the agencies collectively spent more than $161 million on uranium-related cleanup activities on Navajo lands.[157] From 2007 to 2012, the agencies estimate they had spent close to $110 million for work associated with the first five-year plan.[158] Responsible parties contributed an estimated $17 million during that time as well.[159]

Part I of this Article provided an overview of the scope of mining and resulting contamination on the Navajo Nation, as well as the intergovernmental approach to remediating abandoned mines and mills. Part II of this Article begins with a discussion of the overall costs of cleanup, then provides an overview of recent settlement agreements that will cover the costs of remediation at almost half of the abandoned mines.

A. The CERCLA Framework

To help cover remediation costs, responsible parties must bear most, if not all, of the burden. To date, significant progress has been made to identify responsible parties and ensure they contribute financially to remediate the mines they once abandoned. This Section outlines several of the settlement agreements that will help fund cleanup of abandoned mines.[160]

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www.energy.gov/sites/prod/files/2017/07/f35/S10859_Cost.pdf [https://perma.cc/LQ67-M5C5].

156. *Id.* (identifying a total state cost of $479,000 to remediate an eighteen-mile stretch of road associated with the Midnite Mine and Dawn Mill in Washington and providing other remediation cost estimates, including the Lucky Lass and White King uranium mines in Oregon (estimated cost is $13 million), Juniper mine in California (estimated cost is $2.7 million), and the Midnite Mine in Washington, including long-term groundwater treatment (estimated cost is $205 million).

157. FIVE-YEAR PLAN, *supra* note 14, at 12.

158. FIVE-YEAR PLAN SUMMARY REPORT, *supra* note 81, at 8.

159. *Id.* "Potentially responsible party" is defined as any person who may be liable for response costs under CERCLA. 40 C.F.R. § 304.12(m).

160. For a discussion on how tribes can protect reservation environments in concert with federal environmental laws, see Richard A. DuBey et al., *Protection of*

CERCLA, also known as Superfund,[161] provides broad federal authority to respond to releases or threatened releases of hazardous substances that may endanger public health or the environment.[162] Congress passed CERCLA in 1980 in response to a growing public awareness of the serious environmental and health risks posed by industrial pollution.[163] In passing CERCLA, the two primary goals were to promote the "timely cleanup of hazardous waste sites"[164] and "to ensure that the costs of such cleanup efforts were borne by those responsible for the contamination."[165] CERCLA "established prohibitions and requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for cleanup when no responsible party could be identified."[166]

Under CERCLA, EPA has broad authority to identify potentially responsible parties (PRPs) and hold those parties liable for costs of remediation.[167] PRPs are parties that polluted or otherwise bore some level of oversight over the generation, disposal, or transport of hazardous waste.[168] PRPs may include current and past facility owners and operators, parties that arranged for disposal or treatment, and any party who accepted hazardous substances for transport to disposal or treatment facilities.[169]

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the Reservation Environment: Hazardous Waste Management on Indian Land, 18 ENV'T L. 449 (1988); Steven H. Berlant, *Responding to Dangers Posed by Hazardous Substances: An Overview of CERCLA's Liability and Cost Recovery Provisions as They Relate to Indian Tribes*, 15 AM. INDIAN L. REV. 279 (1991).

161. *Superfund: CERCLA Overview*, U.S. EPA (Oct. 8, 2024), https://www.epa.gov/superfund/superfund-cercla-overview [https://perma.cc/6HPC-K536].

162. Pub. L. No. 96-510, 94 Stat. 2767 (1980) (codified as amended in 42 U.S.C. §§ 9601–9628).

163. Burlington N. & Santa Fe Ry. Co. v. United States, 556 U.S. 599, 602 (2009).

164. *Id.*

165. *Id.*

166. *Superfund: CERCLA Overview*, U.S. EPA, https://www.epa.gov/superfund/superfund-cercla-overview [https://perma.cc/3SRX-3TLF] (last updated Oct. 8, 2024).

167. Potentially responsible parties may include owners or operators of a facility, past owners and operators, generators and arrangers who created or arranged for the movement of hazardous waste, and transporters of waste. Liability may be strict, retroactive, joint, and several. 40 C.F.R. § 304.12(m).

168. 42 U.S.C. § 9607(a).

169. *Id.*

In cases where a PRP cannot be identified, the Superfund program can pay for cleanup efforts. In order for a site to be eligible for Superfund funding under CERCLA, the site must either be listed on the National Priorities List (NPL) or there must be a threatened or actual release of a hazardous substance.[170] When there is an actual or threatened release of a hazardous substance into the environment, the federal government can take necessary actions.[171] Section 104 of CERCLA provides for various response authorities, including short-term removal actions and long-term remedial response actions.[172] Short-term removal actions are those actions that may be taken to address releases or threatened releases that require a prompt response in order to protect the public.[173] Long-term remedial actions are permanent remedies that may be taken instead of, or in addition to, removal actions to prevent or minimize the release of hazardous substances.[174]

Under CERCLA's enforcement provisions, EPA has several options. EPA may either conduct a response itself then seek to recover costs from PRPs in a subsequent cost-recovery action, compel potentially responsible parties to perform cleanup actions themselves, or enter into settlement agreements with PRPs to perform all or portions of the work.[175] Responsible parties can be liable for all costs of removal or remediation actions, other necessary response costs, damages for injury to natural resources, and the costs of any health assessments or health studies.[176] Here, in securing funding and remediation for

170. *Superfund: CERCLA Overview*, *supra* note 166. Sites can become eligible for NPL listing by accumulating enough points through EPA's hazardous ranking system which allocates points based on the magnitude of harm to people through water, air, and soil pollution. *Hazard Ranking System (HRS)*, U.S. EPA, https://www.epa.gov/superfund/hazard-ranking-system-hrs [https://perma.cc/7JJE-MQKA] (last updated Oct. 9, 2024). Primarily due to low and dispersed populations and a lack of political will, Navajo uranium mines have generally not accumulated enough points to become eligible for NPL listing. *But see EPA Adds Sites*, *supra* note 143.

171. 42 U.S.C. §§ 9604(a), 9615.

172. § 9604(a).

173. § 9601(23).

174. § 9601(24).

175. *Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and Federal Facilities*, U.S. EPA https://www.epa.gov/enforcement/comprehensive-environmental-response-compensation-and-liability-act-cercla-and-federal [https://perma.cc/LEW5-T3CD] (last updated July 10, 2024).

176. 42 U.S.C. § 9607(a)(4)(A)–(D).

abandoned mines on the Navajo Reservation, EPA exercises each of these enforcement mechanisms.

B. Existing Settlement Agreements Under CERCLA

Various companies mined uranium on the Navajo Reservation and subsequently abandoned their mines and mining operations when mining ended.[177] However, utilizing CERCLA, EPA and the Navajo Nation have been successful in holding some responsible parties accountable, or at least getting those parties to the negotiating table, to pay for cleanup.[178] These negotiations have resulted in settlement agreements that will provide substantial amounts of funding for uranium mine cleanup.[179] Specific settlements include agreements with successors-in-interest to the Kerr-McGee Corporation ("Kerr-McGee"), Freeport-McMoRan, Inc., the United States itself, and nearly a dozen other entities.[180] Each of these parties bear some responsibility for the extensive uranium contamination remaining today. This next Section describes the settlement agreements reached with PRPs and the amount of funding provided for under the settlement. This Section concludes with a discussion of how the settlements contribute overall to remediating abandoned mines within the Navajo Nation.

The Tronox settlement is the largest recovery for cleanup of environmental contamination in United States history.[181] The Tronox settlement began in 2009 when Tronox Inc. ("Tronox") and fourteen of its affiliated companies filed for bankruptcy in

177. *See infra* Table 1 (identifying companies liable for abandoning mines).

178. The federal government itself has largely evaded liability under CERCLA. *See* David, *supra* note 36, at 1771 (arguing that the United States should be held liable as both an "owner" and "operator" under CERCLA); *see also* Cody Phillips, Comment, *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*, 32 COLO. NAT. RES. ENERGY & ENV'T L. REV. 75, 101 (2021) (arguing that the United States should be liable as both an "owner" and "arranger" under CERCLA).

179. *See infra* Table 1 (listing the amounts of various settlement agreements).

180. *See infra* Table 1.

181. *Case Summary: Settlement Agreement in Anadarko Fraud Case Results in Billions for Environmental Cleanups Across the Country*, U.S. EPA, https://www.epa.gov/enforcement/case-summary-settlement-agreement-anadarko-fraud-case-results-billions-environmental [https://perma.cc/E3CX-9M7K] (last updated Oct. 10, 2024).

the Southern District of New York Bankruptcy Court.[182] Tronox is the successor to the Kerr-McGee Corporation, a corporation that mined extensively on the Navajo Reservation during the height of the uranium boom.[183] Kerr-McGee historically operated a wide array of business entities, including companies that treated wood products, produced rocket fuel, refined and marketed petroleum products, and mined, milled, and processed nuclear materials, including uranium.[184] By 2005, Kerr-McGee had terminated many of its previous operations and maintained just two core businesses, including an oil and gas business and a smaller chemical business.[185]

While Kerr-McGee was profiting from its oil and gas operations, Kerr-McGee remained saddled with extensive legacy environmental and tort liabilities from its previous operations.[186] Kerr-McGee's legacy liabilities included a portfolio of more than 2,700 environmental sites in forty-seven states, including federal Superfund sites in Florida, Mississippi, New Jersey, Idaho, Illinois, Wisconsin, and North Carolina.[187] Kerr-McGee "had incurred more than $1 billion in environmental response costs since 2000 and was spending an average of more than $160 million annually on remediation."[188] As part of a strategic corporate reorganization, Kerr-McGee sold its valuable oil and gas business to the Anadarko Petroleum Corporation and the legacy liabilities were left behind with the corporation that was renamed Tronox.[189] Tronox was left "insolvent, undercapitalized and saddled with legacy obligations that it could not support."[190] Tronox, as the new owner of Kerr-McGee's eighty-five years of legacy liabilities, filed for bankruptcy.[191]

In 2013, the Bankruptcy Court determined that Kerr-McGee had fraudulently conveyed billions of dollars in assets in an attempt to avoid its environmental liabilities.[192]

182. Tronox Inc. v. Kerr McGee Corp., 503 B.R. 239 (Bankr. S.D.N.Y. 2013).
183. *Id.* Tronox is sometimes referred to as "Old Kerr-McGee." *Id.* at 248.
184. *Id.* at 249.
185. *Id.*
186. *Id.* at 248–49.
187. *Id.*
188. *Id.* at 249–50.
189. *Id.* at 250–52.
190. Tronox Inc. v. Anadarko Petroleum Corp., 429 B.R. 73, 81 (Bankr. S.D.N.Y. 2010).
191. *Kerr McGee Corp.*, 503 B.R. at 266.
192. FIVE-YEAR PLAN SUMMARY REPORT, *supra* note 81.

Ultimately, Kerr-McGee agreed to pay $5.15 billion to settle the case,[193] resulting in "the largest amount ever awarded in a bankruptcy proceeding for governmental environmental claims and liabilities."[194] Of the $5.15 billion settlement, $4.4 billion was directed to environmental cleanup and environmental claims throughout the country.[195] EPA received approximately $985 million for cleanup of abandoned mines on the Navajo Reservation.[196] The settlement will fund cleanup at forty-two mines on the Navajo Reservation and an additional thirteen uranium mines near the reservation.[197] The Navajo Nation itself received $45 million in the settlement for mine cleanup.[198] Several identified mines and mills on the Navajo Nation received separate allocations for cleanup.[199] Overall, the settlement identifies fifty-five mines on or near the Navajo Nation that will receive funding for cleanup.[200] This settlement presents a historic opportunity to address contamination at the identified mine sites.

In another successful CERCLA action, EPA and the Navajo Nation brought claims against two subsidiaries of Freeport-McMoRan, Inc.—Cyprus Amax Minerals Company ("Cyprus Amax") and Western Nuclear, Inc. ("Western Nuclear")—for abandoned mines throughout New Mexico, Arizona, and Utah.[201] A settlement agreement was reached in 2017 with Cyprus Amax and Western Nuclear, as

193. *United States Announces $5.15 Billion Settlement with Anadarko to Pay for Environmental and Toxic Tort Liabilities*, U.S. ATT'Y'S OFF. S. DIST. OF N.Y. (Apr. 3, 2014), https://www.justice.gov/usao-sdny/pr/united-states-announces-515-billion-settlement-anadarko-pay-environmental-and-toxic [https://perma.cc/2ZXP-RL4T].

