

Holtec-CISFEISCEm Resource

From: Kevin Kamps <kevin@beyondnuclear.org>
Sent: Monday, July 30, 2018 10:31 PM
To: Holtec-CISFEIS Resource
Subject: [External_Sender] Docket ID NRC-2018-0052: Holtec/ELEA's proposed CISF is a violation of environmental justice – that is, it is environmental racism, radioactive racism (submitted by Kevin Kamps, Beyond Nuclear)
Attachments: 7 26 18 EJ comments.pdf

Dear NRC,

Please find attached my comments,

Docket ID NRC-2018-0052

Environmental scoping public comments re: Holtec International/Eddy-Lea [Counties] Energy Alliance's centralized interim storage facility scheme targeted at southeastern New Mexico Prepared and submitted to the U.S. Nuclear Regulatory Commission by Kevin Kamps, radioactive waste specialist, Beyond Nuclear, on July 30, 2018
Holtec/ELEA's proposed CISF is a violation of environmental justice – that is, it is environmental racism, radioactive racism

in PDF format, attached (file name:).

I will send each of the 13 enclosures, cited in my comments, as attachments, in 13 separate follow on emails. Unfortunately, when I tried just now to send my comments, and all 13 attachments, together to this email address, I got an email error message bounce back from you saying
< 552 size limit exceeded >

Thank you.

Sincerely,

Kevin Kamps, Beyond Nuclear

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Beyond Nuclear aims to educate and activate the public about the connections between nuclear power and

nuclear weapons and the need to abolish both to safeguard our future. Beyond Nuclear advocates for an energy future that is sustainable, benign and democratic.

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Docket ID NRC-2018-0052

Environmental scoping public comments re: Holtec International/Eddy-Lea [Counties] Energy Alliance's centralized interim storage facility scheme targeted at southeastern New Mexico

Prepared and submitted to the U.S. Nuclear Regulatory Commission by Kevin Kamps, radioactive waste specialist, Beyond Nuclear, on July 30, 2018

Holtec/ELEA's proposed CISF is a violation of environmental justice – that is, it is environmental racism, radioactive racism

These comments are focused on the environmental justice violations – that is, the environmental racism, or radioactive racism – represented by Holtec/ELEA's centralized interim storage facility (CISF) scheme.

A majority of the population in Lea County, NM is of Hispanic or Latino origin. The 2010 U.S. Census reported that those of Hispanic or Latino origin made up 51.1% of the population in Lea County. (Citation: [*"DP-1 Profile of General Population and Housing Characteristics: 2010 Demographic Profile Data," United States Census Bureau.*](#)) So Lea County can appropriately be described as a people of color community.

As reported at New Mexico's entry on Wikipedia
<https://en.wikipedia.org/wiki/New_Mexico>:

Among U.S. states, New Mexico has the highest percentage of [Hispanic](#) ancestry, at 47% (as of July 1, 2012). This classification covers people of very different cultures and histories, including [descendants](#) of Spanish [colonists](#) with deep roots in the region, and recent immigrants from a variety of nations in Latin America, each with their own cultures.

Under the state's "Ancestry" section of its Wikipedia page, it is stated:

New Mexico is a [majority-minority](#) state. [Citation: ["Of The Four Majority-Minority States In America, Minorities Do Best In Texas"](#). Forbes.com. Retrieved January 14, 2018.]

The U.S. Census Bureau estimated that 48% of the total 2015 population was Hispanic or Latino of any race, the highest of any state. The majority of Hispanics in New Mexico claim to be descendants of Spanish colonists who settled here during the 16th, 17th, and 18th centuries.

As further reported at Wikipedia's NM entry, under Birth Data, a solid majority of "Live Births by Single Race/Ethnicity of Mother" for the entire State of New Mexico, in recent years, were "Hispanic (of any race)": 54.6% in 2013; 55.5% in 2014; 55.9% in 2015; and 55.2% in 2016. (As noted by Wikipedia, "Since 2016, data for births of [White Hispanic](#) origin are not collected, but included in one *Hispanic* group; persons of Hispanic origin may be of any race.") [Citations: https://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_01.pdf; https://www.cdc.gov/nchs/data/nvsr/nvsr64/nvsr64_12.pdf; https://www.cdc.gov/nchs/data/nvsr/nvsr66/nvsr66_01.pdf; https://www.cdc.gov/nchs/data/nvsr/nvsr67/nvsr67_01.pdf.]

Given such birth rate data, as well as the 1% increase (from 47% to 48% of NM's total population), it stands to reason that NM's Hispanic and Latino population ratios will likely hold steady, or even grow, as time goes on, depending on such other factors as migration rates into the state from other states, and even from other countries.

As also reported by the U.S. Census in 2010, there are significant issues of income disparity, and poverty, in Lea County. While the median income for a household in the county was \$43,910 and the median income for a family was \$48,980, there are nonetheless income disparities between men and women, other significant income disparities between rich and poor, and significant poverty rates. Males had a median income of \$44,714 versus \$25,847 for females. The per capita income for the county was only \$19,637. About 15.2% of families and 17.7% of the population were below the [poverty line](#), including 23.5% of those under age 18 and 11.1% of those age 65-years or over. Thus, income disparities do not only disadvantage women, but also children and elders. (Citation: "[DP03 SELECTED ECONOMIC CHARACTERISTICS – 2006-2010 American Community Survey 5-Year Estimates](#)," [United States Census Bureau](#).)

As also reported at NM's Wikipedia entry:

According to the [United States Census Bureau](#) Model-based Small Area Income & Poverty Estimates, the number of persons in poverty has increased to 400,779 (19.8% of the population) persons in 2010 from 2000. At that time, the estimated number of persons in poverty was recorded at 309,193 (17.3% of the population). The latest available estimates for 2014 estimate the number of persons in poverty at 420,388 (20.6% of the population).

It is very likely that women of color, children of color, and elders of color, suffer disproportionately high rates of income disparity and poverty rates, as compared to their white neighbors.

Other socio-economic indicators for NM also lag far behind national averages. The state's Wikipedia entry for NM Education, for example, reveals stark disparities between NM "haves" and "have-nots":

Due to its relatively low population, in combination with numerous federally-funded research facilities, New Mexico had the highest concentration of PhD holders of any state in 2000. [Citation: "[Venture Capitals](#)". Wired. Retrieved July 31, 2010] Despite this, the state routinely ranks near the bottom in surveys of quality of primary and secondary school education. [["These Are The States With The Best And Worst School Systems, According To New Rankings"](#). Huffington Post. August 4, 2014. Retrieved November 22, 2015.]

New Mexico has a higher concentration of persons who do not finish high school or have some college without a degree than the nation as a whole. For the state, 23.9% of people over 25 years of age have gone to college but not earned a degree. [["New Mexico | Bureau of Business and Economic Research UNM"](#). bber.unm.edu. Retrieved February 28, 2016] This is compared with 21.0% of the nation as a whole according to [United States Census Bureau 2014 American Community Survey](#) estimates. [["Data | Bureau of Business and Economic Research UNM"](#). bber.unm.edu. Retrieved February 28, 2016] [Los Alamos County](#) has the highest number percent of post secondary degree holders of any county in New Mexico with 38.7% of the population (4,899 persons) estimated by the 2010-2014 American Community Survey.

Making the challenges of NM's primary and secondary public schools, and the stark contrast of the elite academic make up of the Los Alamos and Sandia national labs, all the more ironic, from an environmental justice perspective, is the fact that the national labs specialize in supporting nuclear and radioactive waste industries, including the generation of their own nuclear weapons, radioactive waste, etc. Conversely, struggling people of color and low income populations in NM are looked to, to shoulder hazardous waste burdens, as at Holtec/ELEA's CISF.

