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Subject:	[External_Sender] Comments on Docket ID NRC-2021-0137-0001 - Systematic Assessment for How the NRC Addresses Environmental Justice in Its Programs, Policies, and Activities
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Dear NRC,
My Comments on Docket ID NRC-2021-0137-0001 - Systematic Assessment for How the NRC Addresses Environmental Justice in Its Programs, Policies, and Activities are attached.

Thank you for your consideration,
Keith Mermelstein.

Binghamton, NY

Federal Register Notice: 86FR36307
Comment Number: 82

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Public Comment on Docket ID NRC-2021-0137-0001 - Systematic Assessment for How the NRC Addresses Environmental Justice in Its Programs, Policies, and Activities

October 29, 2021

To the Nuclear Regulatory Commission
By email to: NRC-EJReview@nrc.gov

The Nuclear Regulatory Commission (NRC) must dramatically improve its approach to environmental justice. One way the commission can demonstrate that it will begin to take environmental justice seriously, is by rejecting applications to site nuclear waste in marginalized communities.

Right now just such a community in southeastern New Mexico is being targeted to hold the nation's largest inventory of radioactive nuclear waste. The human rights implications of this plan must be understood. It is important for government evaluators of all proposed industrial and waste sites in the United States to consider, with a wider lens, the long and sorry history of how minority and low-income communities are targeted to hold toxic waste sites. This proposed nuclear waste dump represents a textbook example of how environmental justice communities are targeted.

Allowing it to proceed would be a clear and egregious human rights violation.

Despite more than half a century of searching and many billions of dollars spent, the United States has yet to find, much less create, a permanent repository for the nation's high-level nuclear waste. In 1982 Congress passed the Nuclear Waste Policy Act, which called for the U.S. Department of Energy (DOE) to establish permanent high-level nuclear waste repositories by 1998. A few years later, the government narrowed its effort to focus on the idea of a deep underground facility within Yucca Mountain, 90 miles northwest of Las Vegas. However, that project was blocked by Nevada opposition and the DOE stopped major funding for its development in 2009 (Rott, 2019). In the meantime, nuclear waste continued to pile up. Commercial nuclear power plants in the United States have already generated over 80,000 metric tons of high-level nuclear waste – or spent nuclear fuel – and more waste is being generated every day that nuclear plants operate. With the lack of a national repository, the waste is being rightfully stored in the states which benefited from the electricity generated. While climate change and security considerations may warrant relocation of some radioactive waste storage sites at operating or decommissioned nuclear reactors, such relocation should remain as close to the facilities which generated the waste as possible. This is not just fair, it eliminates the excess physical and health and environmental risks of transportation which would be unduly imposed on the populations living nearest the interstate highways and rail lines which tend to be people of color and of lower-income.

With no permanent repository in sight, the nuclear industry has turned to the idea of an "interim" storage. The NRC has failed to adequately recognize environmental justice principles in its approval of an interim storage site in New Mexico. But the NRC can reject the project

proposed for New Mexico. In 2017, Holtec International, a private company, submitted a license application to the NRC for permission to build and operate a Consolidated Interim Storage Facility (CISF) to be located in Lea County, New Mexico. The Holtec "Hi-STORE CISF" would receive and store up to 100,000 metric tons of high level radioactive nuclear waste. In March 2020, the NRC issued a draft Environmental Impact Statement (EIS) for public comment which purports to consider environmental justice (NRC EIS, 2020). The NRC docket reflects that many public comments were filed objecting to the New Mexico CISF, with members of First American Nations and Hispanic/Latino communities vigorously articulating their concerns.

Environmental justice, in the Federal scheme, refers to the Federal policy established in 1994 by Executive Order 12898 that "directs Federal agencies to identify and address disproportionately high and adverse human health and environmental effects of its programs, policies, and activities on minority or low-income populations." (NRC EIS 4-81) As reflected in the NRC's Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions (69 FR 52040), the NRC purportedly "strives to meet the goals of EO 12898 through its normal and traditional NEPA review process." (NRC EIS 4-81) Appreciation of the degree to which such articulated goals and human rights principles are being disregarded by the NRC requires, first, consideration of basic human rights principles relevant to the environmental context as well as some review of longstanding environmental justice issues in the United States.