194. *Case Summary: Court Decision in Tronox Bankruptcy Fraudulent Conveyance Case Results in Largest Environmental Bankruptcy Award Ever*, U.S. EPA (July 5, 2023), https://www.epa.gov/enforcement/case-summary-court-decision-tronox-bankruptcy-fraudulent-conveyance-case-results [https://perma.cc/7ZT6-HZRU].

195. *United States Announces $5.15 Billion Settlement with Anadarko to pay for Environmental and Toxic Tort Liabilities*, *supra* note 193.

196. *Id.*

197. ABANDONED URANIUM MINE SETTLEMENTS, *supra* note 93.

198. *See* PAC. SW. REGION 9, U.S. EPA, TRONOX SETTLEMENT FUNDS FOR 50 NAVAJO URANIUM MINES (2016), https://www.epa.gov/sites/default/files/2016-06/documents/tronox_4-16_web.pdf [https://perma.cc/4XNE-SXWC].

199. *Id.*

200. ABANDONED URANIUM MINE SETTLEMENTS, *supra* note 93.

201. Consent Decree at 1, United States v. Cyprus Amax Mins. Co., No. CV-17-00140-PHX-DLR (D. Ariz. May 22, 2017), https://semspub.epa.gov/work/09/100009258.pdf [https://perma.cc/TY2Q-PVHZ].

successors-in-interest.[202] The settlement requires Cyprus Amax and Western Nuclear to finance and perform removal site evaluations or remedial investigations, including community involvement work, at ninety-four mines.[203] Depending on the specific characteristics of the mine, Cyprus Amax and Western Nuclear may be required to conduct interim removal actions, as well as baseline human health risk assessments and ecological risk assessments, engineering evaluations and cost analyses or feasibility studies, removal or remediation design, removal or remedial action, operation and maintenance, and post-removal site controls.[204] Additionally, Cyprus Amax and Western Nuclear are required to pay both the United States and the Navajo Nation past and future response costs.[205] Cyprus Amax and Western Nuclear began the work described in the Consent Decree in 2018.[206] They began by conducting detailed site assessments at each site to determine the extent of contamination present at each mine.[207] The ninety-four mine sites represent nearly 20 percent of abandoned mines on the reservation.[208] Overall, the settlement has an estimated value of $600 million.[209]

The Navajo Nation also sought to hold the United States liable as a PRP under CERCLA for its role in facilitating uranium mining on the reservation.[210] In a series of settlements, Phase 1 and Phase 2, the United States agreed to cover reclamation costs for forty-six high-priority mines.[211] The Phase 1 settlement agreement was entered into in 2015 and provided funds to investigate sixteen priority mines that had

202. *Id.*
203. *Id.* at 94.
204. *Id.*
205. *Id.* at 29–30.
206. *Cyprus Amax and Western Nuclear Mines, Navajo Nation: Cleaning Up Abandoned Uranium Mines*, U.S. EPA, https://www.epa.gov/navajo-nation-uranium-cleanup/cyprus-amax-and-western-nuclear-mines [https://perma.cc/HLV4-E9M7] (last updated Apr. 19, 2024).
207. *Id.*
208. *Id.*
209. *Id.*
210. *Settlement Agreement*, Navajo Nation-U.S. (Apr. 8, 2015) [hereinafter *Phase 1 Settlement Agreement*], https://www.epa.gov/sites/default/files/2017-02/documents/northern-trust-mines-aum-phase_1_settlement_agreement.pdf [https://perma.cc/M2EA-R534].
211. U.S. EPA, TRUST MINES BACKGROUND AND SITE UPDATES 1 n.1 (2020), https://www.epa.gov/sites/default/files/2021-01/documents/nnaum-trust-mines-factsheet-2020-07.pdf [https://perma.cc/5WM3-V36B].

elevated radiation levels near residences or that had the potential to contaminate water resources.[212] The Phase 1 settlement required the United States to deposit just over $13.2 million into a trust account to fund remedial site evaluations, as well as cover future oversight and administrative costs.[213] In 2016, the Navajo Nation and the United States entered into the Phase 2 Expanded Trust Agreement.[214] Phase 2 focused on moving forward with removal actions at the sixteen mines identified in Phase 1. The Phase 2 settlement requires removal site evaluations to be conducted at thirty additional mines and it requires funding for two water studies.[215] The settlement is valued at approximately $21.5 million.[216] In entering the two settlement agreements, the United States did not admit liability for the mines covered in the agreements, and the Navajo Nation agreed to release future claims (only as to the specific mines identified in the settlement agreements) against the United States.[217] Importantly, these settlement agreements did not release the United States from liability for mines other than the specific mines identified in the settlement.[218] As of late 2023, engineering evaluations and costs analyses were ongoing for the Phase 1 mines and removal site investigation work plans are under review for the Phase 2 mines.[219]

In addition to the settlements discussed above, EPA has entered into enforcement agreements with several other corporations to assess contamination or conduct removal actions. The parties include Babbitt Ranches, Burlington Northern and Santa Fe Railway, Chevron, El Paso Natural Gas, EnPro Holdings, Homestake, and the United Nuclear

212. *Phase 1 Settlement Agreement*, *supra* note 210, at 7.

213. *Id.*

214. *Phase 2 Expanded Trust Agreement*, Navajo Nation-U.S. 1 (Feb. 14, 2022), https://www.epa.gov/system/files/documents/2023-08/nn-trust-mines-phase-2-expanded-trust-agreement-w-sow-toc-signed-2022-02-14.pdf [https://perma.cc/9NBH-Z68A].

215. *Id*.

216. ABANDONED URANIUM MINE SETTLEMENTS, *supra* note 93.

217. Defining "Covered Matters" as "any and all claims that were, that could have been, that could now be, or that could hereafter be asserted by the Navajo Nation against the United States . . . that arise out of or in connection with: (1) the [w]ork." *Phase 1 Settlement Agreement*, *supra* note 210, at 4.

218. *Id.* Defining "Work" under the settlement as "Removal Site Evaluations at the Sites and associated public participation." *Id*. at 6. Defining a "Site" as each of the sixteen mines listed in the settlement. *Id.* at 5.

219. *Trust Mines,* U.S. EPA, https://www.epa.gov/navajo-nation-uranium-cleanup/trust-mines [https://perma.cc/MEP3-EL79] (last updated Aug. 15, 2024).

Corporation.[220] Collectively, these companies will begin removal actions at forty-one sites, and take interim safety precautions including putting up fences and signs.[221]

As illustrated in Table 1, of the 523 mines on the reservation, these settlement agreements will cover cleanup costs for 236 of the abandoned mines, leaving 287 mines without a dedicated source of funding.[222] While a full discussion of the potential inadequacies of existing funding is outside the scope of this Article, it should be noted that current funding levels may be inadequate to fully restore the land and water. Final reclamation costs will largely depend on the final remedies selected and the distances waste may need to travel. This Article does not examine whether the funding provided is sufficient to cover remediation costs, nor does this Article examine the suitability of cleanup options.

CERCLA has been a powerful tool in holding responsible parties accountable, but it does not provide a full remedy. Beyond CERCLA, the federal government has legal obligations owed to the Navajo Nation that require the federal government to take immediate action. The next Part provides a basis for those claims.

220. ABANDONED URANIUM MINE SETTLEMENTS, *supra* note 93.

221. *Id.*

222. *See infra* Table 1. Some of the mine sites without a funding source may not require extensive remediation or may be remediated through other available means, such as state or tribal budgets, or other federal programs. *See, e.g.*, *EPA Adds Sites*, *supra* note 143. Sites with funding may still require additional funds to remedy the site. *Id.*

Table 1. Settlement Agreements for Abandoned Uranium Mines (AUMs) on or near the Navajo Reservation

Name of Settlement	Approx. Settlement Amount	Number of Mines Covered in Agreement
Tronox	$1.03 billion	55
Cyprus Amax, Western Nuclear	$600 million	94
Phase 1 and Phase 2	$34.7 million	46
Private Companies	Unknown (past and future response costs)	41
Total AUMs on or near Navajo lands		523
Total mines without funding		287 (approx. 55%)
Total mines with secured funding		236 (approx. 45%)

III. THE FEDERAL GOVERNMENT'S TREATY AND TRUST OBLIGATIONS TO PROVIDE THE NAVAJO NATION A PERMANENT HOMELAND

The settlement agreements discussed in Section II.B are designed to cover costs of cleanup for 236 abandoned mines on the Navajo Reservation. But even with the significant amount of funding available, 287 mines on the Navajo Reservation will remain abandoned with no designated source of funding for cleanup. The remaining question is then—Who is responsible for cleanup at the rest of the mines?

Part III of this Article argues that the United States, based on treaty agreements made with the Navajo tribe and its role as a trustee of Native lands, has a legal obligation to remediate the remaining abandoned mines. This Part begins with an analysis of specific treaty obligations that the United States made to the Navajo Nation in two treaties. This Part then discusses the duty of trust the federal government owes to all tribal nations,

followed by a showing of the specific fiduciary duties that attach in the Navajo uranium context.

A. The Navajo People Have a Treaty Right to a Permanent Homeland

1. Native Nations' Treaty Rights

Treaties with Indian tribes, along with the U.S. Constitution and laws of the United States, are "the supreme Law of the Land."[223] Commitments made in treaty negotiations and memorialized in treaty language "established enduring and enforceable Federal obligations"[224] and are essentially "contract[s] between two sovereign nations."[225] Treaty rights apply both on and off reservation lands, and "can trump private property rights, state regulation, and even state criminal laws."[226] Treaty rights can even survive termination of the tribe itself.[227]

Treaty rights may endure both on and off reservation lands. The Supreme Court's early opinion in *United States v. Winans* illustrates the nature and breadth of tribal treaty rights. [228] In *Winans*, two non-Native people (the Winans brothers) operated fishing wheels to the detriment of Yakama tribal fishers.[229] The brothers held the land bordering the river in fee simple and held state-issued fishing permits.[230] The brothers argued this gave them the right to exclude Native peoples from fishing on their private property.[231] The Native fishers argued they had fished from that location since time immemorial and that their fishing

223. U.S. CONST. art. VI, cl. 2.
224. 25 U.S.C. § 5601(5).
225. Washington v. Wash. State Com. Passenger Fishing Vessel Ass'n, 443 U.S. 658, 675 (1979).
226. Wenona T. Singel & Matthew L.M. Fletcher, *Indian Treaties and the Survival of the Great Lakes*, MICH. ST. L. REV. 1290 (2006) (footnotes omitted) (first citing Grand Traverse Band of Ottowa & Chippewa Indians v. Dir., Mich. Dep't of Natural Res., 141 F.3d 635, 639–41 (6th Cir. 1998); then citing New Mexico v. Mescalero Apache Tribe, 462 U.S. 324, 325 (1983); and then citing People v. LeBlanc, 248 N.W.2d 199, 202 (Mich. 1976)).
227. Menominee Tribe v. United States, 391 U.S. 404, 411–13 (1968) (noting that the tribe's hunting and fishing rights were guaranteed by the Wolf River Treaty of 1854 and survived the Termination Act of 1954).
228. United States v. Winans, 198 U.S. 371 (1905).
229. *Id.*
230. *Id.* at 380.
231. *Id.*

rights were guaranteed by a treaty.[232] The Native fishers relied on an 1859 treaty that guaranteed the Yakama Tribe "the right of taking fish at all usual and accustomed places, in common with citizens of the territory."[233]

In determining the tribe's right to fish "in common with citizens of the territory," the Supreme Court considered the nature of the agreement between the tribe and the United States.[234] Prior to the treaty, tribal fishers enjoyed the right to fish anywhere they chose. By entering the treaty, the tribe ensured they had exclusive rights to fish within certain areas and rights to fish outside those boundaries. At the time the treaty was made, "the fishing places were part of the Indian country, subject to the occupancy of the Indians, with all the rights such occupancy gave."[235] The treaty protected the right of taking fish at all usual and accustomed places, including the right to cross lands and the right to occupy lands for the purpose of fishing. Those rights were "intended to be continuing against the United States and its grantees as well as against the [s]tate and its grantees."[236] "No other conclusion would give effect to the treaty."[237] Holding in favor of the tribe, the Supreme Court held that the treaty guaranteed the right of the Yakama people to take fish at all their usual and accustomed fishing sites, even those sites that had been transferred to private ownership. The treaty rights "imposed a servitude upon every piece of land as though described therein."[238] In discussing the nature of treaty agreements, the Supreme Court stated that the treaties were "not a grant of rights *to* the Indians, but a grant of right *from* them,—a reservation of those not granted."[239] Only a limitation of those rights "was necessary and intended, not a taking away."[240]

The treaty right to fish was further solidified in the seminal case, *United States v. Washington*, known as the Boldt

232. *Id.* at 377–78.
233. *Id.* at 378 (citation omitted).
234. *Id.* at 381.
235. *Id.* at 379.
236. *Id.* at 381–82.
237. *Id.* at 381. Treaty negotiations "seemed to promise more and give the word of the Nation for more." *Id.* at 380.
238. *Id.*
239. *Id.* at 381 (emphasis added).
240. *Id.*

Decision.[241] There, in relying on similar treaty language as in *Winans*, the District Court affirmed the treaty rights of twenty tribes to "tak[e] fish, at all usual and accustomed grounds and stations . . . in common with citizens of the territory."[242] The decision attempted to put an end to years of discriminatory and violent state action and confirm tribes' treaty rights.[243] In considering the terms of the treaty, the Supreme Court considered the tribes' understanding of the treaty terms and the importance of salmon to the tribes. Salmon was critical to the tribes, not only as a means of subsistence, but culturally, socially, and economically.[244] The historical context was clear: The tribes would not have signed the treaty had their rights to fish, both on and off the reservation, not been protected.[245] Indeed, salmon were "not much less necessary to the existence of the Indians than the atmosphere they breathed."[246] The Boldt Decision was ultimately affirmed by a unanimous Ninth Circuit,[247] and two years after the Boldt Decision, the Supreme Court denied the state's petition for certiorari.[248] It was a pivotal case that recognized the scope of tribal treaty rights, even when measured against the interests of powerful commercial fishers and state police powers.