Under NM's Wikipedia entry "Economic Indicators" section, further serious socio-economic challenges in the state are revealed:

...In 2007, the [per capita personal income](#) was \$31,474 (rank 43rd in the nation). [["Per Capita Personal Income by State"](#). University of New Mexico, Bureau of Business and Economic Research. April 4, 2008. Archived from [the original](#) on March 2, 2009. Retrieved October 13, 2008.] In 2005, the percentage of persons below the [poverty level](#) was 18.4%. [["Persons Below Poverty by New Mexico County"](#). University of New Mexico, Bureau of Business and Economic Research. January 18, 2008. Archived from [the original](#) on June 24, 2010. Retrieved October 13, 2008.] As of April 2012, the state's unemployment rate was 7.2%. [["Local Area Unemployment Statistics"](#)] During the late-2000s recession, New Mexico's unemployment rate peaked at 8.0% for the period June–October 2010. [[Local Area Unemployment Statistics](#)". Retrieved May 11, 2012.] (emphasis added)

As with its per capita personal income figures, and its primary and secondary education performance indicators, above, NM consistently ranks among the worst states in the country in terms of numerous vital socio-economic measures. A number of opponents to Holtec/ELEA's CISF pointed this out in late April/early May,

during their oral public comments at the microphone, at the NRC meetings in southeastern NM. They pointed this out in the context of the environmental injustice of the disproportionate number of hazardous facilities (now including the Holtec/ELEA CISF) targeted at this low-income, people of color state.

POLLUTING ENERGY INDUSTRIAL ACTIVITIES IN THE AREA

It's important when considering environmental justice to not only examine those kinds of demographic and economic data above, but also the fact that disproportionately, these communities are impacted already by polluting energy industries, specifically, a large number of nuclear and radioactive waste activities, as well as a large number of fossil fuel activities, oil extraction and natural gas fracking industries.

The New Mexico map created by Deborah Reade, "Water, Air and Land: A Sacred Trust," shows clearly how badly polluted southeastern New Mexico already is, as well as the rest of the state. This map is posted online at:

<http://sacredtrustnm.org/wp-content/uploads/2016/02/2015update-ThreatsMap-11x17.pdf>

The map is also attached to these comments.

FOSSIL FUEL POLLUTING INDUSTRIAL ACTIVITIES

As shown by an inset map at the bottom of Deborah Reade's map, "Oil and Gas Wells in New Mexico (Active and Plugged)" cover the entirety of the Permian Basin region of southeastern New Mexico, over a multi-county region, including the entirety of Lea County, and the vast majority of Eddy County as well. (Citation: New Mexico Bureau of Geology and Mineral Resources, <http://geoinfo.nmt.edu>)

These oil and gas wells, numbering in the hundreds or even thousands (especially if the count continues into West Texas, a contiguous bio-region, also targeted for a highly radioactive waste CISF, at Waste Control Specialists, on the NM state line at Eunice, discussed further below), represent one of the most intensively, and concentrated, areas of fossil fuel extraction in the country, and perhaps the entire world, as one or more public commenters said on the record at an NRC meeting in southeastern NM in late April/early May, 2018. Consequently, the pollution they release to air and water, that then falls out on soil and surface waters, is correspondingly high. The majority Hispanic communities in Lea County, and large Hispanic communities in adjacent counties, as well as Native American and other people of color and low-income communities nearby, already suffer the health impacts from these intensive, heavily polluting fossil fuel industries. In addition to hazardous chemical toxins, this also includes radioactivity, in the form of Technically Enhanced Naturally Occurring Radioactive Material (TENORM). These fossil fuel activities are not limited to mere extraction – waste disposal is another significant impact in the area.

Some of this fossil fuel activity has taken place on, or immediately adjacent to, the Holtec/ELEA CISF targeted site itself.

As documented at Page 3-15 (Page 66 of 543 on the PDF counter) of Holtec's Environmental Report (ER):

A number of oil wells were drilled along the west flank of Laguna Gatuna beginning in the early 1940's. Most of the wells were abandoned by 1975...

And regarding oil and gas industrial waste disposal, at or immediately adjacent to the Holtec/ELEA CISF site itself, the ER reports at Page 3-40 (Page 91 of 543 on the PDF counter):

*Laguna Gatuna was the site of multiple facilities for collection and discharge of brines that were co-produced from oil and gas wells in the entire area; facility permits authorized **discharge of almost one million barrels of oilfield brine per month between 1969 and 1992.** (emphasis added)*

Doing the math, one million barrels of oilfield and gas-field brine per month, multiplied by 276 months (12 months per year, for 23 years, from 1969 to 1992), means ***276 million barrels of oilfield and gas-field brine, dumped on/immediately adjacent to the Holtec/ELEA site.***

But the Laguna Gatuna dumping ground is not the only such oil and gas industry waste disposal site even in the local area. All such impacts in the region, on health and environment, contribute to the environmental injustice already suffered by the people of color, and low-income, communities there.

On various maps, Holtec's Environmental Report also shows fossil fuel transport pipelines crossing the targeted CISF site itself. I have observed a number of such fossil fuel related facilities with my own eyes, as in early May 2018, when I protested Holtec/ELEA's closed door "site tour" conducted for NRC, while the public was restricted to the public roadway through/next to the site. These fossil fuel facilities were on, or immediately adjacent to, the Holtec/ELEA CISF site.

Another oil and gas-related impact on the southeastern New Mexico area is "Accidental releases from petroleum tanks," as depicted on the Sacred Trust New Mexico map cited above. A large number of such "Accidental releases from petroleum tanks" is depicted in Lea and Eddy Counties.

Another fossil fuel industry polluting facility in the area is the Navajo Refining Company in Artesia, Eddy County.

Not only are such fossil fuel facilities sources of chronic hazardous pollution over time, but there is also the ongoing threat of acute, large-scale hazardous pollution releases, as due to accidents, natural disasters, intentional attack/sabotage, etc. (The same can be said of nuclear and radioactive waste industrial facilities and activities, listed below.)

But the disproportionate impact from dirty and dangerous energy industries, that adds up to environmental racism, is significantly worsened by the large concentration of polluting nuclear and radioactive waste industrial activities already present in the area, further described below.

NUCLEAR AND RADIOACTIVE WASTE POLLUTING INDUSTRIAL ACTIVITIES

Yet again, the Sacred Trust New Mexico map cited above is helpful at comprehensively depicting the large number of nuclear and radioactive waste, polluting industrial facilities located just in Lea and Eddy Counties, and nearby elsewhere in southeastern New Mexico and western Texas.

WIPP

The list of nuclear and radioactive waste activities in the nearby vicinity of Holtec's proposed CISF site includes the Waste Isolation Pilot Plant (WIPP), a permanent disposal dump-site for U.S. Department of Energy (DOE) plutonium and trans-uranic contaminated radioactive wastes from the nuclear weapons complex. Holtec has reported in its ER (Environmental Report) that the WIPP site is only 16 miles from the targeted CISF site.

In a very real sense, the reason the Holtec/ELEA CISF targeted site is where it is, is because of where the WIPP site is. WIPP is the camel's nose under the tent for additional radioactive waste dumps in the area, now including Holtec/ELEA's CISF – even though New Mexicans were promised that if WIPP opened and operated for military trans-uranic wastes, high-level radioactive wastes would not be targeted at the state any longer. That promise has been broken by the Holtec/ELEA proposed scheme.

Significantly, WIPP had an “impossible” radioactivity leak to the atmosphere and surface environment on Valentine's Day, 2014. A single barrel burst in the underground. Plutonium and other hazardous trans-uranic particles traveled thousands of horizontal feet through the WIPP underground, then thousands of vertical feet through the WIPP ventilation shaft, and were released onto the winds at the surface, to blow downwind, resulting in radioactive fallout over a wide area.

Plutonium and other trans-uranics are ultra-hazardous alpha radiation emitters. Although human skin, or something as thin as a piece of paper, can deflect alpha radiation from doing health damage to the human body, if plutonium or other trans-uranics are inhaled or ingested, they can cause significant health damage internally.

In fact, nearly two-dozen WIPP workers were exposed to alpha radiation inhalation doses due to their exposure to this Valentine's Day, 2014 radioactivity release to the environment at WIPP. They are thus at significantly increased risk of radiogenic lung cancer in the years and decades ahead. Even a microscopic speck of plutonium, in the human lung, can initiate lung cancer.

Another way plutonium can enter the human body is through a cut or gash in the skin. Once inside, it can do significant harm.