Human Rights

The principles of a human rights-based approach overlap with those of good governance. "Good governance relates to systems of governance that have qualities of accountability, transparency, legitimacy, public participation, justice and efficiency. This includes important elements of (political) legitimacy and democratic citizenship, with effective protection of human rights. The term 'governance' (rather than 'government') denotes more inclusive and cooperative forms of governing, involving a wider set of actors that co-create development outcomes along with new forms of process-oriented societal co-steering through partnerships and dialogue." (United Nations, 2019, 76)

As noted by Basuk Tuncak, from United Nation "Report of the Special Rapporteur on the Implications for Human Rights of the Environmentally Sound Management and Disposal of Hazardous Substances and Wastes," which sites rates of cancer, diabetes and other illnesses linked to the production and use of hazardous substances have been on the rise over the past several decades. These and other diseases have been linked to the increased production and use of toxic chemicals. Children, minorities, indigenous people, workers, low-income communities and others are often exposed to higher levels of toxic chemicals, and all too often suffer disproportionately (Tuncak, 2015). Decades of insufficient action to prevent harm make the task today complex and perhaps overwhelming, but solutions must be developed to protect human rights. Central to these solutions is the obligation of governments and the responsibilities of businesses to provide information and the right to meaningful participation. Tuncak notes that the right to the highest attainable standard of health has all been frustrated by large information gaps throughout the life cycle of substances and waste.

Environmental Justice: A Serious Socioeconomic Issue in the United States

In 1987, the Commission for Racial Justice of the United Church of Christ (UCC) published a landmark national study, "Toxic Wastes and Race in the United States," which demonstrated the degree to which toxic waste facilities in the United States were situated in racial and ethnic communities (UCC, 1987). The results showed that, although income was an important factor, race was the strongest predictor of the location of these facilities. Three of the five largest hazardous waste landfills in the U.S. were found to be located in predominantly Black or Hispanic communities. The findings also showed that three out of five Black and Hispanic residents lived in communities with uncontrolled toxic waste sites. In addition approximately half of all American Indians and Asian/Pacific Islanders lived in communities with uncontrolled toxic waste sites. The hazardous waste issue is very linked to the state of the economy in a given community. Communities already beset by poverty, unemployment and problems related to poor housing, education and health, the authors stressed, cannot afford the luxury of being primarily concerned about the quality of their environment when confronted by a plethora of pressing problems related to their day-to-day survival. "Many racial and ethnic communities have highly depressed economies and alarming unemployment rates; they would be particularly vulnerable to those who advocate the siting of a hazardous waste facility as an avenue for employment and economic development." (UCC, 7) The authors argued that the racial and socio-economic status of a community is also linked to its public health and strongly urged the existing health status of a community to be incorporated into the decision-making process for the location of new hazardous waste and polluting facilities. "Lacking this, there is the risk of compounding the serious pre existing health problems in racial and ethnic communities." (UCC, 7) Finally, the authors pointed out the need for adequate information to be provided to the members of targeted hazardous site communities: "The success of a democracy depends upon the full participation of its citizenry. The hazardous waste issue is admittedly a complex one. Decisions related to it require an informed public, particularly in directly impacted communities." (UCC, 7)

Decades of research since the UCC report was published only confirm and expand upon the insights touched upon in that report. It is now well established and documented that racial and ethnic minorities face greater environmental burdens than others. Numerous studies and reports have identified a wide variety of environmental conditions impacting EJ communities, including Superfund sites, toxic release inventory facilities, toxic-waste dumps, and other locally unwanted land uses across the United States (Bodenreider, 2019; Mohai, 2015; Wikstrom, 2018). Environmental justice has also become well established in principal – if not in practice – in the American federal regulatory scheme. The U.S. Environmental Protection Agency (EPA) defines environmental justice as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies." (EPA)

