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Hidden in Plain Sight: The US Government's Use of the Choctaw Nation as an Environmental Toxics Dumping Ground

Jessica Lambert

In 1942, the Department of Defense (DOD) built the Naval Ammunition Depot seven miles south of McAlester, Oklahoma, in the Choctaw Nation. During World War II, the facility served as the “main location for the production and storage of ammunition for the armed forces in the United States.”¹ In 1977, the DOD turned over the munitions management to the US Army and the facility became the McAlester Army Ammunitions Plant (“McAAP”). Today, the McAAP encompasses seventy square miles in the northwestern Choctaw Nation and has an economic impact of more than \$463 million.² As a citizen of the Choctaw Nation, I was personally prompted by my chief to investigate the impact of the McAAP on the health of the Choctaw people and homelands. Hopefully, this research will pave the way for additional data collection and analysis, remediation of the plant’s contamination of my homeland, and treatment for the many Choctaws who are suffering adverse effects from the plant.

“DEFENDING” AMERICA, POISONING MY PEOPLE

Since the wars in Iraq and Afghanistan began in 2003, the McAAP, which currently employs two thousand people,³ has ramped up its munitions production.⁴ In 2012 it was the DOD’s “premier bomb and warhead production facility” and “largest storage facility for ammunition.”⁵ As part of its daily operations, the McAAP detonates old munitions and disposes of large quantities of weapons materials, including uranium,

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selenium, arsenic, lead paint, and asbestos. Monday through Saturday, from 11 am to 2 pm, the plant detonates munitions up to five hundred pounds at a time,⁶ releasing large plumes of black smoke into the air and producing significant noise pollution.⁷ In many Choctaw households, the blasts cause windowpanes to rattle and buildings to shake, “sound[ing] like thunder, or fireworks.”⁸ To keep noise pollution under control, the McAAP has vowed to shut down operations if noise exceeds 128 decibels in the nearby towns of Kiowa and Savanna.⁹ At 127 decibels, Choctaws and other residents begin to experience tinnitus (ringing of the ears), which can lead to permanent hearing loss.¹⁰ In 2016 alone, the McAAP detonated more than 14 million pounds of explosives.¹¹ This is an extraordinarily high volume of detonations, among the highest in the United States.

In addition, the plant currently manufactures “every size and shape of [non-nuclear] bomb,” including the most powerful nonnuclear bomb in the world, the thirty-thousand-pound Massive Ordnance Air Blast bomb (MOAB) nicknamed the “mother of all bombs.”¹² The most recent public data published on Scorecard, from 2002, puts the McAAP among the “Dirtiest/Worst Facilities in the US.” For both air and water releases, the McAAP is in the top tenth percentile for both cancer and noncancer risk, and also ranks in the top tenth percentile for air releases of recognized carcinogens and developmental and reproductive toxics.¹³ In 2009 alone, the McAAP emitted 2.3 million pounds of Toxic Release Inventory (TRI) chemicals.¹⁴ Choctaw Nation’s Pittsburg County, which is home to the McAAP, easily tops the list of Oklahoma counties with the greatest volume of lead releases into the air. In 2011, the McAAP released 31,000 pounds of lead into the air, while the county with the second highest lead releases, Payne, released “only” 3,140 pounds that year.¹⁵ Lead exposure can have adverse effects on the nervous system, the immune system, the cardiovascular system, kidney function, and the reproductive system.¹⁶ It is also a probable carcinogen.¹⁷

Justin Wingerter, the federal government reporter for *The Oklahoman*, explains, “no Oklahoma military installation has more hazardous sites than the McAlester Army Ammunition Plant.”¹⁸ A half-mile from Brown Lake, a local source of drinking water, pentachlorophenol has been found. This environmental toxin is banned in ninety countries because it is likely cancer-causing.¹⁹ In addition, lead and 2,4,6-Trinitrotoluene (TNT) have been found in the soil, both of which likely cause cancer.²⁰ The US Army “failed to establish groundwater monitoring wells required by the EPA in order to watch for contamination from [the McAAP’s] burn site.”²¹ The EPA has found the McAAP in violation of hazardous waste permits at least eight times.²² Of the US counties and territories with the most contaminated water, Pittsburg County in the Choctaw Nation, home to the McAAP, comes in at number thirteen.²³ Further, eight of the twenty-three counties on this list are also in Oklahoma, a state that the US government used as a dumping ground for American Indians during the ethnic cleansings of the nineteenth century and is now home to thirty-eight federally recognized tribal nations.