Further, some treaty rights are necessarily implied in order to give meaning to treaties with Native nations. In the foundational case of *Winters v. United States*, the Supreme Court held that some rights are necessarily implied in order to give meaning to these treaties.[249] In *Winters*, the Supreme Court considered whether an Indian tribe had the right to prevent upstream water users from diverting water away from

241. United States v. Washington, 384 F. Supp. 312 (W.D. Wash. 1974), *aff'd*, 520 F.2d 676 (9th Cir. 1975) (ruling from Judge Boldt).

242. *Id.* at 356.

243. See CHARLES WILKINSON, TREATY JUSTICE: THE NORTHWEST TRIBES, THE BOLDT DECISION, AND THE RECOGNITION OF FISHING RIGHTS 1–5 (2024) for a complete history of the struggle to recognize Indian treaty rights to fish in the Pacific Northwest, including the "fish wars" where Native fishers exercising their treaty rights to fish were shot at, beat, harassed, and arrested by state police.

244. *Id.* at 10.

245. *Id.* at 68–69.

246. *Washington*, 384 F. Supp. at 331 (quoting United States v. Winans, 198 U.S. 371, 381 (1905).

247. United States v. Washington, 520 F.2d 676 (9th Cir. 1975).

248. *Washington*, 384 F. Supp. at 312, *cert. denied*, Washington v. United States, 423 U.S. 1086 (1976).

249. Winters v. United States, 207 U.S. 564 (1908).

reaching the Fort Belknap Indian Reservation.[250] The tribe had a treaty with the United States establishing the boundaries of the reservation but the treaty was silent with respect to water.[251] Holding in favor of the tribe's rights to water, the Supreme Court reasoned that the tribe had given up vast amounts of land in exchange for a smaller reservation and would not have made this bargain if the reservation did not include the water necessary to make the land valuable.[252] In establishing reservations, it was the policy goal of the federal government to change the nomadic lifestyle of Indigenous peoples and convert them to an agricultural lifestyle.[253] Thus, water was an essential part of fulfilling the government's policy goals. Therefore, the Supreme Court held that where land was reserved for an Indian reservation, there was also an implied reservation of water.[254] The Supreme Court interpreted the treaty as including an implied right to water. It was the only way to give meaning and effect to the treaty and the tribe's bargained-for agreement.

Other cases have similarly protected other rights guaranteed by treaty. In *Minnesota v. Mille Lacs Band of Chippewa Indians*, the Supreme Court upheld a tribe's hunting, fishing, and gathering rights on ceded lands protected under an 1837 treaty.[255] There, the tribe's treaty rights continued even after an 1850 executive order mandated the tribe's removal and revoked its usufructuary rights.[256] The tribe's treaty rights endured even with language in a subsequent treaty, where the tribe agreed to "fully and entirely relinquish and convey to the United States, any and all right, title, and interest, of whatsoever nature the same may be, which they may now have in, and to any other lands in the Territory of Minnesota or elsewhere."[257] That language itself was insufficient to revoke the tribe's treaty rights. Finally, the treaty rights were not impliedly terminated when Minnesota became a state.[258] This case established the enduring nature of treaty rights. Without

250. *Id.*
251. *Id.*
252. *Id.* at 576.
253. *Id.*
254. *Id.* at 576–77.
255. Minnesota v. Mille Lacs Band of Chippewa Indians, 526 U.S. 172 (1999) (quoting Treaty with the Chippewa, Feb. 22, 1855, 10 Stat. 1165).
256. *Id.* at 193–95.
257. *Id.* at 184.
258. *Id.* at 205.

clear congressional intent to abrogate treaty rights, Indian treaty rights persist.[259]

In 2020, a tribe's treaty rights to a promised reservation were protected in what has been described as an "Indian law bombshell"[260] and likely the most significant Indian law case in over one hundred years.[261] In *McGirt v. Oklahoma*,[262] a case concerning reservation disestablishment, the Supreme Court found that the Muscogee Creek Reservation had not been disestablished even after more than one hundred years of the state asserting jurisdiction over reservation lands. The Muscogee Creek Nation had a treaty that "solemnly" guaranteed them a permanent home.[263] "The government's promises weren't made gratuitously" nor were they "delusory."[264] Both parties entered into the agreement knowingly accepting its obligations.[265] In *McGirt*, the Supreme Court found that Congress never disestablished the reservation and the tribe's negotiated treaty rights to a permanent homeland prevailed. In its opinion, the Supreme Court chose to "hold the government to its word"[266] and held that over 3.25 million acres of land constituted reservation land, not state land. In concluding its opinion, the Court wrote,

> The federal government promised the Creek a reservation in perpetuity. Over time, Congress has diminished that reservation. It has sometimes restricted and other times expanded the Tribe's authority. But Congress has never withdrawn the promised reservation. As a result, many of the arguments before us today follow a sadly familiar pattern. Yes, promises were made, but the price of keeping them has become too great, so now we should just cast a blind eye. We reject that thinking. If Congress wishes to withdraw its promises, it must say so . . . . To hold otherwise would be to

259. *Id.* at 202.
260. Robert J. Miller & Torey Dolan, *The Indian Law Bombshell:* McGirt v. Oklahoma, 101 B.U. L. REV. 2049 (2021).
261. *Id.*
262. McGirt v. Oklahoma, 591 U.S. 894, 897 (2020) ("On the far end of the Trail of Tears was a promise.").
263. *Id.* at 900 (citing Treaty with the Creeks arts. I, XIV, Mar. 24, 1832, 7 Stat. 366, 368).
264. *Id.*
265. *Id.* (noting "binding and obligatory" language upon ratification).
266. *Id.* at 898.

> elevate the most brazen and longstanding injustices over the law, both rewarding wrong and failing those in the right.[267]

The *McGirt* Court held the government to its treaty obligations, even after a century of dereliction. Treaties with Native nations must be given effect, and the bargained-for commitments must be honored. This treaty framework informs the proper interpretation of the Navajo treaties.

2. The 1868 Navajo Treaty Guarantees the Navajo Nation a Permanent Home

The United States signed two Senate-ratified treaties with the Navajo Nation recognizing specific rights to the tribe.[268] The treaties form the foundation of the relationship between the Navajo Nation and the United States. The first treaty was signed in 1849 as a result of Western expansion and the desire to attain Indian lands.[269] The arrival of settlers led to significant conflict and loss of life and property on both sides.[270] With the United States recognizing the need to negotiate with the tribe, the treaty was entered into to bring peace to the region. With the signing of the 1849 treaty both parties agreed to promote peace and cease hostilities.[271]

Article I of the 1849 treaty placed the tribe "under the exclusive jurisdiction and protection" of the United States where the tribe was under and "will forever remain[] under the aforesaid jurisdiction and protection."[272] The treaty provided

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267. *Id.* at 937–38.

268. *Treaty with the Navaho, 1849*, *in* INDIAN AFFAIRS: LAWS AND TREATIES 583 (Charles J. Kappler ed., 1902) [hereinafter 1849 Treaty], https://cdm17279.contentdm.oclc.org/digital/collection/kapplers/id/29605/rec/1 [https://perma.cc/T2DA-A8FL]; Treaty with the Navajo Indians, June 1, 1868, 15 Stat. 667 [hereinafter 1868 Treaty], https://www.govinfo.gov/content/pkg/STATUTE-15/pdf/STATUTE-15-Pg667.pdf [https://perma.cc/Z8U7-B9MV].

269. *See* 1849 Treaty, *supra* note 268.

270. The wars between the United States and the Navajo people are frequently referenced as the "Navajo Wars." *See* Bailey, *supra* note 19, at 3–12. "By the subjugation and colonization of their Navajo Tribe we gain for civilization their whole country, which is much larger in extent than the State of Ohio, and, besides being the best pastoral region between the two oceans, is said to abound in the precious as well as other useful metals." Arizona v. Navajo Nation, 599 U.S. 555, 576 (2023) (Gorsuch, J., dissenting) (first citing IVERSON, *supra* note 18, at 50; and then quoting James Henry Carleton).

271. 1849 Treaty, *supra* note 268.

272. *Id*. art. I.

the United States with the sole and exclusive right to regulate trade and intercourse with the tribe,[273] bargained for the return of property,[274] and provided for the establishment of military posts,[275] among other provisions. The 1849 treaty did not establish a reservation for the tribe but stated the intent of the United States, "at its earliest convenience" to "designate, settle, and adjust their territorial boundaries" as conducive to ensure "the prosperity and happiness of said Indians."[276] Lastly, Article XI requires the treaty to receive a liberal construction, "at all times and in all places," and that the United States is to "legislate and act as to secure the permanent prosperity and happiness of said Indians."[277]

The 1849 treaty between the Navajo Nation and the United States is an example of the fleeting nature of peace in the region. The goal of establishing "perpetual peace and friendship"[278] did not last. Instead, "[t]he treaty proved to be a mere scrap of paper" as "[b]etween its signing and the summer of 1849, five American military expeditions took the field against the Navajos."[279] After a period known as the "Navajo Wars,"[280] the Navajo people were gathered and marched between 250 and 450 miles to Bosque Redondo, away from their homelands, where they were kept as prisoners of war.[281] There, the Navajo people were held captive for four years, during which time they

273. *Id.* art. III.
274. *Id.* art. V.
275. *Id.* art. VIII.
276. *Id.* art. IX. The creation of the reservation would follow in the 1868 treaty.
277. *Id.* art. XI.
278. *Id.* art. II.
279. Bailey, *supra* note 19, at 5.
280. While the initial military expeditions proved unsuccessful, wars persisted until the military implemented a "scorched earth" policy. EZRA ROSSER, A NATION WITHIN: NAVAJO LAND AND ECONOMIC DEVELOPMENT 25–26 (2021). In effectuating this policy, "[c]ornfields were destroyed, squash rooted up, sheep and livestock taken or shot on sight, peach trees cut down to the stumps, everything that could possibly sustain Navajo life was rooted out and destroyed. Every Navajo man showing the least fight or defiance was butchered on the spot." Bailey, *supra* note 19, at 11. Eventually, "the Navajo had to be literally starved into surrender." Arizona v. Navajo Nation, 599 U.S. 555, 577 (2023) (Gorsuch, J., dissenting) (citing CARROL J. MCCABE & HESTER LEWIS, U.S. COMM'N ON C.R., THE NAVAJO NATION: AN AMERICAN COLONY 14 (1975)).
281. Jennifer Nez Denetdale, *Naal Tsoos Saní: The Navajo Treaty of 1868, Nation Building, and Self-Determination*, *in* NATION TO NATION: TREATIES BETWEEN THE UNITED STATES AND AMERICAN INDIAN NATIONS 117, 121 (2014). Other tribes across the country had similar experiences as they were forcibly removed from their homelands. *See* Indian Removal Act, ch. 148, 4 Stat. 411 (1830) (codified as amended at 25 U.S.C. § 174 (2017)).

suffered extreme hardship.[282] After four years, the federal government determined that keeping the Navajo people at Bosque Redondo was too expensive and it decided to move the tribe.[283]

The tribe and the federal government then negotiated the 1868 treaty to end the internment of the Navajo Nation.[284] In deciding where to move the Navajo people, several options were considered, but Navajo leaders were adamant they be allowed to return home.[285] Treaty negotiation records show that the Navajo people bargained for a return to their traditional homelands, to live within their four sacred mountains and near their familiar rivers and streams.[286] The United States acceded to the Navajo Nation's requests and the 1868 treaty was signed. The 1868 treaty formally set aside a portion of the tribe's ancestral homeland and established the boundaries of the reservation that was to be the tribe's "permanent home."[287] General Sherman, lead negotiator for the United States,

282. ROSSER, *supra* note 280, at 27 (estimating "2,000 people died during internment or roughly one-quarter of those forced to live at Bosque Redondo"). The alkaline soils at Bosque Redondo prevented the growing of their own food, and the Navajo people became dependent on federal rations. Many Navajo people died from malnourishment and disease. *Id.*

283. *Id.*

284. *See* Denetdale, *supra* note 281, at 125–26.