Fair treatment, the EPA explains, "means that no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental and commercial operations or policies," and the EPA's goal is "to provide an environment where all people enjoy the same degree of protection from environmental and

health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work." (EPA)

A key framework for thinking about and assessing the vulnerability of communities is the need to carefully consider the full burden imposed upon a community, past, present, and future. In addition to considering the socioeconomic and demographic features of any given population which may be seriously impacted by the allowance of a specific project site, due recognition must be taken of the "cumulative impacts" of industry and environmental hazards within the region. As observed by Baptista, of the Tishman Environment and Design Center at The New School: "Today, it is well understood that regardless of who moved in first or whether siting was intentionally discriminatory, these siting conflicts are a manifestation of deeper, structural forms of racism and injustice." (Baptista, 2019) Injustices are embedded in our spatial relationships and are enforced and perpetuated through land use planning.

New Mexico: A Key State of Environmental Justice Concern

There may be no state better suited to illustrating the multitude of issues which come into play to create environmental injustice than New Mexico, the state which is also the target for the Holtec CISF, which would be the most toxic and hazardous waste dump to ever be sited in the United States. New Mexico is one of the very few minority-majority states in the nation. Recent estimates of the U.S. Census reflect that only 37.1% of the state's population of a little over two million are White alone (not Hispanic or Latino). Of the remainder, 49.1% of its residents identify as Hispanic/Latino and 10.9% identify as Native American. A sizable percentage of households (34.8%) report speaking a language other than English at home. Nearly one in five persons (19.5%) living in New Mexico lives in poverty. (U.S. Census, New Mexico, 2019) New Mexico has long ranked among the bottom in US states for earning potential, high school graduation rates, food insecurity, poverty, child health, and health insurance coverage. There are also wide disparities in the socioeconomic and status of residents within the state (Despres, 2017). The New Mexico Indicator-Based Information System (NM IBIS) report put out by the New Mexico Department of Health reports that more than one out of five New Mexicans consider themselves to be in "fair or poor health," with wide disparities in the socioeconomic and status of residents within the state, particularly among Hispanics, African Americans, and American Indians (NM IBIS). The NM IBIS report reflects that the reasons for such disparities are complex, with certain populations experiencing a greater burden of disease due to a variety of factors including education, income level, cultural and linguistic barriers, racism, historical trauma, and inadequate access to timely and appropriate healthcare. The IBIS report adds that disparities also occur due to location and acknowledges that improved linking of environmental hazard or human exposure data with health data is needed. Factors that may adversely affect human health, identified by the NM IBIS, include air, food, and water contaminants, radiation, toxic chemicals, wastes, disease vectors, safety hazards, and habitat alterations. Housing also affects health both directly, through physical, chemical, and biological exposures, and indirectly, through psychological effects.

The striking deep historical and current inequities that frame the lives of New Mexico residents are detailed in a New Mexico Public Health Institute (NMPHI) report. "In New Mexico, the wealthiest 1 percent of the population earns 15.6 percent more than the other 99

percent of people, representing 13.4 percent of all income in the state. The gap in income distribution in New Mexico is greater than in any other state in the US. The spread between the richest 20 percent and the poorest 20 percent is 9.9 percent." (Despres, 13) New Mexico is the land where highly educated scientists, engineers and others are employed by the nation's nuclear high-tech laboratories. Federal and state research funding of nuclear has provided significant support for New Mexico's economy since the 1940s with the initiation of the Manhattan Project effort to develop nuclear weapons – and then later support nuclear power – at the Los Alamos National Lab and Sandia National Lab. The fossil fuel and mining industry also play a dominant role in the state's economy. Oil and gas account for more than $2 billion in taxes and other revenue for New Mexico. New Mexico has significant uranium resources and is the nation's leading producer of potash. Yet, while these extraction industries provide revenue for the state and deliver strong economic benefits for some, they have also been the cause of extensive environmental contamination and major public health concern. NMPHI, for example, notes that the level of particulate matter less than or equal to 2.5 micrometers in diameter (PM 2.5), which is associated with chronic respiratory disease and premature mortality, is consistently higher than the national average. In addition to fossil and mining activity, wildfires propel particulate matter into the air. Radioactive radon and asbestos are additional concerns. Predictably, pollution has led to health problems, particularly for low-income and minority residents. Another issue relevant to health and economic wellbeing, the NMPI points out, is water supply and water quality, but New Mexico's water resources are scarce. Water managers for all 16 regional water planning districts except the San Juan Basin in the northwestern part of the state predict shortages in drinking and irrigation supplies (Despres, 26).