My research suggests that the federal government is using not only the Choctaw Nation but also possibly the entire state as a dumping ground for environmental toxics. During the past three decades, “the EPA has issued the McAlester Public

Works Authority sixty-six water quality violations . . . among the most of any public water system in the United States.”²⁴ The majority of these violations came from trihalomethanes and haloacetic acid concentrations exceeding the maximum allowable level. These chemicals are known to cause specific cancers and certain birth defects.²⁵ Selenium, arsenic, lead, and explosive compounds have also been found in the groundwater.²⁶ In December 2018, the Oklahoma Department of Environmental Quality issued an “emergency order and a \$75,000 fine against Pittsburg County Rural Water District #14 (PCRWD) for violations of state statutes, federal regulations, and the Oklahoma Administrative Code.” At that time, Pittsburg County was under a month-long mandatory boil water advisory, which is relatively common in the area.²⁷ In March 2019, another PCRWD, #20, dumped millions of gallons of untreated wastewater into a lake that is the primary source of drinking water for PCRWD #1.²⁸

Moreover, working at the McAAP is one of the highest-risk occupations for asbestos exposure in Oklahoma.²⁹ In both the mid-to-late 2000s and in 2011, there were outbreaks of anemia among McAAP employees from TNT exposure.³⁰ Due to the sizable health hazard of exposure to chemicals, “employees who work with explosives . . . are medically checked every year.”³¹ However, the residents of the nearby towns of McAlester, Kiowa, and Savanna are not offered these screenings, even though the McAAP has clearly put them in harm’s way. McAlester residents speculate that carcinogens in the water and air from the frequent bomb detonations explain the high incidences of cancer among Choctaws and others that many of them have noticed. Jody Wilkett, a municipal court clerk, asserted, “If you listen to gossip around town there’s been a high incidence of cancer here . . . three to four people we know just through City Hall.”³² Cancer is the second leading cause of death in Pittsburg County,³³ as it is nationally, but alarmingly, esophageal, cervical, and lung cancers, among others, occur at disproportionately high rates in Pittsburg County.³⁴

NATIVE INVISIBILITY

The threat that these toxics are posing to Choctaws, together with the lack of attention it has been given, are manifestations of the continuous forces of settler colonialism at work in the United States today. Settler colonialism has had a tremendous, destructive impact on Native peoples and Native lands, which has “sever[ed] the relations between mind, body, and land.”³⁵ The McAAP’s destruction of, and disregard for, Choctaw land and health, offers a real-world, present-day illustration of the ways settler-colonial structures continue to define US relationships with tribal nations. The McAAP is blatantly sacrificing the health of all residents to further the US Army’s settler-colonial objectives in a region where more than 15 percent of residents are American Indian—more than twenty-six times the US national percentage of 0.58 percent.³⁶ My chief and other Choctaws have been pointing out, to largely deaf ears, how non-Natives have been poisoning my homeland, the US government in particular.

We Choctaws are painfully aware that any data generated from the McAAP monitoring, or any findings from research that it or a contractor has conducted on the impacts of the plant, has not been made easily accessible to the public. The McAAP

has neither taken care to fully inform residents of any such monitoring nor provided any well-researched assurances of the level of threat the plant poses to our people, the animals, and our land. No comprehensive outside studies have been conducted to address the concerns of Choctaw citizens about how to ensure the health and safety of American Indians in this region. The absence of attention given to these serious issues is partly due to a lack of Choctaw researchers. Related to this neglect, universities and other institutions across the country have failed to adequately support American Indian and Indigenous studies, allowing the relative lack of investigation of both the health and environmental problems in McAlester and elsewhere in Indian country to persist.