285. "When the Navajos were first created four mountains and four rivers were pointed out to us, inside of which we should live, that was to be our country and was given to us by the first woman of the Navajo Tribe." Council Proceedings (May 28, 1868), *in* TREATY BETWEEN THE UNITED STATES OF AMERICA AND THE NAVAJO TRIBE OF INDIANS: WITH A RECORD OF THE DISCUSSIONS THAT LED TO ITS SIGNING 1, 2 (1968) [hereinafter 1868 Treaty Record] (quoting Barboncito). "After we get back to our country it will brighten up again and the Navajos will be as happy as the land, black clouds will rise and there will be plenty of rain. Corn will grow in abundance and everything [will] look happy." *Id.* at 9.

286. The Diné voiced opposition to the U.S. government's desire to relocate them to a different reservation with people from other tribes. Andrew Curley, *The Origin of Legibility: Rethinking Colonialism and Resistance Among the Navajo People, 1868-1937*, *in* DINÉ PERSPECTIVES: REVITALIZING AND RECLAIMING NAVAJO THOUGHT 129, 133 (2014) ("The U.S. government eventually relented and decided to allow the Navajo people to return to their homes. This was the biggest accomplishment for those headmen who were negotiating on behalf of the Navajos, and perhaps the most significant diplomatic event in Navajo history."). For a complete history of events surrounding the signing of the 1868 treaty, see John L. Kessell, *General Sherman and the Navajo Treaty of 1868: A Basic and Expedient Misunderstanding*, 12 W. HIST. Q. 251 (1981).

287. 1868 Treaty, *supra* note 268, art. XIII. Article II then established the boundaries of the Navajo Reservation. *Id.* art. II; *see also* Arizona v. Navajo, 599 U.S. 555, 558 (2023) ("Under the 1868 Treaty, the Navajo Reservation includes (among other things) the land, the minerals below the land's surface, and the timber on the land, as well as the right to use needed water on the [R]eservation.").

promised the Navajo people approximately 6.4 million acres,[288] but a survey of the reservation found that it consisted of just half of the amount of territory General Sherman had indicated the tribe would get.[289] Nonetheless, in exchange for a permanent homeland,[290] education,[291] seeds,[292] agricultural implements,[293] clothing,[294] livestock,[295] and other promises, the Navajo people agreed to the terms of the treaty and returned to their traditional homelands.[296] Like many tribes that entered into treaties with the United States, the tribe gave up rights to vast portions of their traditional homelands in exchange for a permanent homeland and other provisions agreed to in the treaties.[297]

3. A Permanent Home for the Navajo Nation

In ratifying treaties, the federal government promised tribes that "they would be secure on reservations and that the federal government would protect Native ways of life and autonomy."[298] As consideration for that agreement, "[t]he vast cessions of land by the [N]ative peoples were premised on federal promises that the [N]ative peoples could continue their way of life on homelands of smaller size, free from the intrusions of the majority society."[299]

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288. Kessell, *supra* note 286, at 263.

289. *Id.* The reservation has since grown through executive orders and acts of Congress. *See, e.g.*, Act of June 14, 1934, ch. 521, 48 Stat. 960; Act of Feb. 21, 1931, ch. 269, 46 Stat. 1204; Act of May 23, 1930, ch. 317, 46 Stat. 378.

290. 1868 Treaty, *supra* note 268, art. XIII.

291. *Id.* art. VI.

292. *Id.* art. VII.

293. *Id.*

294. *Id.* art. VIII.

295. *Id.* art. XII.

296. *Id.* art. IX.

297. Brief for the Navajo Nation at 35, Arizona v. Navajo Nation, 599 U.S. 555 (2023) (Nos. 21-1484, 22-51). As noted by Indian law scholars, "Indians fought hard, bargained extensively, and made major concessions in return for [treaty] rights." Charles F. Wilkinson & John M. Volkman, *Judicial Review of Indian Treaty Abrogation: "As Long as Water Flows, or Grass Grows Upon the Earth"—How Long a Time Is That?*, 63 CALIF. L. REV. 601, 603 (1975).

298. Elizabeth Ann Kronk Warner, *Environmental Justice: A Necessary Lens to Effectively View Environmental Threats to Indigenous Survival*, 26 TRANSNAT'L L. & CONTEMP. PROBS. 343, 348 n.31 (2017) (quoting Mary Christina Wood & Zachary Welcker, *Tribes as Trustees Again (Part I): The Emerging Tribal Role in the Conservation Trust Movement*, 32 HARV. ENV'T L. REV. 373, 387–88 (2008)).

299. Mary Christina Wood, *Indian Land and the Promise of Native Sovereignty: The Trust Doctrine Revisited*, 1994 UTAH L. REV. 1471, 1496.

To abrogate a treaty, Congress must clearly express its intent to abrogate a treaty[300]—Congress has never abrogated the Navajo treaties. The 1868 treaty guaranteed the Navajo tribe a "permanent home."[301] The reservation consisted of lands historically and culturally significant to the tribe. One might argue that the treaty promises have been fulfilled as the Navajo people do have a reservation. This position is wrong in several respects.

First, the treaty did not just promise land to the tribe—the treaty promised a permanent home.[302] At a minimum, this means a place conducive for people to live. Facilitating and allowing hundreds of companies to mine uranium and leave them abandoned, where they continue to leach contaminants into the environment, defeats the purposes of the treaties. A permanent homeland necessarily requires a hospitable environment where people can live without becoming sick from the air, land, and water.[303] Perpetually contaminated soils make the lands unusable and unfit for human exposure, contrary to the express terms of the treaty. As in *Winters*, the treaty should be interpreted in a way to ensure the land remains valuable. The nature of uranium itself adds to the necessity of cleaning up abandoned mines.[304] The half-life of uranium is over four billion years, during which time radiation can spread, potentially affecting nearby people and the environment.[305] As years pass, contamination will continue to spread via winds and water that carry contaminated dust and radon. The toxic substances pass through the people, resulting in generational effects.[306]

300. Minnesota v. Mille Lacs Band of Chippewa Indians, 526 U.S. 172, 202 (1999).

301. 1868 Treaty, *supra* note 268, at art. XIII.

302. *Id.*

303. *See supra* Part I. Addressing contamination issues is consistent with federal policy regarding Native peoples, as Congress has reiterated its commitment to "providing the highest possible health status [for] Indians" in recent years. Indian Health Care Improvement Act, 25 U.S.C. § 1602. Congress's goal cannot be accomplished without ensuring a non-hazardous environment.

304. *Uranium: Its Uses and Hazards*, INST. FOR ENERGY & ENV'T RSCH., https://ieer.org/resource/factsheets/uranium-its-uses-and-hazards [https://perma.cc/5YXN-7A2Q] (last updated May 29, 2012). Uranium consists of three isotopes: uranium-238, uranium-235, and uranium-234. *Id.*

305. A half-life is the time it will take for half the atoms in a matter to decay. *Id.*

306. Joseph H. Hoover et al., *Exposure to Uranium and Co-occurring Metals Among Pregnant Navajo Women*, ENV'T RSCH., Nov. 2020, at 10 (discussing the prevalence of children born today with elevated levels of uranium in their bodies).

Second, meaning must be given to the promise to "legislate and act" to ensure the "permanent prosperity and happiness" of the Diné. This includes providing for the health, safety, and welfare of the tribe in perpetuity. Securing the tribe's permanent prosperity and happiness is an ongoing obligation on behalf of the United States.[307] Guarantees of Navajo prosperity include physical, emotional, mental, and spiritual health, including the right to life and healthy offspring. To meet the terms of the treaty, the government has a duty to quickly and effectively restore contaminated lands. The treaties demand no less. There simply is no other way to read the treaty guarantee of a "permanent home"[308] and promises to "legislate and act"[309] for the "permanent prosperity and happiness"[310] of the tribe without finding that the United States has a treaty obligation to remediate the hazardous conditions it created and benefitted from.[311] Failing to provide a safe and habitable home is not providing a home at all.

Third, although, "Indian treaties cannot be rewritten or expanded beyond their clear terms,"[312] here, the treaty language identifies the specific right the tribe holds—the right to a permanent home. "In carrying out its fiduciary duty, it is the government's . . . responsibility to ensure that Indian treaty rights are given full effect."[313] There is no ambiguity in the United States' promise to provide the Navajo people with a permanent homeland. If any ambiguity existed, the Indian law canons of construction would guide the interpretation. The canons of construction require that any ambiguities in treaties

307. Matthew L.M. Fletcher, *The Dark Matter of Federal Indian Law: The Duty of Protection*, 75 ME. L. REV. 305, 309–11 (2023). Not only are the treaties binding, but the duty of protection "is an ongoing obligation that does not self-terminate." *Id.* at 318.

308. 1868 Treaty, *supra* note 268, art. XIII.

309. *Id.* art. XI.

310. *Id.*

311. Importantly, here, the United States not only facilitated uranium mining on the reservation, but essentially forced mining operations on tribal lands for their own purposes. *Cf.* Deleso A. Alford, *Hela Cells and Unjust Enrichment in the Human Body*, 21 ANNALS HEALTH L. 223 (2012) (discussing the sacrifice made by Ms. Henrietta Lacks for the use of her body's cells without her informed consent for scientific advancements and claims of unjust enrichment).

312. Choctaw Nation v. United States, 318 U.S. 423, 432 (1943).

313. Nw. Sea Farms, Inc. v. U.S. Army Corps of Eng'rs, 931 F. Supp. 1515, 1520 (W.D. Wash. 1996). *See also* Fletcher, *supra* note 307, at 330 (arguing that tribes "are owed a right to the lands promised to them in the nineteenth century or at least compensation for their loss").

"are to be interpreted liberally in favor of the Indians."[314] Because of a history of unequal bargaining power, and because treaties were written in English and required multiple levels of language translation, courts construe treaties as the Native peoples would have understood the terms of the treaty.[315] Adding to the challenge of negotiating treaties was that treaty terms had to be translated from English to Spanish, and then from Spanish to Navajo.[316] "The language used in treaties with the Indians should never be construed to their prejudice,"[317] with "additional rights implied to give effect to treaties."[318] Courts may find implied rights in order to give meaning to treaties with Native nations, as in *Winters*.[319] Here, the treaty itself requires that its terms receive a liberal construction "at all times and in all places."[320] The canons of construction required in Indian treaty interpretation further support the argument that the government has a duty to act to protect the tribe's homeland, and ensure the tribe's permanent prosperity, and happiness.

Fourth, the 1868 treaty included specific lands identified in the treaty, including a portion of the tribe's aboriginal homelands, lands that are historically and culturally significant to the tribe.[321] The federal government has trust and treaty

314. Minnesota v. Mille Lacs Band of Chippewa Indians, 526 U.S. 172, 200 (1999) (citing Washington v. Wash. State Com. Passenger Fishing Vessel Ass'n, 443 U.S. 658, 675–76 (1979)).

315. *Wash. State Com. Passenger Fishing Vessel Ass'n*, 443 U.S. at 676.

316. *See* Kessell, *supra* note 286, at 261 (describing the translation process as "from English, a more abstract, mainly noun- and adjective-oriented tongue of different sounds and conceptual bases spoken by members of a western, preindustrial society, through Spanish to Navajo, an exceedingly literal verb-oriented language in the minds and mouths of a vastly different people").