The impacts of New Mexico's nuclear and fossil industrial complex upon its predominant minority communities, Hispanic/Latinos and Native Americans raises obvious environmental justice concerns. For one thing, communities of color in the U.S. are disproportionately (compared to non-Hispanic Whites) afflicted with high blood pressure, diabetes, heart disease, lung diseases including asthma and chronic bronchitis, and autoimmune diseases like lupus (Berry, 2020; New Mexico Center on Law and Poverty, 2014). Issues related to immigration status also present obstacles for the undocumented and persons living in mixed immigration status families, a problem elevated by recent changes to immigration policy that have led to fears among immigrant families about even their American-born children participating in Medicaid and CHI (Kaiser Family Foundation, 2020). Adding to the problem is the fact that the air in many Latino communities violates air quality standards. One investigation of national data, for example, found that, of the Hispanic/Latinos living in counties above EPA's level of concern for cancer risk, almost all live in New Mexico, Texas, and Colorado (Clean Air Task Force, 2016). Within New Mexico's borders are 23 Native American sovereign nations, including 19 Pueblos, 3 Apache tribes, and the Navajo nation. As with the Hispanic/Latino population, New Mexico's First American Nation peoples contend with environmental hazards and toxic pollution burdens that interact with and are enlarged by their burdens of poverty, poor health, and inadequate access to safe drinking water.

As described by the New Mexico Center on Law and Poverty, "Life for Native communities in New Mexico today is profoundly shaped by a history of colonization. The federal government has held immense power over Indian land, economies, schools and healthcare. Native people have endured a history of broken treaties; disenfranchisement; near

extermination of tradition, language, and land rights; placement of Indian children in Indian boarding schools; and other experiences that reflect deep structural inequities." (New Mexico Center on Law and Poverty, 2014, 16) The New Mexico Center on Law and Poverty notes state law has also been ineffective in preventing major environmental devastation to Native communities, as policymakers have supported the economic interests of polluting industries. This has included uranium mining that has left major contamination on the Navajo nation and is once again threatening the environment and sacred sites for Native Americans in other areas of the state (New Mexico Center on Law and Poverty, 32).

The injustice imposed by the U.S. nuclear complex on indigenous communities in New Mexico, as well as in the American Southwest overall has long been a subject of anxiety and outrage for the human rights and environmental justice community (White Face, 2015; Zabarte, 2019).

Aside from the legacy of military and U.S. Department of Energy (DOE) nuclear activities and radioactive waste generation, atomic bombs were exploded underground near Carlsbad, New Mexico in the 1960s as part of "Project Gnome," a joint government-private industry nuclear experiment conducted with the aim of scientific and engineering progress (Owens, 2018). Tens of thousands of Navajo continue to live near over 1,000 abandoned uranium mines which contaminate groundwater and the landscape with hazardous radioactive particulates and gas emissions. Today, more than a century after the federal government issued the first uranium mining leases on Navajo land, proposed deep EPA budget cuts put the cleanup effort in peril (Alvarez, 2017; Clean U the Mines, 2016; Moore-Nall, 2015; U.S. Bureau of Land Management). Tribal land areas and vital Puerco River source waters also remain contaminated by acidic radioactive sludge from the1979 Church Rock uranium spill in New Mexico which resulted when a dam broke at the United Nuclear Corporation mill which processed ore from the nearby Northeast Church Rock uranium mine and created a Superfund site (Arnold, 2014).