The WIPP plutonium and other trans-uranic fallout from the Valentine's Day 2014 barrel burst radioactivity release has settled on the land's surface over a wide region. Remarkably, as depicted on the Sacred Trust New Mexico map cited above, the "Estimated WIPP release plume (Feb. 14, 2014)" extended through the cities of Carlsbad and Artesia, up the Pecos River Valley to the north through Chaves County, to the northeast into Roosevelt and Curry Counties in New Mexico, and even beyond that into Texas. As cited on the Sacred Trust New Mexico map, the citation for this "Estimated WIPP release plume (Feb. 14, 2014)" is -- Estimated WIPP release plume (Feb. 14, 2014) based on the February 14-15, 2014 release map found at: <http://optimalprediction.com/wp/plutonium-release-from-the-wipp-radioactive-waste-facility/>

Plutonium and other trans-uranic fallout can then be re-suspended by wind, or carried further afield by surface water movement (ingestion via contaminated drinking water is another pathway for these ultra-hazardous substances to enter a person's body, to do damage there). Thus, these hazards will persist in the local area, and perhaps even the much broader region -- downwind and downstream -- for a very long time to come.

An unimaginably long time to come, actually. Forevermore, in a very real sense. The half-life of Plutonium-239, for example, is more than 24,000 years. To calculate the hazardous persistence of a radioactive isotope, its half-life is multiplied by ten. Thus, Pu-239 released from WIPP into the environment will remain hazardous in the local area, or even broader region, for 240,000 years -- about as long into the future as *Homo sapiens sapiens*, "*Wise Wise Man*," has been a distinct species thus far! (Actually, with such an ultra-hazardous substance, it is wise to multiply the half-life by 20, in calculating its hazardous persistence; doing so means 480,000 years -- nearly half a *million* years -- of future hazard associated with the Pu-239 release from WIPP in 2014! This begs the question, was it wise for humans to generate this artificial substance in the first place, one that must be isolated from the living environment for twice as long as our species has even existed? As the Valentine's Day 2014 plutonium release to the environment at WIPP has shown, "*Wise Man*" is not very good at such needed protection of "his" own biosphere!)

Not only will the impacts of WIPP's radioactivity release extend downwind and downstream, they will extend down the generations, essentially forevermore in human terms.

And up the food chain. As Dr. Rosalie Bertell of the International Institute of Concern for Public Health in Toronto, Ontario, Canada warned decades ago, hazardous ionizing radioactivity bio-concentrates, bio-magnifies, and bio-accumulates in the food chain. Humans sit at the top of the food chain, thereby at risk of harm from the most concentrated, worst doses from such hazardous radioactive contamination of the biosphere.

And, as the Sacred Trust New Mexico map depicts and reminds us, WIPP is not only contaminated with radioactive waste -- it is also contaminated with hazardous materials. As Rachel Carson warned in her iconic 1962 book *Silent Spring*, the synergistic effects of radioactive hazards, mixing with chemical toxins in the environment – and the human anatomy – is of great concern. The combination of radioactive and toxic chemical hazards is greater than the sum of its parts, in terms of increased risks to human health – not only in terms of disease in current generations, but also in utero harms, and even genetic damage (which then extends to all future generations). After all, radioactivity – and certain chemical toxins – are potent teratogens and mutagens (causes of birth defects and genetic damage), in addition to being potent carcinogens (causes of cancer).

These points about the WIPP release hazards and risks are instructive and a cautionary tale for the dangers associated with the Holtec/ELEA CISF itself, as well as the many other radioactive hazards afflicting southeastern New Mexico, and the rest of the “Land of Enchantment,” described below. This includes the synergistic effects of hazardous radioactivity interacting with chemical toxins. There is, unfortunately, plenty of such opportunity in southeastern New Mexico, and the rest of the state, as well as western Texas at WCS (which in addition to dumping radioactive waste, as described below, has also disposed of certain chemical toxins), as depicted on the Sacred Trust NM map.

URENCO and WCS

As shown on the map, URENCO and WCS are also precariously close by the Holtec/ELEA targeted CISF site. As Holtec CEO, Dr. Kris Singh, stated at an April 2017 press conference held in a U.S. House office building on Capitol Hill in Washington, D.C., announcing this CISF license application, and as reflected in the license app. itself, the URENCO (Uranium Enrichment Company) facility in Eunice, NM is but 39 miles from Holtec/ELEA’s targeted CISF site. URENCO is likely contaminated with depleted uranium, and other nuclear, radioactive, and even chemical hazards, such as dangerously acidic fluorine compounds (which, if they leak into the environment, can transform into hazardous, even deadly, hydrofluoric acid, including in inhalable vapor form). URENCO, a major uranium enrichment facility, certainly houses large quantities of such hazardous substances, and thus is at ongoing risk of releases to air, water, and soil, be it from so-called “routine” or “incident-free” discharges, or due to accidents, attacks, natural disasters, etc.

Significantly for this discussion of environmental injustice, URENCO was not built in Louisiana in the 1990s, because of legal objections over environmental justice violations associated with it, that were successfully raised by organizations like Nuclear Information and Resource Service (NIRS), Earthjustice, and others in Homer, Louisiana, a low-income African-American community.

A URENCO official admitted, on the public record during the NRC Atomic Safety and Licensing Board oral hearings, that LES (Louisiana Energy Services) targeted African-American Homer, because it never could have gotten away with such a uranium enrichment facility in a white community. This did not pass EJ muster in Louisiana.

URENCO was also successfully chased out of the State of Tennessee for similar reasons, but unfortunately found a home in Eunice, New Mexico, despite efforts by NIRS and numerous other organizations (including Public Citizen and Southwest Research and Information Center) to stop it.

Waste Control Specialists, LLC (WCS) is located immediately across the New Mexico/Texas state line, just a mile or two from URENCO, in Andrews County, West Texas.

In fact, WCS was initially largely established to take depleted uranium (DU) wastes from this URENCO facility, hence the very close proximity of the two immediately neighboring adjacent facilities. In a very real sense – at least in terms of cumulative impacts on human health, safety and the environment, as well as environmental injustice -- the two can be regarded as a single facility, despite the state line and mile or two of distance that separate them.

As the Sacred Trust NM map shows, WCS is contaminated not only with depleted uranium from URENCO, but also other nuclear and radioactive wastes. In fact, WCS is now a major national dump-site for so-called “low-level” radioactive wastes. However, as Diane D’Arrigo of NIRS points out, so-called “low-level” radioactive waste does not mean low-hazard or low-risk. Many, to most, to all radionuclides present in high-level radioactive waste, are also present in low-level radioactive waste, just at lesser concentrations.

WCS’s ever-growing stockpile of permanently disposed (dumped) “low-level” radioactive wastes includes DOE wastes, as well as commercial (nuclear power industry) Class B and C so-called “low-level” radioactive wastes from nuclear power plants and other nuclear power facilities in 39 states. Class B and C are among the most radioactive categories, of “low-level” radioactive waste.

DOE waste stream categories “temporarily” stored, or even permanently dumped, at WCS include such significantly radioactive wastes as the Fernald, Ohio, Belgian Congo, K-65 uranium ores from the Manhattan Project.

Another very telling category, in terms of the risky gambles WCS is willing to undertake in its greed-driven profit motive, is the potentially bursting barrels from Los Alamos National Lab, that were rushed to WCS in a great big hurry after the radioactivity release at WIPP on Valentine's Day 2014, mentioned above.

That single barrel that burst in the WIPP underground carries with it a current price tag for recovery of an astonishing \$2 billion. Yes, \$2 billion with a B. And, that barrel burst took place 2,000+ feet below the surface of the Earth, but nonetheless released ultra-hazardous radioactivity into the atmosphere and environment, as described above.

Just imagine what could happen if one of the more than 100 such potentially-bursting Los Alamos barrels were to in fact burst at the WCS site – not 2,000+ feet underground, but effectively at the surface of the land, directly into the living environment.