317. Worcester v. Georgia, 31 U.S. (6 Pet.) 515, 582 (1832).

318. Daniel I.S.J. Rey-Bear & Matthew L.M. Fletcher, *"We Need Protection from Our Protectors": The Nature, Issues, and Future of the Federal Trust Responsibility to Indians*, MICH. J. ENV'T & ADMIN. L. 397, 403 (2017) (citing *Wash. State Com. Passenger Fishing Vessel Ass'n*, 443 U.S. at 676, 679 (1979)).

319. *See* Winters v. United States, 207 U.S. 564 (1908) (finding an implied right to water in order to give meaning to treaties with Native peoples and the reservation of Native lands).

320. 1849 Treaty, *supra* note 268, art. XI.

321. Navajo leaders bargained specifically for the delineated geographic location described in the 1868 Treaty, that consisted of "four mountains and four rivers" within their traditional homelands. 1868 Treaty Record, *supra* note 285. As codified in Navajo Nation Code, the Navajo recognize the mountains within and surrounding the reservation as the leaders and foundation of the Navajo Nation. Diné Natural Law, NAVAJO NATION CODE ANN. tit. 1, § 205(B) ("The six sacred

obligations to legislate and act for the prosperity of the Diné, which includes the restoration of tribal lands that it exploited in a time of national need. "[T]he promise of a permanent home necessarily implies certain benefits for the Tribe (and certain responsibilities for the United States)."[322] The prevention of further contamination of tribal lands and resources is necessary in order to create a permanent home.[323] During treaty negotiations, the parties chose to use the broadest, most encompassing language to describe the agreement—"permanent home"[324] and "forever."[325] A "permanent home" means something beyond just the transfer of property, and the word "permanent" speaks to the enduring nature of the commitment. The words used in the treaty must be given meaning. The promise to provide a permanent homeland could mean nothing less than the assurance of a safe, livable environment for a people to live, grow, and prosper. The government must honor its treaty commitments and provide a permanent home to the Navajo people.[326]

Finally, aside from being a permanent home, one of the purposes of the Navajo Reservation and the intent of the treaty was to encourage the Navajo people to adopt an agrarian

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mountains, Sisnajini, Tsoodził, Dook'o'ooslííd, Dibé Nitsaa, Dził Na'oodiłii, Dził Ch'ool'í'í, and all the attendant mountains must be respected, honored and protected for they, as leaders, are the foundation of the Navajo Nation."). *See generally* Kristen A. Carpenter & Angela R. Riley, *Privatizing the Reservation?*, 71 STAN. L. REV. 791, 803 (2019) ("American Indian homelands, known as aboriginal territories, are places of collective religious significance, socioeconomic sustenance, and territorial governance."); Sarah Krakoff, *A Narrative of Sovereignty: Illuminating the Paradox of the Domestic Dependent Nation*, 83 OR. L. REV. 1109, 1122 (2004) (discussing the importance of "place" to Navajo culture and identity).

322. Arizona v. Navajo Nation, 599 U.S. 555, 588 (2023) (Gorsuch, J., dissenting). *See generally* Blue Legs v. U.S. Bureau of Indian Affs., 867 F.2d 1094 (holding that the duty to clean up garbage dumps on the Oglala Sioux Reservation is buttressed by the existence of the general trust relationship between the agencies and the tribe).

323. *See* Winters v. United States, 207 U.S. 564, 576 (1908) (interpreting the treaty as including implied rights to water so that reservation lands would not be "practically valueless").

324. 1868 Treaty, *supra* note 268, art. XIII.

325. 1849 Treaty, *supra* note 268, art. I.

326. The very designation and construction of permanent radioactive waste repositories on tribal lands similarly invokes breach of trust and treaty claims. Potential treaty and trust violations should be considered before constructing permanent radioactive waste repositories on the reservation. The Navajo Nation has a ban prohibiting uranium production and processing. *See* Diné Natural Resources Protection Act, NAVAJO NATION CODE ANN. tit. 18 §§ 1301–1303 (2005). Any permanent repositories should be consistent with the laws of the Navajo Nation.

lifestyle of farming and agriculture.[327] Here, the treaty guarantees the Navajo a permanent home where they would have land and water resources to accomplish the purposes of the reservation.[328] Uranium contamination impedes these goals. The 1868 treaty provided for "agricultural implements" and "seeds."[329] To be successful in farming and agriculture, the soil needs to be conducive to those goals. In uranium-contaminated areas, people cannot farm or plant fields, nor would their crops be profitable due to fears about the quality and safety of the food grown. While the extent of water contamination is still largely unknown, some water resources beneath tailings piles are known to be contaminated, as well as specific water resources throughout the reservation. Both the federal EPA and the Navajo Nation EPA attempt to advise the public to avoid certain wells with high levels of uranium.[330] Livestock drinking from contaminated waters resulted in birth abnormalities in the animals and rumors of defects in the livestock sometimes makes them uneconomical. The spread of uranium in groundwater itself may also constitute its own separate claim as a violation of the tribe's rights to water.[331]

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327. Carpenter & Riley, *supra* note 321, at 815 (discussing the purpose of allotment). "Both allies and enemies of Indian Tribes believed that teaching Indians to respect private property; become Christian, yeoman farmers; and give up their tribal ways would be the best way to assimilate them into American life." *Id.*

328. When reservations are created, there is an implied reserved water right to enough water to fulfill the purposes of the reservation. *Winters*, 207 U.S. at 576; Arizona v. California, 373 U.S. 546, 600 (1963) (establishing the "practicably irrigable acreage" standard to quantify a tribe's rights to water, assuming that most tribes would need water for agriculture and farming).

329. 1868 Treaty, *supra* note 268, art. VII.

330. *See* Brief for DigDeep, *supra* note 82, at 17–18.

331. 1849 Treaty, *supra* note 268, art. XI. As much as 99 percent of the Navajo Nation's drinking water comes from groundwater sources. *Source Water Assessment and Protection (SWAP)*, NAVAJO NATION EPA, https://navajoepa.org/source-water-assessment-and-protection [https://perma.cc/66HT-T7TZ]. For cases discussing fiduciary duties to ensure a certain quality of water on Native reservations, see, for example, Hopi Tribe v. United States, 782 F.3d 662, 669 (Fed. Cir. 2015) (finding the United States had no obligation to ensure a certain quality of water absent any third party diversion or contamination and holding that "[a]t most, by holding reserved water rights in trust, Congress accepted a fiduciary duty to exercise those rights and exclude others from diverting or contaminating water that feeds the reservation."); United States v. Gila Valley Irrigation Dist., 920 F. Supp. 1444, 1454–55 (D. Ariz. 1996) (enjoining upstream junior water users from practices that reduced the quality of waters entering the reservation).

The Navajo treaties require the government to "legislate and act"[332] in order to "secure the permanent prosperity and happiness" of the Navajo people.[333] The federal government created the conditions that now exist and must now act to remediate hazardous conditions. The United States must either "act" by cleaning up the remaining mines or it must "legislate" to resolve this problem. The remediation actions described in Part I of this Article are insufficient. In the various iterations of the agencies' plans, the response has been underfunded, delayed, and inadequate. The government was aware of the problem that existed but generally ignored it and allowed contamination to spread. Unlike communities in Colorado including Durango, Grand Junction,[334] and Uravan,[335] where response actions were taken as early as 1970,[336] Navajo communities did not begin to get relief until 2008.[337] Even with the treaty requirement that the federal government "act," the federal government left the problem largely unaddressed since the last mine closed twenty years prior. Whereas other communities have seen action from the federal government, the Navajo people wait for the plans to be implemented and hazardous soils to be removed. The federal government has a duty to "act" and restore the land and groundwater resources—both to meet the purposes of the treaties, which included supporting an agrarian lifestyle, and to achieve the permanent happiness and prosperity of the Diné, which is expressly guaranteed in the treaties.

The Navajo people have a treaty right to a permanent homeland, as negotiated by the tribe and as agreed to by the United States. Treaties are enduring—the supreme law of the land—and must be liberally interpreted. Other rights may be implied to give effect to the treaties. Here, the tribe can point to the language of the treaty that states the Navajo people have a right to a permanent home.

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332. 1849 Treaty, *supra* note 268, art. XI.

333. *Id.*

334. *See* VOYLES, *supra* note 23, at 137 (describing a "massive cleanup effort" authorized by Congress where tailings were removed from Grand Junction, Colorado).

335. *Id.* (describing evacuations from homes with elevated levels of radon in Uravan, Colorado).

336. *Id.*

337. *See* FIVE-YEAR PLAN, *supra* note 14.

B. The Federal Government Owes a Duty of Trust to Preserve and Protect Reservation Lands

In addition to treaty arguments, under a breach of trust theory, the federal government owes fiduciary duties to the tribe. This Section begins with a discussion of the federal duty of trust and the judicial evolution of the trust doctrine, including the 2023 Supreme Court opinion in *Arizona v. Navajo Nation.* There, the Supreme Court took a narrow approach in considering the fiduciary obligations that attach to an implied treaty right.[338] This Section concludes by distinguishing *Arizona* from the issues discussed here.

1. The Federal Duty of Trust to Native Nations

The federal government has an obligation to Native nations within the United States known as the duty of trust. The trust obligation was first described in the 1831 Supreme Court decision *Cherokee Nation v. Georgia* as a duty of protection.[339] The duty of protection has since been consistently recognized and reaffirmed by courts, congress, and the executive branch.[340] The Supreme Court has recognized "the undisputed existence of a general trust relationship between the United States and the

338. Arizona v. Navajo Nation, 599 U.S. 555 (2023).

339. Cherokee Nation v. Georgia, 30 U.S. (5 Pet.) 1 (1831) (describing the trust duty as a duty of protection, similar to that of "a ward to his guardian"). *But see* Mary Christina Wood, Professor, Univ. of Or. Sch. of Law, Origins and Development of the Trust Responsibility: Paternalism or Protection?, (Apr. 10, 2003), https://law.uoregon.edu/sites/default/files/mary-wood_0/mary-wood/albequerque_trust_speech.pdf [https://perma.cc/44UU-J2YZ] ("[Y]ou can isolate the trust responsibility to a duty of protection arising as a corollary to the massive land cessions, not as a duty arising from a guardian-ward relationship.").

340. "The Departments [Department of Agriculture and Department of the Interior] are responsible for the management of millions of acres of Federal lands and waters that were previously owned and managed by Indian Tribes." U.S. DEP'T OF THE INTERIOR & U.S. DEP'T OF AG., ORDER NO. 3403, JOINT SECRETARIAL ORDER ON FULFILLING THE TRUST RESPONSIBILITY TO INDIAN TRIBES IN THE STEWARDSHIP OF FEDERAL LANDS AND WATERS (2021).

> "In managing Federal lands and waters, the Departments are charged with the highest trust responsibility to protect Tribal interests and further the nation-to-nation relationship with Tribes. The Departments recognize and affirm that the United States' trust and treaty obligations are an integral part of each Department's responsibilities in managing Federal lands."

Id.

Indian people."[341] Since its inception, the trust obligation has remained a foundational principle in federal Indian law,[342] and "[n]early every piece of modern legislation dealing with Indian tribes contains a statement reaffirming the trust relationship between tribes and the federal government."[343]

The trust responsibility "defies categorical definition"[344] and draws from several areas of law, including property, contracts, trusts, foreign relations, and constitutional law.[345] In describing the nature of the trust relationship, the contours of this relationship have extended from traditional notions of duties of protection to "a robust and protective" fiduciary-beneficiary relationship.[346] When considering trust obligations in the management of tribal resources, the duty can resemble private trust law.[347] The Supreme Court has described the trust responsibility as imposing "moral obligations of the highest responsibility and trust,"[348] where "the national honor has been committed,"[349] and where the federal government is to be held to "the most exacting fiduciary standards."[350] As the trustee for Native lands, the federal government has an obligation to protect and manage Native lands and resources for the benefit of Native peoples. As Professor Matthew Fletcher writes, the trust responsibility is "not merely metaphorical, as the federal government holds and administers billions of dollars

341. United States v. Mitchell (*Mitchell II*), 463 U.S. 206, 225 (1983).

342. "[T]he fiduciary responsibilities of the United States to Indians also are founded in part on specific commitments made through written treaties and agreements securing peace, in exchange for which Indians have surrendered claims to vast tracts of land, which provided legal consideration for permanent, ongoing performance of Federal trust duties." Indian Trust Asset Reform Act, Pub. L. 114-178, § 101(4)–(5), 130 Stat. 432, 433 (2016).