The Proposed Holtec HI-STORE Consolidated Interim Storage Facility (CISF)

It is within the backdrop of environmental justice issues in the United States, and the unique context of nuclear and other extractive industries in the West that the Holtec CISF emerges as an insult added to injury for marginalized communities in New Mexico.
The Holtec CFSI is located approximately halfway between the cities of Carlsbad and Hobbs, New Mexico in Lea County, which borders Eddy County. Both Lea and Eddy are minority-majority counties with a large Hispanic/Latino population (Data USA, Lea County; Data USA, Eddy County). Both Lea and Eddy counties, as well as Carlsbad, are within the Permian Basin, the most prolific oil and gas producing region in the U.S. The American Lung Association's 21st annual State of the Air Report, which focuses on particulate and ozone pollution, reflects a poor state of air quality in both Lea and Eddy. Lea is given a "D" grade, and Eddy is given an "F" (American Lung Association, 2020). The most common drilling method in the basin involves hydraulic fracturing – or fracking – which involves pumping massive amounts of freshwater — along with sand and chemicals — into shale formations as deep as 10,000 feet**.** In 2018 alone, New Mexico's share of the Permian Basin generated 42 billion gallons of oil and gas wastewater (Reese, 2020). The southwestern New Mexico area in which Holtec's proposed CIFS sits, is just 39 miles away from Andrews County in West Texas, where another private company, Interim Storage Partners, LLC (ISP), has submitted a license application to the NRC for a CISF to be

located at the existing Waste Control Specialists (WCS) low-level nuclear waste storage facility. The WCS would hold up to 40,000 metric tons of high level nuclear waste. (NRC EIS, 3-100)

The Holtec CFSI, not surprisingly, has been the subject of intense controversy and has engendered strong opposition by members of the public and nonprofit organizations on environmental justice grounds (Ali, 2019; Kamps, 2018). In public comments submitted to the NRC in response to an EIS "scoping" proceeding, for example, Rose Garder, of Alliance for Environmental Strategies in Eunice, New Mexico, writes: "I am a native and lifelong resident of NM. My grown daughters are lifelong residents of this great place we live. We live and work in Eunice, Hobbs, and Lovington NM. We are property owners, business owners, mothers, wives, equal partners in our relationships and we unequivocally reject Holtec and their dangerous plan to bring spent fuel, high level radioactive waste to New Mexico. We live within 35 miles of the site. We have family that travel back and forth for pleasure and business on the road adjacent to the site Holtec has selected." (Gardner, 1) Gardner continues, "The local people of Lea county are of predominantly Hispanic heritage and other minorities. I feel as a Hispanic woman that the brown skinned people have more than done their share of carrying the burden of too many nuclear related projects in NM. …I am fed up with being a toilet and sewer for all the radioactive experiments of the United States." (Gardner, 2) She relates that she attended most of the NRC meetings and some other community gatherings regarding the Holtec project and even facilitated some events because there were no Holtec representatives available to give information. She also criticized the problem of a language barrier for people in her community and the lack of information in Spanish that actually gives detail about the project or explains how the Spanish speaking public can participate. Gardner further notes the reticence of people in her community to get involved in activism against a license application in which the federal "government is involved, especially with the Hispanic population who presently fear many things government related" due to its recent "immigration and deportation stance of even naturalized citizens, active and retired military members and even babies." (Gardner, 3) Finally, Garner protests that the people of her state got no benefit from the power generated by nuclear plants in other states and "we do not want their dangerous cast off toxic waste." (Gardner, 3)