I learned about these issues within my own tribal nation only through a conversation with my chief, Gary Batton. In a 2017 discussion, Batton underlined the necessity of research to address health issues within our nation, expressing a strong desire for this research to be conducted by Choctaws. When I later asked Chief Batton for a statement, he responded with a strong admonition as a comment for an audience of the larger, non-Native public. “When developing locations such as the McAlester Ammunition Plant,” he asserted, “it is mission critical to do proper monitoring to assure there are no negative impacts on individuals or the environment.”³⁷

Not only are there no comprehensive outside studies assessing the impact of the McAAP on Choctaw health, land, and sovereignty, but virtually no media or other coverage of the McAAP’s pollution and contamination in the Choctaw Nation. While a few articles mention the McAAP in broader discussions of US Army environmental contamination, I am aware of only one article, by Oklahoma journalist Tricia Pemberton, that maintains a focus on the McAAP. Although Pemberton does not directly address the American Indian population or the Choctaw Nation, she reports the responses of local residents and reveals that suspicions among residents that the plant is causing cancer are widespread. These articles, together with a few websites containing data and statistics, comprise all the public attention given to the McAAP’s release of high amounts of carcinogens and the area’s abnormally high rates of cancer.

Moreover, none of the existing information mentions the implications of the McAAP’s operations in terms of Choctaw sovereignty, health, lands, and people, speaking to Rebecca Nagel’s insight that the systemic erasure of Indigenous peoples from “K-12 education, mainstream news, and pop culture” functions as a settler-colonial technology of oppression, “directly undermin[ing] public support [for Native rights].”³⁸ Ignoring the presence of Natives helps settlers carry out their goals. By using assumptions that, for example, “aboriginal peoples are . . . mostly dead or assimilated,” settlers ignore, discount, and delegitimize our issues and concerns.³⁹ Alternatively, by painting us as docile, uncivilized, controllable, warlike, and savage, settlers work to further justify and preserve settler supremacy. Importantly, while engaging in these technologies, settlers often claim and exercise innocence, excusing and often blatantly ignoring their role in perpetuating settler colonialism. Eve Tuck (Unaga̓x̓, enrolled member of the Aleut Community of St. Paul Island) and K. Wayne Wang point out that settlers even “attempt to deflect a settler identity, while continuing to enjoy settler privilege and occupying stolen land.”⁴⁰ At the root of all destructive settler technologies is the abduction of land.

This principle, that “land is the prime concern of settler colonialism,” helps explain the history of my tribe. As la paperson argues, a settler comes “to a ‘new’ place not only to seize and exploit but to stay, making that ‘new’ place his permanent home.”⁴¹ To carry out this goal, settlers pushed my Choctaw ancestors out of our homeland, relocating us to Indian Territory. This ethnic cleansing resulted in the death of a large percentage of our people, destroyed our clan system, severed our deep relationships with the land, and nearly eradicated our precontact cultural practices. Further illustrating the principle, settlers later privatized our new homeland in an effort to appropriate that land and to profit from the extraction of our subsurface resources, especially oil and coal. My tribe’s current problems include an inadequate land base, checkerboarded ownership, and wounds and scars in the land from drilling and mining, all direct results of the core settler goal of appropriating Indigenous land.

ENVIRONMENTAL INJUSTICE: A TECHNOLOGY OF OPPRESSION

Kyle Powys Whyte (Citizen Potawatomi Nation) focuses much-needed attention on the concept of environmental justice and injustice. This framework begins with the reality that underrepresented and underprivileged groups, specifically Indigenous communities, are highly likely to “live in toxic environments that are bad for human health and community cohesion.”⁴² Whyte goes on to explain that environmental injustice stems largely from settler-colonial development, including capitalist exploitation of resources, industrial air, water and soil pollution, and weapons development. He asserts that Indigenous environmental injustice is “rooted in one society’s interference with and erasure of another society’s way of experiencing the world as infused with responsibilities.”⁴³ The almost nonexistent reporting on, and the erasure of, Choctaw experiences relating to the McAAP’s contamination provide a textbook case of environmental injustice. Such intrusions, remarks Dina Gilio-Whitaker (Colville Confederated Tribes) about the Dakota Access pipeline—a crude oil pipeline that jeopardizes, among other things, the quality of Standing Rock Sioux drinking water—constitute “just one more assault on the lands, and self-determination of Native peoples since the beginning of American settler colonialism.”⁴⁴ “As the Standing Rock story illustrates,” she adds, “the assaults have never ended.”⁴⁵