I learned on an October 2016 Alliance for Nuclear Accountability tour of Los Alamos National Lab (LANL), from a DOE official, that LANL had to intervene at the WCS site because WCS, in its wisdom – lack thereof! -- had put these potentially-bursting barrels in concrete overpacks that were painted black on the exterior, and then set out, to in effect bake, under the hot Texas summer sun. Given such grave operational errors by WCS, DOE had to alert WCS to the danger of the hot summer sun's heat increasing the risk of triggering or accelerating a chemical reaction in the volatile contents, leading to one or more barrels bursting at the land's surface, releasing plutonium and other trans-uranic wastes directly into the air, soil, and surface waters, at the surface environment (which then fallout, and flow, into groundwater). WCS then, under LANL pressure to mitigate the high-risk situation, covered the concrete overpacks with a thin layer of soil, to serve as a minimal insulation buffer against the Texas summer sun's blistering heat. To the best of my knowledge, these 100+ potentially-bursting, high-risk Los Alamos TRU (trans-uranic) waste barrels are still stuck at WCS, baking for their fifth straight summer under the hot Texas summer sun. This begins to suggest something about the competence of WCS, or lack thereof!

Of course, WCS has also proposed to become a highly radioactive waste CISF, in addition to all of the above. Although WCS's license application to NRC, to construct and operate a CISF for 40,000 metric tons of commercial irradiated nuclear fuel, was suspended in 2017 due to WCS's bankruptcy, the company's new ownership has now requested that NRC hit "play" again, on the "pause(d)" proceeding.

Another 40,000 metric tons of highly radioactive irradiated nuclear fuel, stored on a supposedly "temporary" basis, at WCS, would add significantly to the risks posed by 173,600 metric tons of irradiated nuclear fuel, and Greater Than Class C "low-level" radioactive waste, stored on a supposedly "interim" basis at Holtec/ELEA's CISF. As evident in these comments, both above and below, this attempt to target the same local area with not one, but two, high-level radioactive waste CISFs, separated by

only 40 miles, is an attempt to turn this region into an even worse “energy sacrifice zone,” and “nuclear sacrifice zone,” than it already is. This is a blatant environmental injustice, environmental racism, and radioactive racism, given the disproportionate impacts on low-income, people of color communities. It is unacceptable. It must be rejected and blocked.

But before leaving this section that discussed the depleted uranium (DU) contamination, hazards, and risks associated with the URENCO enrichment facility, and the WCS “low-level” radioactive waste dump-site, it should be mentioned that the Sacred Trust NM map also shows DU site contamination at the Carlsbad Environmental Monitoring & Research Center. Carlsbad is just over 30 miles from the Holtec/ELEA CISF targeted site.

Similarly, the Sacred Trust NM map shows the future potential for further DU contamination, at the currently on hold, proposed International Isotopes DU hexa-fluoride de-conversion facility. This proposed site would, if constructed and operated, also become contaminated with hazardous materials, such as chemical toxins. The site targeted for International Isotopes is just west of Hobbs, and thus 30 miles or less away from the targeted Holtec/ELEA CISF site.

GNOME-COACH EXPERIMENTAL TEST SITE

As depicted on the Sacred Trust NM map, the U.S. Atomic Energy Commission conducted a so-called “Project Plowshares” nuclear detonation, approximately 25 miles southeast of Carlsbad. Thus, the Gnome-Coach experimental test site is about 10 miles, at most, south-southeast of the WIPP site. Gnome-Coach looks to be about 20 miles or so from the targeted Holtec/ELEA CISF site.

Firstly, “Project Plowshares” was blasphemously named, like “Trinity” before it (see more on “Trinity,” below). The Prophet Isaiah of the Old Testament urged the faithful to beat their swords into plowshares, and to study war no more. The anti-nuclear Plowshares Movement has conducted dozens of non-violent direct disarmament actions against nuclear weapons and nuclear weapon facilities in the past several decades, in keeping with the spirit of Isaiah’s prophecy and warning from millennia ago. But the blasphemous “Project Plowshare” efforts by the nuclear industry in the U.S. led to the biggest radioactively contaminated blast crater at the Nevada Test Site – the Sedan crater. And overseas, such blasphemy even led to nuclear weapons proliferation, as in India: the equally blasphemously named “Smiling Buddha” so-called “peaceful” nuclear detonation of 1974, which instead served notice to the world that India was now a nuclear weapons state.

But in addition to the blasphemous name of this first “Project Plowshare” nuclear blast, the 3 kiloton underground blast (equivalent to 3,000 tons of TNT, about one-fifth the size of the Hiroshima blast on August 6, 1945) radioactively contaminated the New Mexico lithosphere, less than 1,200 feet below the land’s surface. In addition, the U.S. Atomic Energy Commission then injected various hazardous

radioactive “tracers” into the hydrology at the associated Gnome-Coach sites. The attached DOE Legacy Management fact sheet, “Nevada Offsites: Gnome-Coach, New Mexico Site,” contains more information.

It must be pointed out, re: this DOE fact sheet, that loss of institutional control, over long enough time periods, is a major concern. Such loss of institutional control is a major concern for all nuclear and radioactive waste facilities in southeastern NM, and elsewhere in and near (as at WCS) the state. Such loss of institutional control could lead to inadvertent human intrusion, as at the Gnome-Coach sites, as well as loss of containment, leaks, spills, and the spread of radioactive contamination, and inevitable harm to humans and other living beings who come into contact with it, over long time periods into the future, given many radioactive isotopes’ very long-lasting hazardous persistence.

(Ironically, in the first paragraph on Institutional Control and Land Use, DOE says that future oil and gas development on the site is prohibited, as an example of institutional control protections against radioactive hazards. But then a couple sentences further on, says that oil and gas prospecting is currently taking place. This does not bode well for the maintenance of institutional control over long periods of time!)

In addition to the 3-kiloton, underground Gnome-Coach in 1961, and 20-22 kiloton, surface/open air Trinity in 1945, nuclear detonations in NM, there was also the 29-kiloton, underground Project Gasbuggy blast in 1967. Another supposed “peaceful Project Plowshare” nuclear blast, its environmental injustice includes its location on the Jicarilla Apache Indian Reservation in northern NM, as shown on the Sacred Trust NM map.

ADDITIONAL HAZARDS IN SOUTHEAST NEW MEXICO

In addition to the above, already frighteningly long listing of hazardous and polluting fossil fuel, nuclear, and radioactive waste industrial activities afflicting low-income and people of color communities in southeastern New Mexico with environmental injustices, the transportation of hazardous petroleum products, chemical toxins, nuclear materials, and radioactive wastes on area roads and rails deserves mention. The unprecedented large number of rail (and even road) shipments of highly radioactive irradiated nuclear fuel, and Greater Than Class C (GTCC) so-called “low-level” radioactive waste, for “temporary” storage at the Holtec/ELEA CISF site, is a significant added risk and environmental injustice. These risks include not only the danger of severe accidents or attacks, releasing disastrous amounts of hazardous radioactivity into the local environment, but even so-called “routine” or “incident-free” train and/or truck shipments being akin to “Mobile X-ray Machines That Can’t Be Turned Off,” in terms of gamma- and neutron-radiation emissions. (The phrase was coined by Loren Olson at a grassroots environmental high-level radioactive waste transport risk summit at Notre Dame University in northern IN in the mid- to late-1990s.) These permitted radiation emissions would

be hazardous to persons within the region of influence, along area road and rail routes.

(The environmental justice impacts of high-risk, high-level radioactive waste shipments to Holtec/ELEA's CISF extend far beyond southeastern NM, however. See, for example, MEASURES OF COMMUNITY IMPACT FOR THE TRANSPORTATION OF HAZARDOUS MATERIALS: THE CASE OF INDIAN TRIBES AND HIGH-LEVEL NUCLEAR WASTE, State of Nevada Agency for Nuclear Projects (Dilger, Halstead, Ballard), March 2, 2005, attached. Although written in the context of shipments bound for the proposed Yucca Mountain, Nevada permanent burial dump for high-level radioactive wastes, itself Western Shoshone Indian land, its cautionary tale applies equally well to the Holtec/ELEA CISF. As its abstract states:

The shipment of high-level nuclear waste to the proposed Yucca Mountain repository would have varying effects on Indian Tribes across the nation. Indian Tribes would likely play a significant role in the shipment of nuclear material because of their unique legal standing. This paper develops basic measures of potential impacts of Yucca Mountain shipments on each identified tribe.)