In testimony to New Mexico legislators, Leona Morgan, a Navajo woman and environmental activist from northern New Mexico, said that indigenous communities in the region already suffered the effects of radiation from uranium mining, with many forced to relocate from sacred land. "All of the impacts of nuclear colonialism can be simplified by explaining it as environmental racism," Morgan said. "My concern is for the health of the people and the environment. The impacts to my family has been various cancers and deaths." Because cancer often takes u to 25 years to develop, Morgan said she considered nuclear proliferation into Native American communities a "slow genocide." "I maintain that the U.S. is founded upon institutional racism which is perpetuated today by radioactive contamination. We're still dealing with what was once federal policy periods such as relocation and removal, but just in a different way,' she said. 'We're having to relocate from places that have been contaminated. Some of our people refuse to relocate, because these are places their ancestors are from, these are places we consider sacred." (Morgan, 2019)

A formal resolution of the All Pueblo Council of Governors, which represents the collective voice of the 20 member sovereign Pueblo nations in New Mexico and Texas, also

denounced the Holtec CISF and the WCS CISF in Texas, voicing its opposition to the transportation of nuclear waste in the state: "[T]his transportation campaign imposes potential risks to the health of the environment, communities, and irreparable harm to Pueblo cultural resources located near or on transportation routes {*and*} the ancestral homelands, current reservations, and communities of Pueblos throughout New Mexico's legacy of exposure to the nuclear fuel cycle— including weapons development, transportation, and storage of nuclear material—continues to detrimentally impact the health and well-being of our people, communities, and natural and cultural resources, the cultural losses and health effects of which will never fully be compensated or recovered". (All Pueblo Council of Governors, 2019, 4) The All Pueblo Council also protested that the Pueblos have not been afforded the opportunity to engage in meaningful tribal consultation with the Federal government.

The Failure of the NRC EIS to Adequately Consider Environmental Justice

The NRC asserts that its EIS for the Holtec CISF includes an "evaluation of the radiological and non-radiological environmental impacts" of the project and "also considers unavoidable adverse environmental impacts, the relationship between short-term uses of the environment and long-term productivity, and irreversible and irretrievable commitments of resources." (NRC EIS, 1-3) The NRC contends it gave consideration to the 50-mile radius surrounding the site, which it terms the "region of influence" (ROI). Although there is still no permanent repository for high level nuclear waste in the nation and Holtec itself has indicated it may run the CISF for 120 years, the NRC EIS considers only the timescale of 40 years (NRC EIS, 2-2).

The NRC, in a lengthy section 3 of the EIS, duly iterates the litany current and possible future additional nuclear facility operations, including the Waste Isolation Pilot Plant (WIPP) in Carlsbad, New Mexico, 16 miles to the southwest, and the Waste Control Specialists (WCS) low-level radioactive waste storage and disposal site in Andrews County, Texas, 39 miles to the west, which is, as previously noted, now another proposed CISF (NRC EIS 3-95 and 3-100) The NRC EIS also describes with a good deal of detail the voluminous fossil fuel and mining activities in the area, including: active oil and gas exploration and development, with fracked wells; gas pipelines; compressor stations; a gas plant; an oil waste treatment facility; an industrial landfill; and sizable potash mining activities. The NRC even concedes that such activities "may result in limited chemical exposure" to persons in the near vicinity of the Holtec CISF (NRC EIS, 3-97).

Notwithstanding all the polluting industries in the region, the NRC concludes that impacts to minority and low-income populations from land use, transportation and traffic, soil, groundwater quality, air quality, socioeconomics of employment, population, community resources, and human health would all be "SMALL", while impacts to the ecology and "Economic Structure" component of socio economics would be "SMALL to MODERATE" with respect to Hispanic/Latino populations in the "vicinity" of the CISF and "SMALL to MODERATE" with respect to all minority and low-income populations in the region. (NRC EIS, Table 4.12-1, titled "Potential Impacts of the Proposed Action on Minority and Low-Income Populations" NRC EIS, 4-83) The "MODERATE" characterization, however, is based on the NRC's estimation that the impact would be "beneficial" because communities in the 50-mile