343. COHEN'S HANDBOOK OF FEDERAL INDIAN LAW § 5.04[3][a] (Nell Jessup Newton ed., 2012).

344. Rey-Bear & Fletcher, *supra* note 318, at 399.

345. *Id.* at 400; *see also* Fletcher, *supra* note 307, at 306 (describing the trust obligation as "dark matter" where the "promises must mean something").

346. COHEN'S HANDBOOK OF FEDERAL INDIAN LAW, *supra* note 343.

347. *Id. But see* United States v. Jicarilla Apache Nation, 564 U.S. 162, 165 (2011) (stating that the government is in a unique position as a sovereign and does not resemble a private trustee in every respect). "Although the Government's responsibilities with respect to the management of funds belonging to Indian Tribes bear some resemblance to those of a private trustee, this analogy cannot be taken too far." *Id.*

348. Seminole Nation v. United States, 316 U.S. 286, 296–97 (1942).

349. Heckman v. United States, 224 U.S. 413, 437 (1912).

350. *Seminole Nation*, 316 U.S. at 296–97.

of Indian and tribal assets in the form of land, natural resources, and cash."[351]

2. The Judicial Evolution of the Trust Doctrine

In early decisions, the Supreme Court considered international customary law to guide the formation of the new sovereign-to-sovereign relationship between the federal government and Native nations.[352] Through this arrangement, tribes retained their inherent sovereignty while also accepting the protection of the United States. In 1831, the Supreme Court described the "peculiar" relationship between Native nations and the United States as one that "resemble[s] that of a ward to his guardian."[353] Native nations were described as "domestic dependent nations"[354] that "look to our government for protection."[355] The next year, the Supreme Court affirmed the view that tribal nations were "under the protection of the United States."[356] This promise of protection was born from the perception that Indigenous peoples were "savages"[357] "heathens,"[358] and "in a state of pupilage."[359]

As federal Indian policy shifted to an era of Indian self-determination,[360] the duty of protection began to be referred to as the trust relationship. In a series of foundational breach of trust cases, *Mitchell I* and *Mitchell II*, the Supreme Court considered the federal government's fiduciary obligations to manage timber resources for the benefit of a Native nation.[361] There, allottees from the Quinault Reservation in Washington brought a breach of trust action against the federal government

351. MATTHEW L.M. FLETCHER, PRINCIPLES OF FEDERAL INDIAN LAW 1–2 (2017).

352. *See* Johnson v. M'Intosh, 21 U.S. (8 Wheat.) 543 (1823).

353. Cherokee Nation v. Georgia, 30 U.S. (5 Pet.) 1, 17 (1831).

354. *Id.*

355. *Id.*

356. Worcester v. Georgia, 31 U.S. (6 Pet.) 515, 521 (1832).

357. *Johnson*, 21 U.S. (8 Wheat.) at 590.

358. *Id.* at 577; *see also* Carpenter & Riley, *supra* note 321, at 810–11 (describing the loss of Indian lands and resources to non-Indians due in part to the view of Indians as "inferior[]—along the axes of race, religion, biology, culture, and [in] relationship to property rights.") (internal citations omitted).

359. Cherokee Nation v. Georgia, 30 U.S. (5 Pet.) 1, 17 (1831).

360. *See, e.g.*, Indian Self-Determination and Education Assistance Act of 1975, 25 U.S.C. § 2507 (2002); Indian Health Care Improvement Act, 25 U.S.C. §§ 1651–1660d (2010).

361. United States v. Mitchell (*Mitchell I*), 445 U.S. 535, 537 (1980).

for mismanagement of their timber resources.[362] The reservation was heavily forested and was almost exclusively timber lands.[363] The tribe argued that the federal government mismanaged the tribe's timber by failing to obtain fair market value for timber sold, failing to manage timber on a sustained-yield basis and failing to rehabilitate the land after logging, failing to obtain payments for merchantable timber, failing to develop a proper system of roads and easements for timber operations and exacting improper charges from allottees for roads, failing to pay interest on certain funds and paying insufficient interest on other funds, and exacting excessive administrative charges from allottees.[364]

The Quinault's breach of trust claim went before the Supreme Court twice.[365] In the first consideration of the breach of trust claim, the allottees argued that the enactment of the General Allotment Act (also known as the Dawes Act) created a fiduciary duty on behalf of the federal government to administer resources on allotted lands for the benefit of the Native owners.[366] The Supreme Court considered whether the General Allotment Act established a duty that would require the federal government to manage the Quinault's timber resources.[367] In ruling against the tribe, the Supreme Court held in *Mitchell I* that the Allotment Act created only a "bare trust" that did not include a fiduciary duty on part of the government to manage the allottees' timber resources.[368] The "bare trust" did not amount to an enforceable trust duty because the Allotment Act did not include a specific duty to manage the tribe's timber.[369]

362. *Id.*
363. *Id.* at 536.
364. *Id.* at 537.
365. *Id.*; *Mitchell II*, 463 U.S. 206 (1983).
366. The General Allotment Act of 1877 (also known as the Dawes Act) was a policy in which Native lands were divided into allotments for individual use and "surplus" lands were sold to non-Native people. Ch. 119, 24 Stat. 388 (1887) (codified as amended in scattered sections of 25 U.S.C.). *See generally Mitchell I*, 445 U.S. at 538–40. This Act resulted in significant loss of Native lands and broke up Native land management practices that had been based on communal use and Indigenous land use perspectives. *See* Carpenter & Riley, *supra* note 321, at 816 ("Moreover, by destroying tribes' ability to live together, practice culture, speak a common language, and engage in ceremonies, allotment divided land and people, upending tribal lifeways and causing irreparable and devastating economic, social, and cultural disruption.").
367. *Mitchell I*, 445 U.S. at 536.
368. *Mitchell II*, 463 U.S. at 224.
369. *Mitchell I*, 445 U.S. at 546.

In considering the purpose of allotment, the Supreme Court found that the Allotment Act focused on encouraging individual allottees to utilize and develop the land.[370] Therefore, because the Allotment Act made no reference to federal management of timber resources and put the allottee in charge of utilizing the land, the government had no fiduciary duty under the Allotment Act to manage the tribe's timber resources.

However, when the Supreme Court considered the Quinault's breach of trust claim a second time in *Mitchell II*, the Supreme Court found a fiduciary duty had been established.[371] In *Mitchell II*, the Supreme Court looked to whether the extensive control the federal government exercised over the tribe's timber resources and the combination of federal statutes governing the tribe's timber gave rise to a trust duty.[372] In ruling in favor of the tribe, the Supreme Court found a fiduciary obligation had been established, evidenced by the "pervasive" control the government exercised over timber management on the Quinault Reservation.[373] This pervasive control gave the federal government "full responsibility to manage Indian resources and land for the benefit of the Indians."[374] The Supreme Court held, "where the Federal Government takes on or has control" of property belonging to a tribe, the "fiduciary relationship normally exists . . . even though nothing is said expressly" about "a trust fund, or a fiduciary connection."[375] Indeed, "fiduciary duties characteristically attach to decisions" that involve "managing assets and distributing property" of others.[376]

In *Mitchell II*, the regulations that amounted to pervasive control included the Act of 1910,[377] later revisions to the 1910 act,[378] the Indian Reorganization Act of 1934 (IRA),[379] and

370. *Id.* at 543.
371. *Mitchell II*, 463 U.S. at 224.
372. *Id.* at 207.
373. *Id.* at 219.
374. *Id.* at 224.
375. *Id.* at 225 (quoting Navajo Tribe of Indians v. United States, 624 F.2d 981, 987 (Ct. Cl. 1980)).
376. Pegram v. Herdrich, 530 U.S. 211, 231 (2000).
377. Act of 1910, ch. 431, §§ 7–8, 36 Stat. 855, 857 (codified as amended at 25 U.S.C. §§ 406–07).
378. BUREAU OF INDIAN AFFS., U.S. DEP'T OF THE INTERIOR, REGULATIONS AND INSTRUCTIONS FOR OFFICERS IN CHARGE OF FORESTS ON INDIAN RESERVATIONS 4 (1911).
379. Indian Reorganization Act, ch. 576, 48 Stat. 984, 986 (1934) (codified as amended at 25 U.S.C. § 466).

other regulations promulgated relating to the tribe's timber. The Act of June 25, 1910, authorized the Secretary of the Interior to sell reservation timber for the benefit of the tribe,[380] and authorized the Secretary to consent to sales by allottees, with the proceeds to be paid to the allottees or disposed of for their benefit.[381] In addition to the 1910 act, the Department of the Interior later promulgated regulations describing its responsibilities in "managing the Indian forests so as to obtain the greatest revenue for the Indians consistent with a proper protection and improvement of the forests."[382] The detailed regulations discussed various aspects of forest management, including the "size of sales, contract procedures, advertisements and methods of billing, deposits and bonding requirements, [and] administrative fee deductions."[383] The regulations also required, "allowable heights of stumps, tree marking and scaling rules, base and top diameters of trees for cutting, and the percentage of trees to be left as a seed source."[384]

The role of the federal government continued to expand under the IRA, when Congress directed the Department of Interior to manage tribal timber resources on the principle of sustained-yield management.[385] Regulations promulgated under the IRA provided for more federal regulation, including the preservation of Indian forest lands, prohibiting the clear-cutting of large contiguous areas, calling for the development of long-term plans for all major reservations, requiring adequate provisions for new growth when mature timber was removed, and requiring the regulation of run-off and the minimization of erosion.[386] When the timber provisions in the 1910 act were amended in 1964, Congress directed the Secretary to consider "the needs and best interests of the Indian owner and his heirs" in managing timber.[387] Altogether, these

380. Act of 1910 § 7.
381. *Id.* § 8.
382. BUREAU OF INDIAN AFFAIRS, *supra* note 378.
383. *Mitchell II*, 463 U.S. 206, 220 (1983).
384. *Id.*
385. Indian Reorganization Act, 25 U.S.C. § 466; *see also* 78 CONG. REC. 11726 (1934) (statement of Rep. Edgar Howard). "The failure of their governmental guardian to conserve the Indians' land and assets, and the consequent loss of income or earning power, has been the principal cause of the present plight of the average Indian." *Id.*
386. *See* 25 C.F.R. Pt. 163 (1982).
387. Act of April 30, 1964, 78 Stat. 186 (codified as amended at 25 U.S.C. § 406(a)).

comprehensive responsibilities assumed by the federal government amounted to pervasive control sufficient to establish a fiduciary relationship.

In addition to this comprehensive and pervasive regulatory framework, the Supreme Court in *Mitchell II* found that "a fiduciary relationship necessarily arises when the Government assumes such elaborate control over forests and property belonging to Indians. All of the necessary elements of a common-law trust are present: a trustee (the United States), a beneficiary (the Indian allottees), and a trust corpus (Indian timber, lands, and funds)."[388]

Later, in *United States v. Navajo Nation* and *United States v. Jicarilla Apache Nation,* the Supreme Court limited the ability of tribes to successfully hold the government liable for breach of trust actions.[389] In *United States v. Navajo Nation*, the Navajo Nation brought a breach of trust claim against the Secretary of the Interior.[390] The tribe alleged a breach of fiduciary duties based on the actions and ex parte communications of the Secretary.[391] These actions resulted in a weakened bargaining position for the tribe during active lease negotiations with a coal company.[392] In determining whether the Secretary's conduct was a violation of fiduciary standards, the Supreme Court considered whether the Indian Mineral Leasing Act (IMLA) and its related regulations amounted to elaborate control sufficient to establish a fiduciary obligation.[393] Although the IMLA required secretarial approval of coal leases and authorized the secretary to promulgate general regulations to govern mining operations, these obligations were not sufficiently elaborate to find a fiduciary obligation under *Mitchell II*. The Supreme Court stated that the IMLA and its regulations did not "give the Federal Government full responsibility to manage Indian resources . . . for the benefit of the Indians."[394] The IMLA and related regulations "impose[d] no obligations resembling the detailed fiduciary responsibilities

388. *Mitchell II*, 463 U.S. at 225.

389. United States v. Navajo Nation (*Navajo I*), 537 U.S. 488, 506 (2004); United States v. Navajo Nation (*Navajo II*), 556 U.S. 287 (2009); United States v. Jicarilla Apache Nation, 564 U.S. 162 (2011).

390. *Navajo I*, 537 U.S. at 493.

391. *Navajo II*, 506 U.S. 291–92.