The McAAP is just one of many examples of the blatant disregard of and apathy for Indian health and safety by the federal government. American Indian health issues are too often overlooked, despite the reality that we Indians have among the poorest health in the nation. The contamination and exploitation of our natural resources and homelands is a product of continued US attempted extermination and genocide of indigenous peoples. Indeed, settler-colonial nations often use environmental pollution as a means of severing Indigenous people from their land.⁴⁶

Elizabeth Hoover rightly points out that it is nearly impossible for Native peoples to “maintain Indigenous culture in a community affected by environmental contamination and pressures from outside forces.”⁴⁷ Hoover brings attention to environmental-toxics pollution and contamination in the Akwesasne Mohawk Nation. PCBs, mirex, and mercury from a General Motors Plant have been spilling into the

Akwesasne waterways, prompting a public outcry about the safety of fish consumption, an integral aspect of Akwesasne Mohawk culture.⁴⁸ Fish from the area were found to have PCB levels above both New York Department of Health and federal criteria for consumption safety standards.⁴⁹ Hoover terms these actions by General Motors “environmental suicide.”⁵⁰

Like Choctaws in and around McAlester, Akwesasne Mohawks have been forced to choose between their cultural and physical health. If they were to forego PCB-ridden fish, they would be severing longstanding cultural ties to fishing and fish consumption; losing their connections to the water, land and their ancestors; and exacerbating their chronic diet-related health problems by cutting out the physical health benefits of fish consumption.⁵¹ Similarly, escaping the negative health effects of the McAAP’s pollution and contamination can be achieved only through physical separation from these lands. By removing oneself from Choctaw homelands, one surrenders community engagement, interactions, and understandings, all of which form the bedrock of Choctaw culture. Robin Kimmerer (Citizen Potawatomi Nation) explains that “in the settler mind, land was property, real estate, capital, or natural resources. But to our people, it was everything: identity, the connection to our ancestors, the home of our nonhuman kinfolk, our pharmacy, our library, the source of all that sustained us.”⁵²

There are numerous other examples of non-Indian entities using Native homelands as dumping grounds for environmental toxics. Before addressing two particularly egregious cases of this contamination—uranium contamination in the Navajo Nation in the US Southwest, and mercury poisoning of the Asubpeeschoseewagong “Grassy Narrows” First Nation in Canada—an appreciation of the scope of the problem in North America can be gained through a quick look at the number of US EPA Superfund sites located in American Indian tribal homelands, relative to the total number of such sites in the United States. In addition, one can compare the number of sites that the Canadian government classifies as “active contaminated sites” located on First Nations’ reserves relative to the total number of such sites in all of Canada. Both US Superfund sites and their Canadian counterpart sites are widely understood to be the most polluted and contaminated lands in North America.

Superfund sites are abandoned or uncontrolled hazardous waste sites in the United States, a classification that emerged from the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA or Superfund).⁵³ Although American Indian lands compose less than 2.5 percent of US lands, at least 532 of the US’s Superfund sites are on Indian land – almost one for each federally recognized tribal nation.⁵⁴ The McAAP, too, is a Superfund site.⁵⁵ The Canadian government has designated more than five thousand sites in its country as “active contaminated sites.”⁵⁶ Although First Nations’ reserves compose only 0.2 percent of Canadian lands,⁵⁷ in 2017 more than 20 percent of the sites in Canada that were classed as active contaminated sites were on First Nations’ reserves. Canada’s 335 First Nations’ reserves contain as many as 1,090 sites of active contamination, with each reserve averaging 3.25 such sites.⁵⁸