ROI would share in the "economic growth the proposed CISF project would expect to generate." (NRC EIS, 4-76) The EIS acknowledges, however, that NRC staff did not evaluate "how the benefits are likely to be distributed among persons or potential beneficiaries in the ROI." (NRC EIS, 4-76) The NRC discounts risk to the minority and low-income population based on its assumptions that all industrial regulatory schemes (including its own) are fully protective, that Holtec would be in full compliance with all regulations, could implement all necessary mitigation measures, and that no external events could be reasonably anticipated to challenge these assumptions. For example, the NRC reasons, "adverse health effects to all populations, including minority and low-income populations, are not expected under the proposed action, because Holtec is expected to maintain current access restrictions; comply with license requirements, including sufficient monitoring to detect radiological releases; and maintain safety practices following a radiation protection program that addresses the NRC safety requirements". (NRC EIS, 4-82 to 4-83)

Particularly troubling is the NRC's assessment that "minority and low-income populations would not be more obviously at risk than the general population". (NRC EIS, 4-84) In other words the NRC concludes there would be no adverse impacts to environmental justice populations because they would be exposed to the same conditions as others. This ignores two important things. The first is that minority and low-income populations are substantially more vulnerable to negative effects. The second is that New Mexico is a minority-majority state.

It is most telling that the EIS fails to reference or address any of the environmental justice concerns repeatedly made in comments filed with the agency and in public meetings. Most blatantly, perhaps, the NRC ignores the long-standing and vigorous objections of Native Americans to the deleterious impacts the nuclear fuel cycle (including uranium mining and milling) have foisted upon First Nation tribal lands and peoples. These include the specific strong objections raised specifically with respect to the Holtec CISF. The EIS – in its 488 pages – pays not one bit of attention to the concerns of these communities. Adding insult to injury, as the NRC sidesteps the broader concerns of the Native American population in New Mexico and the American West, it includes in its EIS, merely a cursory mention that there are archeological sites in the region. The NRC appears to have more interest in people who lived long ago than in the continued health of current and future generations.

Conclusion

Among the injustices imposed by the Holtec CISF on the region is that the industrial activity that generated all of the commercial nuclear waste came from other states. No commercial nuclear power plants were ever sited in New Mexico. Thus the benefits of the electricity generated over the decades these reactors operated accrued to the states (mostly white majority) which received their power. Yet the extraordinarily radioactive and toxic waste these reactors generators would be dumped in the minority-majority state of New Mexico in an area already heavily burdened by other dangerous materials and in communities struggling with poverty, poor health, and suffering from prejudice. These racial-ethnic disparities in consumption of goods and services and pollution exposure are well documented, including by academics from, among other institutions, the University of New Mexico and the University of Texas, Austin in a paper aptly titled "Inequity in consumption of goods and services adds to racial-

ethnic disparities in air pollution exposure" (Tessum, Apte, Goodkind, et al, 2019). Their focus was specifically on small particulate PM 2.5 air pollution. The study directly shows and quantifies the linkages between human end-use pollution and shows how minorities (in the case of the study, African American and Hispanic/Latino) bear a disproportionate burden compared to non-Hispanic Whites. Air pollution and small particulates in particular, as noted previously, abound in Lea and Eddy counties.

Perhaps the greatest violation of human rights implicated by the Holtec CISF is that it adds additional risk to a region already experiencing source water and groundwater strain. Water is an internationally recognized human right (United Nations 2019). Water is essential to survival and the long term sustainability of health and economic viability. Water resources are already compromised by all the other nuclear, fossil fuel, and mining activities being permitted today in New Mexico. The EIS note that the Ogalla Aquifer, the water-bearing portion of the Ogalla Formation, is the primary source of water in Lea County, and states: "The recharge of the Ogalla Formation on the High Plains is due entirely to precipitation." (NRC EIS, 3-34) The NRC further acknowledges that conditions associated with global warming, including the fact that the region is arid and climate change projections indicate that the average temperature in New Mexico is projected to increase along with more intense drought and wildfires. Yet the NRC engages in no analysis of the risk to the communities resulting from the combined conditions of water stress, heat, dust storms or fire and simply concludes that the Holtec CISF will only have a small impact upon waters. This makes no sense.