Women are more vulnerable than men to radioactivity's harm. Similarly, girls are more vulnerable than boys. Children are more vulnerable to radioactivity's harm than adults. Thus, low-income, people of color, pregnant women, and the female fetus in their womb, are the most significantly vulnerable to radioactivity's harmfulness, than any demographic. Such disproportionate risks must be accounted for in NRC's Environmental Impact Statement. They have certainly been ignored, largely to entirely, by Holtec's Environmental Report. See attached NIRS and IEER documents regarding the disproportionate harm done to women by hazardous ionizing radioactivity, an issue that NRC has never taken seriously, but should – including in the scope of this instant EIS.

Highway 62/180, for instance, is but a half-mile south of the targeted Holtec/ELEA CISF site. Hundreds or even thousands of Carlsbad, Hobbs, and other area residents drive Highway 62/180 on a regular basis, past the targeted Holtec/ELEA CISF site. Rail shipments into the CISF would parallel the highway, just a half-mile or less away, for an extended distance.

Truck shipments could well take place immediately next to the vehicles of local area drivers. Not only heavy haul truck shipments for the final leg of the journey into the Holtec/ELEA site are possible. So too are Legal Weight Truck (LWT) shipments on interstate highways, and state and county roads at the tail end of interstate shipments. This is because Holtec has claimed, in its Environmental Report, that any NRC-certified container can be accommodated at its CISF, of any model/make/design. Taking Holtec at its word, this would include the contents of LWT shipping containers. After all, NRC has certified LWT shipping containers.

The Holtec/ELEA CISF scheme represents the potential for unprecedented large numbers of highly radioactive waste shipments in the southeastern NM region. After all, Holtec has proposed storing, on an “interim” basis, 173,600 metric tons of irradiated nuclear fuel. There have been some 2,500 to 3,000 shipments of irradiated nuclear fuel since the 1940s in the U.S., most of them taking place many decades ago. Holtec, in its license application documents, has admitted 10,000 containers targeted at southeastern NM. It is unclear if this 10,000 containers figure corresponds to Holtec’s 100,000 metric ton figure, or its 173,600 metric ton figures. If the former, than perhaps 17,000 containers can be expected, if Holtec/ELEA opens and operates its CISF, over time. Regardless, 10,000 shipments, or 17,000+ shipments, of highly radioactive waste, is obviously significantly more than the at most 3,000 shipments of highly radioactive waste that have taken place in the U.S. in the past over the course of the past seven decades. And every single one of these 10,000 shipments, or 17,000+ shipments, of irradiated nuclear fuel and GTCC “low-level” radioactive waste, would enter southeastern NM, traveling its rails and/or roads.

Externally contaminated shipments would worsen the radioactivity doses suffered by local area people of color and/or low-income residents, as I pointed out in previous comments submitted to this environmental scoping docket. As the National Academy of Science reported, in its BEIR VII Report (Biological Effects of Ionizing Radiation), ionizing radioactivity exposures are harmful to human health, as vis a vis cancer causation, even at so-called low doses. No dose is so low as to be “safe” for human exposure. And such harms are cumulative over a lifetime of such exposures.

Further exacerbating radioactive risks are the “WIPP (Waste Isolation Pilot Plant) routes,” as depicted on the Sacred Trust NM map, crisscrossing much of the length, and breadth, of the state. The risks of accidents or attacks on WIPP shipments, already faced by New Mexicans (including people of color, and those of low income) would be added to, by risks of accidents or attacks involving high-level radioactive waste shipments bound for the Holtec/ELEA CISF. And for a community like Eunice, NM (which according to the 2000 U.S. Census, had a nearly 40% Latino and Hispanic population itself), already facing the not too far away WIPP shipments since 1999, and the proposed Holtec/ELEA shipments, also would face the WCS shipments – every single rail shipment bound for the TX CISF would pass through Eunice, en route to its “interim” storage site. And of course every single hazardous shipment of radioactive and toxic uranium hexafluoride, whether about to be enriched, or depleted, incoming and out-going, would pass through Eunice, given URENCO’s location there. And all radioactive wastes bound for WCS pass through, or at the very least, immediately close to, Eunice as well, not “just” the high-level radioactive wastes bound for proposed CIS there, but also all categories of so-called “low-level” radioactive bounds, to be dumped at WCS (itself upstream of Eunice, as certain surface waters and groundwaters flow, including the Ogallala Aquifer itself.) Just such cumulative radioactive risks amount to textbook violations of environmental injustice. For this reason, adding Holtec/ELEA’s CISF, and WCS’s, are non-starters, from an environmental justice perspective. The TX/NM borderlands are not a

radioactive wasteland. They are the homelands of low income and people of color communities, who have the right to environmental justice protections, not further abuse.

Likewise, the multiple exposures to harmful ionizing radioactivity, and synergistic chemical toxins, listed above, and below, represent cumulative environmental injustices to the low-income, people of color communities of southeastern NM and western TX.

ADDITIONAL NUCLEAR AND RADIOACTIVE WASTE RISKS ACROSS NEW MEXICO

Even beyond the immediate environmental racism, and radioactive racism, of extreme southeastern NM (and immediately adjacent extreme western TX, as explicated above), these same and similar environmental injustices continue to mount in concentric circles throughout the “Land of Enchantment” the further one looks, as on the Sacred Trust NM map, away from the Holtec/ELEA CISF targeted site. For, as Leona Morgan of Nuclear Issues Study Group has commented in this very environmental scoping public comment period, nuclear colonialism began in New Mexico.

And to compound the radioactive racism, given its history (including invasion and conquest by the Spanish Empire’s conquistadores, as early as the 1500s), NM has the highest percentage of Hispanic and Latino Americans of any U.S. state. The largest of these groupings include the Hispanos of New Mexico, Chicanos, and Mexican Americans.

And, after only Alaska, it has the second highest percentage of Native Americans as a ratio of the overall population, of any state. Three federally-recognized Native American tribal nations – the Navajo (who call themselves Diné), the Pueblo, and the Apache indigenous peoples, all call the land, now called “New Mexico” (the name, Nuevo México, was applied to the territory by Spanish settlers in the Spanish viceroyalty of New Spain in 1563, after the Aztec Valley of Mexico) home, as they have for centuries, and even thousands of years, before invasion, conquest, and settlement by Europeans, European Mexicans, and European Americans.

In addition, the Ancestral Puebloans, Mogollon, and the modern extant Comanche and Utes (Shoshonean peoples) formerly inhabited the land, and territory, of the only 106-year old U.S. state, now called New Mexico.

The state flag of New Mexico reflects this rich, diverse history, and pre-history. NM’s Spanish origins are reflected by the scarlet and gold coloration associated with Spain’s Cross of Burgundy. Its much deeper Native American origins are reflected by the ancient sun symbol of the Zia Pueblo.

TRINITY TEST SITE (FIRST NUCLEAR EXPLOSION)

Given its centuries of Hispanic and Latino history, and its many millennia of Native American heritage before that, the Manhattan Project impacts on New Mexico validate the truth of Leona Morgan of NISG's claim that nuclear colonialism began in the "Land of Enchantment." The, as mentioned above, blasphemously named "Trinity" (the Ten Commandments of the Judeo-Christian religious tradition forbid the taking of the "name of the the Lord thy God in vain") 20-22 kiloton, atmospheric/open air, plutonium implosion fission bomb test blast of July 16, 1945, precursor of the one ironically dropped on Nagasaki (Japan's most Christianized city at the time) on August 9, 1945, created history's first "Downwinders," including Hispanic and Latino New Mexicans, as well as Native Americans such as on the Mescalero Apache Indian Reservation.

As shown on the Sacred Trust NM map, the Mescalero Apache Indian Reservation is less than 100 miles to the north and west of the targeted Holtec/ELEA CISF site. Tulasrosa, NM (with a significant Hispanic and Latino demographic) is little more than 10 miles west of the reservation's eastern border. And less than 50 miles to the northwest of the Mescalero reservation, and Tularosa, is the Trinity atomic bomb test site.