392. *Id.*

393. *Id.* at 293.

394. *Mitchell II*, 463 U.S. 206, 224 (1983).

that *Mitchell II* found adequate to support a claim for money damages."[395] In *Navajo II*, the tribe raised additional statutes to support their breach of trust claim, including the Indian Mineral Development Act of 1982, the Navajo-Hopi Rehabilitation Act, and the Surface Mining Control and Reclamation Act of 1977.[396] The Supreme Court found that none of these statutes provided the specific rights-creating or duty-imposing language to support a breach of trust claim. Further, the Supreme Court held, "[t]he Federal Government's liability cannot be premised on control alone."[397]

The Supreme Court required that for a tribe to successfully bring a breach of trust claim, the tribe must first "identify a substantive source of law that establishes specific fiduciary or other duties, and allege that the Government has failed faithfully to perform those duties."[398] After meeting that initial burden, the Supreme Court would then consider whether the substantive source of law can "fairly be interpreted as mandating compensation by the Federal Government for damages sustained."[399] Other cases affirmed that only after the substantive law has been identified may common law principles of trust law apply.[400]

In *United States v. Jicarilla Apache Nation*, the Jicarilla Apache Nation brought a breach of trust claim against the federal government for alleged mismanagement of the tribe's trust funds.[401] In the discovery phase of the litigation, the United States failed to turn over certain documents, arguing that those documents were protected by the attorney-client privilege.[402] In considering whether the fiduciary exception to the attorney-client privilege applied, the Supreme Court held that the fiduciary exception to the attorney-client privilege does not apply to the general trust relationship that exists between

395. *Navajo I*, 537 U.S. at 490.
396. *Navajo II*, 556 U.S. at 296–301.
397. *Id.* at 301.
398. *Navajo I*, 537 U.S. at 506.
399. *Id.* (citing *Mitchell II*, 463 U.S. at 226).
400. *See, e.g.*, United States v. White Mountain Apache Tribe, 537 U.S. 465, 477 (2003).
401. United States v. Jicarilla Apache Nation, 564 U.S. 162, 167 ("Among other things, the Tribe claims the Government failed to maximize returns on its trust funds, invested too heavily in short-term maturities, and failed to pool its trust funds with other tribal trusts.").
402. *Id.*

the United States and Native nations.[403] In its reasoning, the Supreme Court stated that the federal government as a sovereign cannot be analogized to a private trustee because it is a governmental body with competing interests it must balance.[404] In its discussion of the duty of trust the government owes to tribes, the Supreme Court held that the United States owes judicially enforceable trust duties to a tribe "only to the extent it expressly accepts those responsibilities."[405] To show that the federal government expressly accepts those responsibilities, the extent of those obligations "must train on specific rights-creating or duty-imposing" language in a treaty, statute, or regulation.[406]

Finally, in its latest consideration of the trust obligation, the Supreme Court looked to the specific words used in a treaty to determine the scope of the government's duty of trust owed to a tribe. In *Arizona v. Navajo*, in ruling against the Navajo Nation in a breach of trust claim based on the Navajo treaties, the Supreme Court focused on the treaty text and historical records to determine whether the United States agreed to assess the Nation's water needs and plan for the delivery of those water resources.[407] *Arizona* considered the tribe's implied reservation of water and what the majority characterized as additional "affirmative" duties to take actions that were not specifically agreed to in the treaties.[408] Because the treaties did not specifically mention water or specific duties related to the tribe's water, the Supreme Court found a fiduciary duty had not been created. Even though the treaty record was replete with Navajo Nation leaders expressing the need and desire for ample water

403. *Id.* at 187.

404. *Id.* at 165 ("The trust obligations of the United States to the Indian Tribes are established and governed by statute rather than the common law, and in fulfilling its statutory duties, the Government acts not as a private trustee but pursuant to its sovereign interest in the execution of federal law.").

405. *Id*. at 177.

406. *Navajo I*, 537 U.S. at 506.

407. Arizona v. Navajo Nation, 599 U.S. 555 (2023). Importantly, the question before the Court was not whether the tribe had rights to water. All parties agreed that under *Winters*, the Tribe has rights to water. *Id.* at 558 ("Under the 1868 treaty, the Navajo Reservation includes . . . the right to use needed water on the [R]eservation."). The primary question before the Court was specific to the government's duty to assess and plan for the Navajo Nation's water needs.

408. "Today, the Court rejects a request the Navajo Nation never made. This case is not about compelling the federal government to take '*affirmative steps* to secure water for the Navajos.' Respectfully, the relief the Tribe seeks is far more modest." *Id*. at 574 (Gorsuch, J. dissenting) (citation omitted).

of a quality with which to grow food,[409] the Supreme Court held that without specific language in the treaty regarding water, the federal government had no corresponding duty. Without specific rights-creating or duty-imposing language that the tribe could point to, the Supreme Court found there was no fiduciary obligation that required the federal government to take affirmative steps to ensure the tribe had access to water, including assessing the tribe's water needs or planning for the delivery of necessary water.[410]

In *Arizona v. Navajo Nation*, the Supreme Court continued to depart from the initial understanding of the duty of trust and obligations owed to tribes. The requirement of relying on a specific rights-creating and duty-imposing substantive source of law is contrary to the historical understanding of the trust duty and upends a foundational doctrine of federal Indian law.[411] Requiring tribes to point to specific, statutory language to confirm the obligations of the United States could render the trust relationship meaningless.[412] Further, "[i]f the Supreme Court finds a prevailing fiduciary obligation only when statutory law already imposes duties on the executive branch, then the doctrine arguably amounts to little more than an emboldened principle of statutory interpretation."[413] Indeed, "[i]f the fiduciary duty applied to nothing more than activities already controlled by other specific legal duties, it would serve no purpose."[414]

In summary, early Indian law cases established a duty of protection that later into the trust obligation that we know

409. *Id.* at 578. ("[W]e know this land does not like us . . . neither does the water."); 1868 Treaty Record, *supra* note 285 ("This ground we were brought on, it is not productive, we plant but it does not yield, all the stock we brought here have nearly all died.").

410. *Arizona*, 599 U.S. at 565 ("But the treaty said nothing about any affirmative duty for the United States to secure water.").

411. *See e.g.*, Amy K. Kelley, *Federal Trust Responsibilities Toward Tribes Interpreted Narrowly Again*, 57 WATER L. NEWSL. no. 2, 2024, https://www.fnrel.org/publications/bookstore/secure/wln2-2024abc/fedlead [https://perma.cc/YH7Q-UCGH] (describing the Court's analysis as "rigorous" and "nearly-impossible-to-meet"). *See generally*, Fletcher, *supra* note 307, at 307 ("As should be well understood, the United States has fulfilled only a tiny portion of its obligations to Indian people and tribal nations.").

412. For a critique of how statutory standards overshadow the common law trust doctrine, see Mary Christina Wood, *The Indian Trust Responsibility: Protecting Tribal Lands and Resources Through Claims of Injunctive Relief Against Federal Agencies*, 39 TULSA L. REV. 355 (2003).

413. Wood, *supra* note 299, at 1521–22.

414. Vanity Corp. v. Howe, 516 U.S. 489, 504 (1995).

today. In *Jicarilla* and now in *Arizona*, the Supreme Court has required tribes to point to specific rights-creating or duty-imposing language explicitly written in treaties, statutes, or regulations in order to find a break of trust, ignoring the historic nature of the trust obligation and allowing the federal government to sidestep its obligations to Native tribes.[415]

3. The Navajo Treaties Provide the Express Rights-Creating, Duty-Imposing Substantive Sources of Law Needed to Establish a Fiduciary Relationship

Apart from the treaty right the Navajo people have to a permanent home, the Navajo treaties can be pointed to as the positive source of law needed to establish a fiduciary relationship. In a breach of trust claim, a tribe may rely on the text of a treaty, statute, or regulation that imposes certain duties on the United States.[416] Treaties may be used as the rights-creating, duty-imposing substantive sources of law in breach of trust cases.[417] Here, the 1868 treaty is the specific rights-creating substantive source of law that is the basis for a breach of trust claim. The Navajo Nation has a right to a permanent home, and the United States has a duty to provide the tribe a permanent home. Further, the federal government holds land in trust for Native nations and has a corresponding duty to not let trust assets fall into disrepair.

a. Considering Arizona v. Navajo *in the Uranium Context*

Navajo uranium issues differ from the issues in *Arizona v. Navajo Nation*. Whereas in *Arizona*, the Navajo Nation was seeking to enforce an implied right (to water), here the tribe has an express right (the right to a permanent homeland)

415. Rey-Bear & Fletcher, *supra* note 318, at 399 (noting the trust responsibility "defies categorical definition" and draws from various areas of law, including property, contracts, trusts, foreign relations, and constitutional law).

416. Arizona v. Navajo Nation, 599 U.S. 555, 563–64 (2023) (citing United States v. Jicarilla Apache Nation, 564 U.S. 162, 173–74, 177–78).

417. "The Executive Branch has likewise and repeatedly advanced the position—including in this very litigation—that 'a treaty can be the basis of a breach-of-trust claim' enforceable in federal court." *Id.* at 585 (Gorsuch, J., dissenting) (citing Brief for Federal Parties at 22–23 n.5, Arizona v. Navajo Nation, 599 U.S. 555 (2023) (Nos. 21-1484, 22-51)).

guaranteed in the treaty. In *Arizona*, the Supreme Court required the Navajo Nation to point to language in the treaty or treaty record that showed the government had committed to a specific duty or that the tribe held a specific right regarding water. The tribe could not do so in *Arizona* because tribal rights to water are generally implied, not express, rights. So while all parties agreed tribal treaties include an implicit reservation of water,[418] the Supreme Court held there was no affirmative duty requiring the federal government to take affirmative steps necessary to actually provide the Navajo people with water.[419] Here, the language in the treaty is explicit—the federal government agreed to provide a permanent home. Contrary to the Supreme Court's opinion in *Arizona*, requiring the United States to ensure a permanent home for the Navajo people is not "rewrit[ing] and updat[ing] this 155-year-old treaty."[420] It is requiring the United States to fulfill its explicit treaty obligations of ensuring a permanent home.

In *Arizona*, the Supreme Court discussed a potential differentiation between an interference with the tribe's right to water and an affirmative duty to secure water for the tribe.[421] While the Supreme Court found there was no affirmative duty to secure water for the tribe, the result might have been different had there been an *interference* with the tribe's right to water.[422] Courts have been more apt to find in favor of a tribe's rights when there is some level of interference intruding upon the tribe's rights.[423] In the uranium context, there was interference with the tribe's right to a permanent home. The United States made the commitment to provide a permanent home where the Navajo people could live without intrusion by the broader

418. "Everyone agrees the Navajo received enforceable water rights by treaty. Everyone agrees the United States holds some of those water rights in trust on the Tribe's behalf." *Id.* at 574.

419. *Id.* at 558–59 (majority opinion).

420. *Id.* at 559.

421. *Id.* at 558 ("The Navajos' claim is not that the United States has *interfered* with their water access. Instead, the Navajos contend that the treaty requires the United States to take *affirmative steps* to secure water for the Navajos.").

422. *Id.*

423. *See, e.g.*, Winters v. United States, 207 U.S. 564 (1908) (prohibiting upstream water users from diverting water away from the reservation); United States v. Winans, 198 U.S. 371 (1905) (prohibiting non-Indians from excluding tribal fishers access to traditional fishing grounds on private property); United States v. Gila Valley Irrigation Dist., 920 F. Supp. 1444, 1454–55 (D. Ariz.1996) (enjoining upstream junior appropriators from practices that reduced the quality of water flowing into a reservation).

society. Years later the government breached this promise by covertly, then overtly, facilitating and incentivizing uranium mining on the Navajo Reservation. The United States was able to do this, in part, because it had forced a foreign governmental structure on the Navajo for the express purpose of signing lease agreements.

Additionally, the federal government's heavy-handed subsidization of mining interfered with the tribe's right to use its land as it might otherwise have. Before mining began, the Navajo people were largely engaged in agriculture and their economy was based on livestock, agriculture, and trade. Through the Livestock Reduction Act, discussed in Part I, the federal government replaced the Navajo's economy of agriculture and trade,[424] with a cash economy.[425] The boom of the uranium industry essentially forced the Navajo Nation into a specific economy—that of mining and extractive industries.