Moreover, the NRC staff clearly made little effort to assess the link between water vulnerabilities and the overall health and economic vulnerabilities of minority and low-income populations in the region. As water – and especially clean water – becomes increasingly more scarce, competition for water use by industry and agriculture will inevitably clash with the water needs of the population both in the vicinity of the CISF and the state of New Mexico. As evidenced by past experience, it is industry that is likely to win that competition. If pollution levels and drought ultimately force people from the region, the wealthy and well-educated will have options. The poor will not.

Government actors need to take a holistic approach in licensing of such sites and to be attentive to the special needs and desires articulated by the members of environmental justice communities themselves. This point was emphasized work authored by D'Odorico, Davis, Rosa, et al Reviews of Geophysics papers, which argued the need for policy makers to consider linkages between biophysical and social impacts (e.g., human rights, governance, globalization, and resilience) and look toward the future resource conditions and needs (D'Odorico, Davis, Rosa, et al, 2018). Treatment of water as a commodity or property can lead to water resources being transferred to more profitable industrial, fuel extraction/energy production, or household uses that have negative societal impacts. The value of water can be perceived as a sacred good, human right, social justice imperative, security asset, and ecosystem medium. Water has "intrinsic characteristics that can be associated with structural market failures, large externalities, and interconnectedness that make the level of individual and collective interdependence particularly critical." (D'Odorico, 473)

As discussed by the United Nations World Water Assessment Programme in its 2020 World Water Development Report "Water and Climate Change" (WWDR 2020), ''Good governance' involves adhering to principles of human rights, including effectiveness, responsiveness and accountability; openness and transparency; participation in the performance of key governance functions relating to policy and institutional arrangements; planning and coordination; and regulation and licensing. For the integration of substance, integrated water resources management (IWRM) provides a process to involve stakeholders across society, the economy and the environment." (United Nations, 2020, 6) Scientific information and data need to be made available at the local level and included as information into local multi-stakeholder decision processes.

The Holtec CISF presents one more industrial "hit" which threatens to irreversibly compromise the environmental conditions which sustain economic wellbeing of the region and its peoples. To the minority and low-income communities already suffering from poverty and compromised health, this hit may be one too many. However, even if the NRC's contention that the Holtec CISF poses absolutely no threat to public health and the environment, the site would still represent an environmental injustice. This is because access to money, information and needed expertise is not enjoyed by the minority and low-income communities in New Mexico. This injustice is facilitated by the NRC, but it really arises more from an overall problem of governance in the United States in which short-term financial considerations prevail over the long-term public interest and wealthy powerful industries exert undue influence over policy decisions made with regard to use of land and water.

It is clear from the reference pages associated with every single part of the NRC EIS that the agency is far more interested in using its regulatory scheme to promote the nuclear industry than it is in giving true consideration to concerns raised by members of public and public interest groups. Especially outrageous is the NRC's failure to take into consideration the entire history of corporations in the United States willingly or accidentally despoiling and their communities.

The NRC in the EIS, is apparently satisfied with Holtec's stated plans to adhere to all regulations, be in compliance with all needed certificates, and mitigate any problems that might arise. The fact that private for-profit companies all too often fail to live up to their articulated commitments seems to not be accounted for, if not deliberately disregarded, by the NRC.

It is worthy of note that while the reference pages of the NRC EIS abound with citations relating to *Holtec* submissions, the pages are devoid of any citation to *public* comments. In fact, the NRC EIS does not appear to have a reference to a single journal article or non-profit group report addressing environmental justice issues, the persistent levels of poverty, or the serious health problems affecting Hispanic/Latinos and Native Americans in the U.S., much less Hispanic/Latinos and Native Americans in New Mexico.

The NRC is tasked with protection of the public, not protection of industry profit margins. The NRC EIS represents a clear failure of the NRC staff to appreciate the basic human rights of marginalized groups in New Mexico. Luckily, the agency has time to correct its approach and assume one which is more honorable and in keeping with the true obligation of government.

Respectfully Submitted

Keith Mermelstein, October 29, 2021

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