The Sacred Trust NM map shows the radioactive and hazardous material contamination of the Trinity site itself. The map also shows the "Trinity test fallout plume (July 16, 1945)," extending many hundreds of miles to the east, and especially to the north. I hasten to add that, given meteorology records from July 16, 1945, initial fallout may have landed to the east, and especially to the north, over a very large region of NM, and even other states downwind. But it is important to remember that such radioactive fallout, once deposited onto soil and surface water, was readily re-suspended into the air, to fallout further downwind, ever since – as due to the actions of winds. In addition, due to erosion, and water flow, fallout has undoubtedly extended much further distances downstream, flowing with surface waters.

Thus, the Tularosa Basin Downwinders Consortium, founded by Tina Cordova and Fred Tyler in 2005, have legitimate claim to recognition as Downwinders, and to compensation, as under the federal RECA (Radiation Employees Compensation Act). And the Mescalero reservation is as close to the Trinity site as is Tularosa. More information about the Tularosa Downwinders calls for justice can be found at their website, <https://www.trinitydownwinders.com/>, as well as the website of CCNS (<<http://nuclearactive.org/>>).

"Accidental releases from petroleum tanks (historic & current)," as shown on the Sacred Trust NM map, afflict both Tularosa and Mescalero, further exacerbating likely radioactive exposures with synergistic risks of toxic petro-chemical exposures.

In the documentary film "The Day After Trinity," Robert Oppenheimer, the scientific director of the Manhattan Project's race for the atomic bomb -- first exploded at Trinity, and in Japan (twice in three days), in 1945 -- was asked by the filmmaker late in his life, when the nuclear arms race should have been halted. Oppenheimer, already ex-communicated from the so-called "nuclear priesthood" years earlier by having his security clearances revoked (orchestrated as a Communist witch hunt-style expulsion and blacklisting, by the likes of Ed Teller, "Father of the Hydrogen Bomb," due to Oppenheimer's opposition to the development of the "Super"), responded, desolately, "The day after Trinity."

Likewise, the radioactive racism afflicting New Mexico's low-income, people of color communities, begun at Los Alamos, founded and directed by Oppenheimer years earlier than the Trinity test blast, should have never happened in the first place. And yet LANL itself continues to the present day, and would be further exacerbated, significantly, by the Holtec/ELEA CISF, also to be located in NM.

SPEAKING OF MESCALERO

NM, and even southeastern NM, have been targeted before for a high-level radioactive waste CISF. Back then, in the late 1980s and early 1990s, CISFs were called instead MRSs, for Monitored Retrievable Storage sites.

Specifically, the Mescalero Apache Indian Reservation in NM was targeted for a CISF/MRS. The DOE's Nuclear Waste Negotiator, as he was called, offered significant amounts of money to Native American reservation tribal councils, to enter more and more deeply into the process of becoming a "host" for a CISF/MRS.

This was, on its face, a most shameful form of environmental, or radioactive, racism. As Keith Lewis, environmental director of the Serpent River (Ojibwe) First Nation in Ontario, Canada -- devastated by decades of intensive uranium mining and milling, and now targeted for Canada's high-level radioactive waste dump -- put it, in the book *This Is My Homeland: Stories of the effects of nuclear industries by people of the Serpent River First Nation and the north shore of Lake Huron* (edited by Lorraine Rekmans, Keith Lewis and Anabel Dwyer, Serpent River First Nations, 2003), "There is nothing moral about tempting a starving man with money."

But Mescalero Apache traditional environmental protectors, led by Rufina Marie Laws and Joe Geronimo, stopped it, through deep personal sacrifice.

Grace Thorpe of the Sauk and Fox Indian Reservation in Oklahoma did so in her home community too, then helped scores of other targeted reservations do the same. Thorpe, serving on the board of Nuclear Information and Resource Service (NIRS), and as president of National Environmental Coalition of Native Americans (NECONA), helped defund and eliminate the Nuclear Waste Negotiator's office at DOE in the early 1990s.

Thorpe would be honored, posthumously, by President Obama as a protector of the Earth for her tireless work to stop CISFs targeted at Indian reservations. See attached.

But then the nuclear power industry itself, under the consortium name Private Fuel Storage, LLC (PFS), picked up the reins. PFS continued to target Mescalero Apache for an MRS/CISF, but Laws and Geronimo and their traditional environmental protectors again stopped it.

PFS then moved on to another reservation community that had been previously targeted by the DOE Nuclear Waste Negotiator, the tiny, low income, Skull Valley Goshutes Indian Reservation in Utah. But again, traditional environmental protectors at Skull Valley, led by Margene Bullcreek and Sammy Blackbear, blocked the PFS CISF/MRS. The battle lasted well over a decade, again requiring deep personal sacrifices by Bullcreek and Blackbear and their families.

Shamefully, NRC rubber-stamped the PFS license at Skull Valley Goshutes, despite its highly controversial environmental injustice.

Despite NRC's rubber-stamped license, PFS never opened an MRS at Skull Valley Goshutes, UT. For one thing, the George W. Bush administration's Bureau of Indian Affairs concluded it could not approve the lease agreement between the disputed Skull Valley Goshutes tribal chairman, Leon Bear, and PFS. BIA ruled that as trustee for the tribe, it would not be appropriate to allow the CISF to happen, because there was no guarantee that the highly radioactive waste, once stored there on an "interim" basis, would ever leave again. This last point is a cautionary tale for the people of NM, vis a vis Holtec/ELEA's CISF.

Significantly, in light of this Holtec/ELEA CISF proceeding, PFS was also based on Holtec dry cask containers. But whereas PFS in UT involved a proposal for 4,000 Holtec containers, and 40,000 metric tons of commercial irradiated nuclear fuel, Holtec/ELEA's CISF in NM would be much larger. Holtec's proposal is for 10,000 containers, and 100,000 metric tons of irradiated nuclear fuel. Or is it 120,000 metric tons, as Holtec and ELEA have said in a number of public pronouncements? Or is it 173,600 metric tons, as Holtec states early on in its Safety Analysis Report. This moving target nature of the figure for how much waste would be "temporarily" stored at Holtec/ELEA's CISF in NM has never been explained, neither by Holtec, ELEA, nor NRC – and it must be. This is a most basic requirement of NEPA, AEA, and APA (the National Environmental Policy Act, Atomic Energy Act, and Administrative Procedures Act, respectively)!

Please find attached documentation of these radioactive racist attempts to dump high-level radioactive wastes on Native American reservations, and traditional environmental protectors' successful resistance campaigns, aided by allied environmental justice activists across the continent.

While it would appear that the nuclear establishment has moved on from targeting Native American reservations with CISFs (to targeting Hispanic and Latin American communities in the TX/NM borderlands, another low income, people of color community), and least this time around, it should be remembered that the Mescalero Apache Reservation, very close to Holtec/ELEA's currently targeted CISF site, has previously been targeted (by DOE, and PFS) for MRSs in the past.

It should also be remembered, as Leona Morgan of NISG (Nuclear Issues Study Group) testified at public comment meetings in southeastern NM in early May, 2018, the Holtec/ELEA targeted site is traditional Mescalero Apache, as well as Comanche, territory, even though it is not technically currently within the bounds of a federally-recognized Native American reservation. But the Mescalero Apache retain certain off-reservation rights, which Holtec/ELEA and even NRC have thus far ignored, and neglected to adequately honor. There is no environmentally just way to dump high-level radioactive waste on stolen Native American lands, without their full, informed consent.