In the United States, a large number of Superfund and other contaminated sites are located in the 17-million-acre Navajo Nation.⁵⁹ Between 1942 and 1985, Navajo

tribal land was contaminated through the mining of more than thirty million tons of uranium ore first for the Manhattan Project and later for the Atomic Energy Program.⁶⁰ Traci Voyles aptly calls this contamination of Navajo Nation homelands “wastelanding,” a process characterized by “Indigenous land [being] laid waste.”⁶¹ At the beginning of the wastelanding process in the Navajo Nation, non-Indian-owned mining companies installed Navajos in the least protected jobs as miners, jobs that were also the lowest paid.⁶² Later, at the encouragement of mining officials, many Navajo homes were built from uranium-mine debris, with six hundred Navajo homes continuing to pose a significant threat of uranium contamination to its inhabitants and visitors.⁶³ Voyles explains that Navajo “interests and agency were consistently undermined by the racism inherent to settler colonial power.”⁶⁴

In the 1970s, earthen uranium tailings were held by a dam built by the United Nuclear Corporation for the Church Rock Uranium Mill in the southeastern region of the Navajo homeland. In 1979 the dam failed, releasing 94 million gallons of radioactive waste into the Rio Puerco.⁶⁵ This spill constitutes the largest nuclear accident in American history, exceeding the radiation released by the Three Mile Island nuclear accident, which received far more media attention and coverage.

Many abandoned and unreclaimed uranium mines in the Navajo Nation remain highly radioactive.⁶⁶ These sites consistently leach into tribal waterways toxic runoff sludge, which contains uranium, arsenic, lead, vanadium, and manganese.⁶⁷ To date, the contamination of Navajo water has received almost no media coverage.⁶⁸ In a context in which 40 percent of Navajos lack running water, almost one-third of tribal members who live in the Navajo Nation use water from sources that are unregulated and contain uranium or arsenic.⁶⁹ According to a CDC study, 27 percent of Navajos have high levels of uranium in their urine, a percentage that is more than five times higher than that of the US population as a whole.⁷⁰

Exposure to uranium, both from working in the mines and from ingesting uranium waste that has been seeping into the Navajo tribal water supply for more than a half-century and that is also present in the soil and air,⁷¹ has had an extremely detrimental effect on the health of Navajo citizens. By the mid-1980s, Navajo uranium miners had a rate of lung cancer that was fifty-six times the national average, and their life expectancy was just forty-six years.⁷² Stomach cancer was eighty-two times the national average, and these workers were two hundred times more likely to get liver cancer.⁷³ Between 1970s and 1990, cancer rates in the Navajo Nation doubled,⁷⁴ and tribal members experienced elevated rates of genetic defects, neurohepatopathy, and mortality.⁷⁵ Disturbingly, the effects of radiation exposure sometimes take two decades or even longer—that is, multiple generations—to manifest. In 2016, a CDC study found uranium in the bodies of Navajo newborns.⁷⁶ Voyles describes mining as a kind of “delayed destruction” that unfolds over time.⁷⁷ Rob Nixon would refer to it “slow violence,” a term he coined that includes but is not limited to events of prolonged pollution and contamination.⁷⁸

The US government has been aware of this contamination and its dangers in the Navajo Nation for decades, yet it did not initiate cleanup of such sites until relatively recently.⁷⁹ From 2008 to 2016, the EPA removed thousands of cubic yards of mine

waste and rebuilt nearly fifty homes that had used uranium-mine debris as building materials. Also during this period, the Department of Justice began incentivizing mining companies to take responsibility for their reckless and unethical contamination of Navajo lands. Although one such mining company, Anadarko Petroleum, paid \$1 billion to the Navajo Nation for cleanup and compensation to Navajo citizens, about one-third of the companies responsible for the contamination of Navajo lands have either been shut down or have run out of money.⁸⁰ The uranium boom of the 2000s prompted Navajo citizens in Crownpoint and Church Rock to form the Eastern Navajo Diné Against Uranium Mining (ENDAUM). Concomitantly, the Navajo Nation passed the Diné Natural Resources Protection Act (DNRPA), which “placed a moratorium on uranium mining in Navajo country.”⁸¹ The Tribe has used this law to contest proposed new uranium mines.⁸²