Here, in the uranium context, the pervasive control the federal government exercised over both Navajo lands, and the uranium minerals, surpasses the level of government control described in *Mitchell II*. The pervasive control in addition to the positive, rights-creating law found in the 1868 treaty establish a fiduciary relationship. In *Mitchell II*, the federal government had "daily supervision over the harvesting and management of tribal timber" such that the government controlled "[v]irtually every stage of the process."[426] This is also true in the Navajo peoples' experience with uranium. From the very beginning of mining on the reservation, the federal government exercised pervasive control over every step of uranium mining.[427] The first surveys of uranium deposits on the reservation were done secretly by the federal government.[428] After the first classified survey of uranium deposits, the Atomic Energy Commission (AEC) then offered bonuses for prospectors to locate and mine

424. In 1849, the Navajos were "wealthy" with "immense herds of horses, mules, sheep, and cattle." IVERSON, *supra* note 18, at 38 (describing how the fields had been cultivated with all the grains and fruits known to Spaniards in that area).

425. Tribal nations have often had different concepts of wealth and value. *See* MICHAEL C. BLUMM, SACRIFICING THE SALMON: A LEGAL AND POLICY HISTORY OF THE DECLINE OF COLUMBIA BASIN SALMON 65–67 (2002) (discussing the impacts to salmon with the introduction of a market economy from a traditional "gift economy" practiced by tribes in the Pacific Northwest).

426. *Mitchell II*, 463 U.S. 206, 222 (1983).

427. *See supra* Part I.

428. *See supra* Part I.

the uranium on Navajo lands.[429] The AEC was then the sole purchaser and beneficiary of uranium ore.[430] In facilitating the entire process of uranium development, the United States identified the mineral deposits, encouraged its development, then utilized and benefited from the minerals. The federal government had such control over the development of uranium resources that it is recognized as the only "government-induced, government-maintained, government-controlled mining boom in this nation's experience."[431]

Even now, EPA, the BIA, the Department of Energy, the Nuclear Regulatory Commission, and the Indian Health Service continue to exercise control in developing cleanup plans for the region. The coordinated approach by the federal agencies, as described in Part I, is an example of the continued pervasive control described in *Mitchell II*.[432] *Mitchell II* states that "where the Federal Government takes on or has control or supervision over tribal monies or properties, the fiduciary relationship normally exists . . . even though nothing is said expressly in the authorizing or underlying statute . . . about a trust fund, or a trust or fiduciary connection."[433] While the government's liability of a breach of trust claim "cannot be premised on control alone,"[434] pervasive government action, in addition to positive law and clear treaty obligations, support the finding of a fiduciary-beneficiary relationship. Further, as described in Part II, the federal government accepted the majority of settlement funds to remediate mines on the Navajo Nation. This illustrates the control the federal government continues to exercise over Navajo lands, the minerals, and now the reclamation efforts.

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429. *See supra* Part I.

430. *See supra* Part I.

431. David, *supra* note 36, at 1807 n.214 (quoting Herbert Lang, *Uranium Mining and the AEC: The Birth Pangs of a New Industry*, 36 BUS. HIST. REV. 325, 325 (1962)).

432. The Department of the Interior, through the Bureau of Indian Affairs, "exercises literally daily supervision over the harvesting and management of tribal timber." *Mitchell II*, 463 U.S. 206, 222 (quoting White Mountain Apache Tribe v. Bracker, 448 U.S. 136, 147 (1980)). Virtually every stage of the process is under federal control. *Id.*

433. *Id.* at 225 (quoting Navajo Tribe of Indians v. United States, 624 F.2d 981, 987 (Ct. Cl. 1980)).

434. United States v. Navajo Nation (*Navajo II*), 556 U.S. 287, 301 (2009).

b. The Federal Government's Control of Native Peoples' Lands Creates a Duty to Preserve Trust Assets

Reservation lands are assets held in trust by the federal government for Native nations, and therefore, the federal government has a duty to preserve and protect trust assests.[435] Following the signing of treaties with tribes, the United States maintained a role in the continued management of tribal lands and resources. Early cases discussing Native peoples' rights to land established that the United States held title to Native lands,[436] and that Native nations "occupy a territory to which we assert a title."[437] Even now, the "title is split: The federal government holds 'ultimate title' for the benefit of Indian tribes, which hold 'title of occupancy.' Under this arrangement, the government helps protect the tribal land base by prohibiting alienability and restricting certain leases of those lands without federal approval."[438] The Non-Intercourse Act prohibits the transfer, sale, lease or other conveyance of land owned by a tribe without federal approval.[439] Congress defined "Indian Country" as "all land within the limits of any Indian under the jurisdiction of the United States government," including rights-of-way running through the reservation, "all dependent Indian communities," and "all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way."[440] Native peoples' rights to land are recognized by courts as "Indian title" or "aboriginal title."[441]

Because the federal government holds reservation land in trust for Native nations, the United States has a corresponding duty to protect and preserve those trust assets. In *United States v. White Mountain Apache*, the United States was held liable for breach of its fiduciary duty to manage land and improvements held in trust for the White Mountain Apache tribe but occupied

435. "Much of the tribal land in the United States is held in trust for Indian Tribes by the federal government." Carpenter & Riley, *supra* note 321, at 798.

436. Johnson v. M'Intosh, 21 U.S. 543, 574 (1823) (holding that the doctrine of discovery "gave exclusive title to those who made it").

437. Cherokee Nation v. Georgia, 30 U.S. (5 Pet.) 1, 17 (1831).

438. Carpenter & Riley, *supra* note 321, at 798, 803 (internal citations omitted) (noting that a history of disruption and dispossession has resulted in "a complex legacy of Indian land tenure").

439. 25 U.S.C. § 177.

440. 18 U.S.C. § 1151 (1988).

441. Pueblo of Jemez v. United States, 63 F.4th 881, 885 (10th Cir. 2023).

by the government.[442] In *White Mountain Apache*, the federal government held a former military post in trust for the tribe, including thirty buildings and other appurtenant structures, while retaining a right to use the buildings for administrative or educational purposes.[443] Although the fort was eventually designated a national historic site by the National Park Service, the fort fell into disrepair and the tribe sought $14 million in damages to rehabilitate the site.[444] The tribe filed a breach of trust claim arguing that the government breached its duty to "maintain, protect, repair and preserve" the trust corpus.[445] In ruling in favor of the tribe, the Supreme Court stated that "elementary trust law, after all, confirms the commonsense assumption that a fiduciary actually administering trust property may not allow it to fall into ruin on his watch."[446] Indeed, a fundamental common law duty of a trustee is to "preserve and maintain trust assets"[447] and exercise "such care and skill as a man of ordinary prudence would exercise in dealing with his own property."[448]

Because the federal government holds the fee title to land on behalf of Native nations, the federal government has a trust obligation to not let Native lands held in trust fall into ruin or disrepair.[449] As in *White Mountain Apache*, the United States as a trustee cannot allow the trust asset to fall into ruin. The trustee must manage the trust corpus in a way that the corpus is preserved and maintained.[450] The facilitation of mining on Native peoples' lands, then allowing contamination to spread unabated for decades is a violation of the trustee's duty to preserve the trust corpus.

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442. United States v. White Mountain Apache Tribe, 537 U.S. 465, 468 (2003).
443. *Id.* at 469.
444. *Id.*
445. *Id.*
446. *Id.* at 475.
447. *Id.* (quoting Cent. States v. Cent. Transp., Inc., 472 U.S. 559, 572 (1985)).
448. *Id.* (quoting RESTATEMENT (SECOND) OF TRUSTS § 176 (1957) (3D ED., 1967) (internal quotation marks omitted)).
449. The United States holds the land in trust for Indian tribes. Tribes are prohibited from alienating land and entering into lease agreements without federal approval, except in limited circumstances. The federal government's involvement in land and mineral decisions is pervasive, even today. *See Natural Resource Production on Native American Land*, OFF. OF NAT. RES. REVENUE, U.S. DEP'T OF INTERIOR, https://revenuedata.doi.gov/how-revenue-works/native-american-production [https://perma.cc/TX83-FLK9].
450. *White Mountain Apache*, 537 U.S. 465, 475–76 (2003).

Additionally, a fiduciary has a duty "to act for the benefit of the other as to matters within the scope of the relationship"[451] including a duty "not to profit at the expense of the other."[452] A fiduciary has a duty to act in good faith and fair dealings, "not only a duty of protection from others, but also a duty to protect the beneficiary from misconduct by the trustee itself."[453] The Department of the Interior has also affirmed the fiduciary duty owed to tribes "of care and loyalty, to make trust property income productive, to enforce reasonable claims on behalf of Indians, and to take affirmative action to preserve trust property."[454] Further, "the existence of a trust relationship between the United States and an Indian or Indian tribe includes as a fundamental incident the right of an injured beneficiary to sue the trustee for damages resulting from a breach of the trust."[455] The covert nature of early exploration and development of uranium on reservation lands was a breach of treaty promises and the duty of trust. The continued heavy-handed and government-controlled development of uranium was a breach of trust. The lack of action in remediating uranium contamination is an ongoing breach of the treaties and the duty of trust.

A breach of trust claim is supported here because there is explicit rights-creating and duty-imposing language in the treaty that ensures the Navajo people a permanent home. The specific language found in the treaty is further supported by the pervasive government control the federal government exercised over the full cycle of uranium production on the reservation. In *Arizona v. Navajo Nation*, the Supreme Court found the pervasive control the United States exercises over the Navajo Nation's water resources was insufficient to create a fiduciary obligation. While the Supreme Court was unable to find explicit language in the treaty referencing a specific duty regarding water, here there is specific language in addition to pervasive control. This pervasive control, not alone but in combination

451. RESTATEMENT (THIRD) OF TRUSTS § 2 cmt. b. (AM. L. INST. 2003) (defining fiduciary relationship or "Definition of Trust").

452. *Id.*

453. Rey-Bear & Fletcher, *supra* note 318, at 406.

454. Letter from Leo M. Krulitz, Solic., U.S. Dep't of the Interior, to James W. Moorman, Assistant Att'y Gen., U.S. Dep't of Just. 2 (Nov. 21, 1978), https://www.usetinc.org/wp-content/uploads/bvenuti/IMPACT%202015/Wrap%20up%20Items/Krulitz%20Letter%20(2).pdf [https://perma.cc/KMG3-AKMF].

455. *Mitchell II*, 463 U.S. 206, 226 (1983).

with the positive law found in the treaty, establishes a fiduciary relationship.

The facts here are distinguishable from *Arizona* because here the federal government interfered with the tribe's use of their land by facilitating extensive mining on the Navajo Reservation. There was interference in the Navajo Nation's system of government and chosen economy. Whereas in *Arizona*, there may have been an underlying concern regarding how a decision in favor of the tribe might upset settled expectations of water in the arid West, that concern is not present here. Lastly, the treaties promised that the United States would legislate and act for the permanent prosperity and happiness of the Diné. Altogether, these promises establish continuing obligations to provide the tribe a permanent home.

If a breach of trust claim fails here in this context and the tribe is denied a permanent home, then it would be hard to imagine in what scenario a tribe would be successful in asserting a breach of trust claim after *Arizona*. Surely, nobody would contest a breach of trust claim requiring the federal government to provide other commitments specified in the treaty—sheep, cattle, a blacksmith, or other promises explicit in the treaty. Likewise, there should be no exception to the promise of a "permanent home," lest we find another situation where, as the Supreme Court discussed in *McGirt*, "the price of keeping [the treaty promises] has become too great, so now we should just cast a blind eye."[456] Here, as in *McGirt*, the Supreme Court should hold the government to its word.

CONCLUSION

Since time immemorial the Navajo people have lived within their traditional homelands. Even now, this is where they remain. Through the period of warfare with the United States and the ensuing Navajo Wars, the Navajo people sought to protect their people and lands. In order to bring peace to the region, the Navajo Nation signed two treaties with the United States guaranteeing them a reservation that would be their permanent home forever. Within this permanent home, uranium ore, critical to the United States' war effort, was found. In a time of national need, the United States relied on and benefited from the uranium mined on Navajo lands. The Navajo

456. McGirt v. Oklahoma, 591 U.S. 894, 937 (2020).

people bore the burden of this extensive mining and continue to bear the burden as the reservation remains saddled with hundreds of abandoned mines that leach contaminants throughout the soil, water, and air. The extensive contamination remaining today is an ongoing breach of trust and a breach of specific treaty commitments. Beyond CERCLA, the federal government must take action and provide a full and fair remedy for impacted Navajo communities. The United States must honor its treaty commitments and trust obligations by providing the Navajo people a permanent home for their prosperity and happiness—as expressly agreed to in the Navajo treaties.