LOS ALAMOS NATIONAL LABORATORY (LANL)

As shown on the Sacred Trust NM map, LANL, less than 150 miles north of the Trinity atomic bomb test blast site, is severely contaminated with radioactive and hazardous materials, after three-quarters of a century of nuclear weapons, and other nuclear, activities. Groups like Nuclear Watch New Mexico, Tewa Women United, Concerned Citizens for Nuclear Safety (CCNS), Citizens for Alternatives to Radioactive Dumping, and Los Alamos Study Group, to name but several, watch-dog such dire contamination issues to the present day, trying to get them addressed by the U.S. federal government, and military-industrial-academic complex, which created them in the first place. Significantly in terms of environmental justice, yet again, low-income and people of color communities have borne the brunt of LANL's radioactive and toxic chemical pollution and contamination since day one. These include such immediately adjacent Pueblo Indian communities as Santa Clara, and Jemez, as well as nearby Hispanic and Latin American communities. As LANL's radioactive contamination is spread further downwind and downstream (see the Cerro Grade Fire smoke plume (May 2000), as well as the Las Conchas Fire boundaries (June 2011), as depicted on the Sacred Trust NM map; see also the watch-dogging work of groups like Nuclear Watch New Mexico, and CCNS, regarding radiological contamination of groundwater and surface water at, and downstream of, LANL, which could implicate drinking water and irrigation water supplies further downstream, including additional Pueblo Indian, Hispanic/Latino, and low income communities.)

The Sandia National Laboratories and Kirtland Air Force Base complex, in and around Albuquerque, must also be mentioned. As the Sacred Trust NM map shows, significant radioactive and hazardous materials contamination is present there. This includes the infamous, unlined, Mixed Waste Landfill, located above groundwater

used as drinking water by the surrounding population, which again includes low-income, people of color communities.

The Kirtland Underground Munitions Storage Complex, with its more than 1,900 stored nuclear weapons, not only risks further radioactive and toxic releases to the surrounding environment, but also puts the Albuquerque region at high risk of nuclear annihilation during a nuclear war. Nuclear-armed adversaries can be expected to target one of the largest concentrations of nuclear weapons on the planet, for destruction. This puts low-income, people of color communities, as well as all others in NM, at increased risk, itself yet another environmental injustice on top of so many others listed herein.

And, as depicted by the Sacred Trust NM map, there are a very large number of “Accidental releases from petroleum tanks (historic & current),” in the greater Albuquerque area. As mentioned previously, petro-chemical toxins can interact synergistically with radioactive and other hazardous substances, generating even higher combined risks for human health.

Downstream of Albuquerque on the Rio Grande is the Isleta Pueblo, exposed even to NM’s biggest city’s sewage outflows. This is yet another environmental injustice, on top of so many others listed above. Holtec/ELEA’s proposed CISF would exacerbate these already present environmental injustices, for not only southeastern NM, but the entire state.

URANIUM MINING AND MILLING

The aftermath from past large-scale uranium mining and milling industries, as well as ongoing threats of resumed uranium extraction industries, in the Navajo/Diné and Pueblo Indian countries of northwestern NM, near Gallup and Grants, and yet more uranium extraction contamination further northwest near Shiprock and Farmington, deserves special mention in this examination of environmental injustices that would be exacerbated by the Holtec/ELEA CISF.

As depicted on the Sacred Trust NM map, certain contaminated sites stand out.

Amidst United Nuclear Corporation’s (UNC) uranium mining and milling complex, 90-million gallons of liquid radioactive waste, and 1,100-tons of solid uranium mill wastes, spilled at Church Rock on July 16, 1979 into the Rio Puerco River. This vital source of drinking water for humans and livestock in Navajo/Diné communities immediately downstream was barely checked for contamination levels, let alone ever cleaned up. Such environmental injustice, associated with one of the worst nuclear disasters in North American history, is off the charts.

This infamous nuclear disaster is compounded by lesser known sites in the same area, the “routine” and “accidental” radioactivity and toxic chemical releases from which are disproportionately borne by Native American and other low income,

people of color communities in the region. As shown on the Sacred Trust NM map, these sites include: Homestake/Barrick Gold Mining Co. Mill & Disposal Site; Jackpile Mine on the Laguna Pueblo proper, upwind of the central village (still, after a half-century, one of the largest open pit uranium mines on the planet); Ambrosia Lake Mill & Disposal Site; Quivira/Ambrosia Lake Mill & Disposal Site #2; the list goes on and on, including a vast number of abandoned uranium mines, not all of which are even depicted on the map given their very large number (NM is one of 15 Western states “hosting” 15,000 (fifteen thousand!) abandoned uranium mines, as documented by the Native American-led Clean Up the Mines! See < <http://www.cleanupthemin.org/facts/>>.)

As chronicled by such books as *If You Poison Us: Uranium Mining and Native Americans* (by Peter H. Eichstaedt, Red Crane Books, 1994), *The Navajo People and Uranium Mining* (Doug Brugge, Timothy Benally, and Esther Yazzie-Lewis, Editors, University of NM Press, 2007), and *Yellow Dirt: A Poisoned Land and the Betrayal of the Navajo* (Judy Pasternak, Free Press, 2011), to name but a few, the aftermath of uranium mining has devastated the Navajo/Diné homelands, as well as those of Pueblos such as Laguna. To add to such past radioactive racism in NM, by adding the very significant burden of Holtec/ELEA’s CISF, adds yet more environmental injustice, insult and injury.

As is readily apparent upon closer study of the Sacred Trust NM map, the sites listed above are far from comprehensive. The Shiprock Mill and Disposal Site on the San Juan River in Navajo/Diné country in far northwest NM is made synergistically worse by large-scale coal mining, and massive coal burning power plants (surrounded by areas of highly concentrated air and ground pollution, in a radius of about 30 miles downwind of coal burners), throughout the area. There is also a high concentration of oil and gas wells, second in NM only to the Permian Basin in the southeastern corner itself, made yet worse by large-scale methane hot spots.

As the Ute Mountain Ute are mentioned on the Sacred Trust NM map’s extreme northwestern corner, it deserves mention that pollution and contamination do not stop at arbitrary state borders in the Four Corners region, of course. The White Mesa Uranium Mill, in southeastern Utah, just north of the Navajo Nation Reservation, and not far northwest of the State of NM border, adds to the radioactive and toxic burdens on Native Americans in the region. The environmental justice violations associated with the White Mesa Uranium Mill are documented at the Native American-led organization Haul No!’s website < <https://www.haulno.org/facts-the-canyon-mine-and-white-mesa-mill/>>:

What is the White Mesa Mill?

The White Mesa Mill is the only conventional uranium mill licensed to operate in the United States. Energy Fuels Inc. owns and operates both the mill and the Colorado Plateau uranium mines, including Canyon Mine, that supply ore to the mill. The mill is

located three miles north of the Ute Mountain Ute Tribe's White Mesa Ute community and six miles south of Blanding, Utah.

- built in 1979 to process uranium ore from the Colorado Plateau.*
- In 1987, it began processing "alternate feed material" (uranium-bearing toxic and radioactive waste) from across North America.*
- Energy Fuels disposes of the mill's radioactive and toxic waste tailings in "impoundments" that take up about 275 acres next to the mill.*

What are the tailings impoundments?

- There are currently five tailings impoundments (Cells 1, 2, 3, 4A, and 4B) in the mill's 275 acre tailings-management system. These impoundments receive tailings, including waste processing solutions, that are laden with radioactive and toxic elements.*

What are the health and environmental hazards?

- Cells 1, 2, and 3 at the White Mesa Mill were constructed with thin plastic liners between two layers of crushed rock. The liners in those cells had a useful life of 20 years when they were installed in the early 1980s and have never been replaced.*
- Cells 1, 2, and 3 leak detection system lacks a double liner and will not detect a leak until groundwater has already been contaminated.*
- The mill emits radioactive and toxic air pollutants including radon and thoron (gases) and sulfur dioxide and nitrogen oxides (particulates). Windblown particulates and gases travel off-site. Energy Fuels has stockpiled both ore and alternate feed on-site. Many of the stockpiled materials are not adequately covered and can blow off-site. White Mesa residents report smelling pollutants from the mill.*
- Trucks loaded with ore hazardous materials travel on Arizona and Utah highways to reach the mill. Alternate feed materials are usually off-loaded from the railroad at Cisco, Utah, trucked to Interstate 70, east to Highway 191, and south through Moab, Monticello, and Blanding to the mill. Ore from the mines near the Grand Canyon region travels north through the Navajo Nation and Bluff to the Mill.*
- There are plumes of increased levels of nitrate, nitrite, and chloride in the perched aquifer beneath the mill site.*

What are other community concerns?