A similar story in many respects unfolded more than 1,700 miles away from the Navajo Nation on the reserve of the Asubpeeschoseewagong “Grassy Narrows” First Nation in Canada during the 1960s. Eighty miles upstream from this reserve, the chemical company of Dryden Chemicals Limited manufactured bleaching agents for a paper mill using a production process that generated inorganic mercury. Instead of responsibly disposing of the untreated mercury waste, between 1962 and 1970 the company discharged forty thousand pounds of inorganic mercury into the air and water, half of which entered the English-Wabigoon river system.” The mercury waste caused “complete and irreversible” damage to more than three hundred miles of the river system.⁸³

In humans, mercury can damage memory and speech. It can cause loss of coordination, loss of memory, extreme fatigue, depression, uncontrollable tremors and convulsions, permanent brain and kidney damage, paralysis, coma, and death. Mercury especially affects unborn fetuses, who at birth tend to have mercury concentrations 30 percent higher than that of their mothers. As anthropologist Anastasia Shkilnyk, who documented the aftermath of this incidence of wastelanding, points out, “There are no remedies or therapy for the victims of mercury poisoning; the disease is considered to be irreversible.”⁸⁴ Asubpeeschoseewagong citizens had mercury concentrations 40 to 150 times that of an average Canadian, “well above the level at which neurological damage occurs.” Moreover, these Natives were almost entirely uninformed about the health effects of mercury contamination.⁸⁵ In 1970 and 1972, many received blood and hair tests for mercury from the Ontario Ministry of Health. They were not, however, informed of the concentrations of mercury in their bodies until 1973, when they were provided with no means by which to interpret the data.

Mercury contamination was and is difficult for the Asubpeeschoseewagongs, like other peoples, to conceptualize. Mercury cannot be seen, smelled, or tasted; there is no physical evidence, aside from health impacts, of contamination. Shkilnyk reported that many members of this First Nation “could not believe that the natural environment, which had nurtured them both spiritually and materially, could suddenly betray them. To accept the fact that their ‘River of Life’ had turned into a river of poison meant to lose forever their faith in nature and in the source of life itself.”⁸⁶ Instead of believing that the waterways that had loved, protected, and sustained them were contaminated,

some reached the conclusion that rumors of mercury “w[ere] something the white people made up . . . to take away our fishing rights and our right to live in the Indian way.”⁸⁷ Indeed, the mercury poisoning stripped Asubpeeschosesewagongs of their ability to provide for their own needs through subsistence practices and commercial fishing. Many refer to the contamination as “the last nail in the coffin.”⁸⁸

Federal responses to the contamination were driven “by the need to avoid any action that might be interpreted as, and thus set a precedent for, compensation for the damages of industrial pollution.”⁸⁹ In addition to avoiding the responsibility of compensation, the government feared the economic losses from the dwindling tourist industry and worked to downplay the effects of mercury. Minister of Resources Development René Brunelle argued that outsiders were not paying enough attention to the fact that many lakes in the area “have a high natural background of mercury.”⁹⁰

The contamination caused the abrupt collapse of the commercial fishing industry, as well as subsistence fishing and tourism.⁹¹ Fish in the English-Wabigoon river had mercury concentrations 40 times higher than the national standard suitable for human consumption.⁹² The collapse of the fishing industry, one of the primary sources of income for Asubpeeschosesewagongs,⁹³ led to great economic loss. In 1975 dollars, the losses totaled \$2 million from direct annual revenue and \$40 million in indirect revenues, together with the loss of three hundred jobs, many of which were held by Indians.⁹⁴ The losses rendered the main town on the reserve, Grassy Narrows, no longer financially sustainable.⁹⁵

In the early twenty-first century, mercury continues to leak into the tribe’s water. Downstream from the plant, the mercury levels are 130 times higher than they are upstream. Had mercury contamination been halted soon after it was detected, the levels would, of course, be much lower. Grassy Narrows residents are “still living with mercury poisoning and people are still suffering.”⁹⁶ Ninety percent of residents have health effects from mercury poisoning, including the generation born after the initial contamination in the 1960s. Recently it was discovered that Dryden disposed of excess mercury by burying drums of mercury. These drums have been leaching contaminants, which have now also polluted the reserve’s groundwater.⁹⁷ In December 2017 the reserve was promised a government-funded treatment center by Jane Philpott, then Indigenous Services Minister, and the province of Ontario “secured an \$85 million trust to aid in the cleanup of the land and water.”⁹⁸ I have not been able to find any evidence that the Canadian government has followed through with either the promised treatment center or the environmental cleanup.