- The mill was built on sacred ancestral lands of the Ute Mountain Ute Tribe. More than 200 rare and significant cultural sites are located on the mill site. These include burial sites, large kivas and pit houses, storage pits, and artifacts. When the mill and its tailings impoundments were constructed, several*

- significant archeological sites were destroyed. These included pit houses, kivas, burial sites, and food-processing and storage structures.*
- *Many residents in the communities of White Mesa and Bluff are concerned that the Navajo Sandstone aquifer, which provides drinking water to the area, will be contaminated. This primary drinking water aquifer lies underneath the mill site.*

Thus, not only is the Navajo/Diné Nation, whose federally-recognized reservation extends across four states, including NM, impacted (and whose off-reservation rights extends further still), but so too is the Ute Mountain Ute tribe.

In fact, the Nuclear Issues Study Group's "Dismantling the Nuclear Beast" symposium at University of NM in Albuquerque in early December 2017 featured Yolanda Badback, of the Ute Mountain Ute, White Mesa Concerned Community, as a speaker. (See <http://abqpeaceandjustice.org/index.php/current/feature/item/594-dismantling-the-nuclear-beast>)

Other indigenous speakers at this powerful event included Edith Hood of the Red Water Pond Road Community Association (whose local ecology was devastated by the 1979 Church Rock uranium mill tailings spill, mentioned above), and Tommy Rock, Diné Researcher, all on the "Uranium Mining, Milling, & Enrichment" panel; Verna Teller, former chairwoman of the Pueblo of Isleta Council; Kathy Sanchez and Beata Tsosie-Peña, of Tewa Women United; Klee Benally, of Indigenous Action Media, on "Indigenous-Rooted Direct Action and Resisting Nuclear Colonialism"; Petuuche Gilbert, of Pueblo of Acoma; and Leona Morgan of NISG and Haul No!

There were also many non-indigenous allies who presented at this event, including Myrriah Gomez of University of New Mexico (UNM); Tina Cordova of the Tularosa Basin Downwinders Consortium; and many youth, including UNM students and NISG members, including indigenous youth and other youth of color.

These environmental injustices – as spoken to by representatives of such diverse communities at NISG's "Dismantling the Nuclear Beast" event -- stretching from Indian County in the Four Corners, all the way through NM into TX, are inextricably inter-connected, and should be treated as such in this EIS scoping being conducted by NRC.

This kind of broad, deep, and diverse concern, as represented at NISG's "Dismantling the Nuclear Beast" event, regarding the environmental impacts of Holtec/ELEA's CISF scheme, is the kind of "scope" NRC's EIS should aspire to. It is no accident that opposing the added, very significant burden of Holtec/ELEA's CISF (all of the country's commercial high-level radioactive waste, at risk of becoming de facto permanent surface storage in NM), was a major focus of the NISG event.

CONCLUSION

As exhausting is the litany of the nuclear colonialism, environmental injustices, and radioactive racism listed above is, it is far from exhaustive. For example, the Superfund sites and brownfields documented in the Sacred Trust NM map, have gone unmentioned herein.

So too have the numerous military bases occupying NM, as depicted on the Sacred Trust NM map. NM's Wikipedia page notes the presence of so many military bases in NM, pointing out that low income, relatively sparsely populated, people of color communities are often targeted for such a concentration of major military bases. The book *The Tainted Desert: Environmental and Social Ruin in the American West*, by Valerie L. Kuletz (Routledge, 1998, from the series Thematic Studies in Latin America) makes similar points, that military, as well as hazardous (such as nuclear and radioactive waste) facilities are most often targeted at low income, people of color communities in sparsely populated areas, such as the American Southwest, an environmental injustice.

Superfund sites, brownfields, and military bases in NM are nonetheless significant, and should also be included in NRC's environmental scoping on the Holtec/ELEA application for a license to construct and operate a high-level radioactive waste CISF in NM, in terms of the cumulative impacts of mounting environmental injustices borne by low income and/or people of color communities in NM.

Uranium mines in other parts of NM, as well as many hazardous materials contaminated sites, mine processing sites, and impaired rivers and streams (contaminated with pollutants above legal limits, including the Gold King Mine disaster unleashed into the San Juan River, most ironically enough caused by the U.S. Environmental Protection Agency itself), as depicted on the Sacred Trust NM map, but not explicitly mentioned yet in my comments above, should also be accounted for in NRC's environmental scoping for this proposal, vis a vis environmental justice, or violations thereof. For this proposal, Holtec/ELEA's CISF, would worsen, significantly, all these environmental injustices already suffered by the State of NM, disproportionately borne by low income, people of color communities.

NM has had far more than enough, for a long time now. This was clearly shown by how quickly local residents -- including cattle ranchers Ed and Patty Hughs, who had never been involved in environmental activism -- chased the U.S. Department of Energy's "test deep borehole disposal for radioactive waste" out of their New Mexico community. That empowering victory in hand, the Hughs are now actively engaged (such as Patty Hughs' testimony at the NRC public comment meeting in Roswell in late April 2018) in the NM grassroots resistance against Holtec/ELEA's CISF, embodied by a remarkably diverse coalition, representing multiple races and walks of life.

“We the people” are declaring their independence from the nuclear industry’s plans to turn New Mexico into Nuke Mexico. Any notions of energy or nuclear sacrifice zones must end, past injustices acknowledged and rectified, and any further such abuses stopped before they start.

As explicated above, it’s not just the demographics of race and income, but also the issue of disproportionate impacts by polluting nuclear and radioactive waste, fossil fuel, and other hazardous industries in NM, that militate against Holtec/ELEA’s proposed CISF scheme. This straw could break the camel’s back, in terms of environmental justice violations. It must be stopped.

The Holtec/ELEA CISF scheme, as detailed above, is unacceptable, and must be rejected by NRC on environmental justice grounds alone.

ATTACHMENTS (13 altogether):

(1.) The New Mexico map created by Deborah Reade, “Water, Air and Land: A Sacred Trust,” Version 3, July 2018.

NIRS, IEER, and Beyond Nuclear documents regarding the disproportionate harm done to women, and children, as compared to adult males, by hazardous ionizing radioactivity:

(2.) Radiation and Children: The Ignored Victims, NIRS, August 2004.

(3.) ATOMIC RADIATION IS MORE HARMFUL TO WOMEN, NIRS, October 2011.

(4.) The Use of Reference Man in Radiation Protection Standards and Guidance with Recommendations for Change, IEER, Rev. 1, April 2009.

(5.) Science for the Vulnerable Setting Radiation and Multiple Exposure Environmental Health Standards to Protect Those Most at Risk, IEER, October 19, 2006.

(6.) Open Letter to President Bush on Protecting the Most Vulnerable, IEER, Oct. 19, 2006.

(7.) Nuclear Power and Children, Beyond Nuclear, March 2014.

Documentation of radioactively racist attempts to dump high-level radioactive wastes on Native American reservations, and traditional environmental protectors’ successful resistance campaigns, including President Obama’s proclamation honoring Grace Thorpe’s anti-CISF Earth protection:

(8.) Women’s History Month, 2009, by the President of the United States, a Proclamation (re: Grace Thorpe, Rachel Carson, Marjory Stoneman Douglas, et al.)

(9.) Radioactive Racism: The History of Targeting Native American Communities with High-Level Atomic Waste Dumps, NIRS and Public Citizen, June 14, 2005.

(10.) Re: Private Fuel Storage, LLC application for commercial irradiated nuclear fuel "interim" storage site at the Skull Valley Goshutes Indian Reservation in Utah, environmental and environmental justice coalition (437 organizations) letter to NRC Commission, July 7, 2005.

(11.) Skull Valley Goshutes/PFS Timeline, Public Citizen and NIRS, June 14, 2005.

(12.) MEASURES OF COMMUNITY IMPACT FOR THE TRANSPORTATION OF HAZARDOUS MATERIALS: THE CASE OF INDIAN TRIBES AND HIGH-LEVEL NUCLEAR WASTE, State of Nevada Agency for Nuclear Projects, March 2, 2005.

Other:

(13.) U.S. Department of Energy, Legacy Management, Nevada Offsites, Gnome-Coach, New Mexico, Site, 11/2017.