CONCLUSION

As in the Navajo Nation and on the reserve of the Asubpeeschosesewagong “Grassy Narrows” First Nation, environmental toxics are contaminating the water, soil, and air in my Choctaw Nation homeland. A number of my people, including my chief, are deeply concerned that the daily detonations of munitions and emissions from the US-government-owned and operated McAAP are having serious, long-term detrimental effects on the health of our people, our land, and the animals. Yet insufficient

evidence exists to prove that this is indeed the case, as almost no data has been collected on the relationship between the McAAP's activities and the health of the community. Kimmerer suggests that the actions taken by entities such as the US government, which operates the McAAP, may endanger much more than the physical and psychological health of our communities. She explains that "healthy land and a healthy, responsible relationship between humans and the land" is a precondition for "cultural survival."⁹⁹ Her insights deepen our appreciation of the gravity of the problem of the McAAP's daily detonations, particularly given the large volumes of the toxics that are being emitted into the environment in and around McAlester.

Given the findings of my preliminary investigation of this relationship, findings that are presented in this article, action in the form of conducting an in-depth scientific study, or even multiple such studies, seems warranted and urgent. Chief Batton's vision that this research be carried out by our tribe's citizens is a compelling one. Yet there are questions about the extent to which the level of scientific training, expertise, and experience among our tribal citizens is sufficient to effectively develop and carry out such studies. Collaborating with scientists, including social scientists, from other tribes and from the larger, non-Native society, as well as collaborating with tribal environmental organizations, such as the Inter-Tribal Environmental Council, the Institute for Tribal Environmental Professionals, and the Navajo Nation EPA, seems prudent.

Armed with the data from comprehensive scientific studies that show that the Choctaw people, together with the land and animals, are being harmed by the actions of the McAAP, we Choctaws can then work to remediate the environmental problems in our homeland. There is reason for optimism, as an example from Hawai'i shows.¹⁰⁰ During World War II, the US military seized the island of Kahoolawe for the ostensible purpose of testing bombs. For decades the military denied Native Hawaiians access to this part of their ancestral land. In the mid-1970s, Native Hawaiian activists occupied the island, demanding that it be restored to Native Hawaiian control. Since 1993, the activist group, Protect Kahoolawe Ohana, has pursued as part of its core mission and responsibility the cleanup and rehabilitation of this badly damaged island. The vision and determination of these Native activists is inspirational. The story suggests, among other things, that Choctaws could benefit by drawing upon the experience and strategies of other Natives. Two actions undertaken by Navajo Nation citizens seem particularly promising as possibilities for my tribe: Navajos have passed tribal environmental protection laws and established a tribal environmental protection agency. We Choctaws need to seriously consider working with the lawmakers and other leaders of our tribe to pass tribal environmental protection laws and to establish a tribal environmental protection agency as part of the Choctaw Nation government.

In pursuing actions to remediate the environmental contamination in McAlester and to prevent further harm from occurring there, it is important to be mindful of the fact that "how we approach restoration of land depends, of course, on what we believe 'land' means . . . If land is just real estate, then restoration looks very different than if land is the source of a subsistence economy and a spiritual home."¹⁰¹ We Choctaws have a close relationship to our land. There is no question that the vast majority of us care deeply about nearly every aspect of the health of our land. We also care deeply

about the health of our people and the animals who reside in our homeland. I am confident that we will be able to harness successfully the resolve that enabled us to survive the Trail of Tears and other traumas toward the end of achieving environmental justice for our people.

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