

Holtec-CISFEISCEm Resource

From: Scott Kovac <scott@nukewatch.org>
Sent: Monday, July 30, 2018 9:33 PM
To: Holtec-CISFEIS Resource
Cc: Jay Coghlan
Subject: [External_Sender] NWNM Comments on Holtec International¹'s HISTORE CIS Facility for Spent Nuclear Fuel
Attachments: NWNM_Holtec_CIS_Comments_July 30.pdf

Dear Ms. Ma,

We respectfully submit these scoping comments on the pending draft environmental impact statement (EIS) on Holtec International's proposed Facility for Spent Nuclear Fuel.

Please reply as to your receipt and readability of our comments.

Thank you,

Scott Kovac

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July 30, 2018

Ms. May Ma
Office of Administration
Mail Stop: TWFN-7- A60M
U.S. Nuclear Regulatory Commission
Washington, DC 20555- 0001

Submitted online at:
Holtec-CISFEIS@nrc.gov

RE: Docket No. 72-1051; Holtec International's HI-STORE CIS Facility for Spent Nuclear Fuel, Lea County, New Mexico

Dear Ms. Ma:

Nuclear Watch New Mexico seeks to promote safety and environmental protection at nuclear facilities; mission diversification away from nuclear weapons programs; greater accountability and cleanup in the nation-wide nuclear weapons complex; and consistent U.S. leadership toward a world free of nuclear weapons.

We respectfully submit these scoping comments on the pending draft environmental impact statement (EIS) on Holtec International's proposed Facility for Spent Nuclear Fuel. In its Environmental Report (ER), Holtec plans to "store" at least 100,000 metric tons of spent fuel, i.e. high-level radioactive wastes, from nuclear reactors around the country to southeast New Mexico. Please know that ***we do not consent*** to becoming a national radioactive waste dumping ground or to transporting up to 10,000 canisters of highly radioactive waste through thousands of communities. We should not have to risk the contamination of our land, groundwater aquifers, air, plants, wildlife, and livestock. We do not consent to endangering present and future generations.

Summary Of Comments

- **The Whole Picture Must Be Analyzed**
- **This Holtec Proposal Is Contrary to Current Law**
- **Holtec Must Remove Claims of Copyrights and All Redactions in the Environmental Report**
- **High Risks Would Be Passed to Taxpayers As High Profits Line Private Pockets**

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- **Who Ultimately Pays and the Effect on the Proposed Scheme Must Be Analyzed**
- **The Impacts of Permanent Storage Must Be Analyzed**
- **The Impacts of Potential Reprocessing Must Be Analyzed**
- **More Alternatives Must Be Analyzed**
- **The Consequences to an Accident-Exposed Individual Must Be Analyzed**
- **Cracked And Leaking Casks Must Be Addressed**
- **Risks of “Routine” Shipments, Which Are Like “Mobile X-ray Machines That Can’t Be Turned Off”, Must Be Analyzed**
- **More Cumulative Impacts Must Be Analyzed**
- **Risks of Potash Must be Analyzed**
- **Risks of Loss of Institutional Control Must Be Analyzed**
- **Job Creation for Local Residents Must Be Analyzed**
- **Seismic Impacts on Stored Casks Must Be Stated**
- **Environmental Injustice Must Be Addressed and Analyzed**
- **Economic Injustice Must Be Addressed and Analyzed**
- **Emergency Response Must Be Analyzed**
- **The Environmental Report Must Be Fact-Checked**
- **Specific Monitoring Plans Must Be Included**
- **Impacts to the Lesser Prairie Chicken Must Be Analyzed**
- **The Environmental Report Inadequately Discusses the Transportation Risks and Must Thoroughly Analyze All Transportation Options**
- **The Exact Numbers Must be Given, Understood, and Analyzed**
- **Railway Transportation Is a Deal Breaker and Must Not Be Ignored**
- **Legal Weight Truck Shipments Must Be Analyzed**
- **Barge Shipments Must Be Analyzed**
- **Impacts Of Future Railroads And Electric Lines Must Be Analyzed**
- **Cask Transportation Must Be Analyzed**
- **Please Consider Our Comments Carefully**

The Whole Picture Must Be Analyzed

We do not consent to the Department of Energy’s (DOE’s) strategy of divide and conquer by attempting to play “orphaned” waste communities off against the rest of us – many “stranded” waste communities have stated explicitly that *de facto* permanent surface storage would be done “not in our name.” DOE’s stated purpose for prioritizing “stranded” waste is to free up decommissioned nuclear power plant sites for “unrestricted,” and productive “re-use.” But decommissioning regulations are so inadequate that supposedly “cleaned up” sites are still significantly contaminated with hazardous radioactivity, making re-use of those sites risky for current and future generations.

In January 2012, the Blue Ribbon Commission (BRC) on America’s Nuclear Future parroted DOE’s “orphaned” and “stranded” irradiated nuclear fuel arguments in recommending Consolidated Interim Storage Facilities (CISFs) as a top priority. The Holtec/Eddy Lea Energy Alliance (ELEA) cites the BRC’s CISF recommendations from

the BRC's Final Report in its own application documents. Holtec/ELEA also claim their scheme is consistent with the BRC's recommendation and DOE's talk under the Obama Administration of "consent-based siting." The growing groundswell of public opposition in New Mexico and beyond to this and other CISF schemes shows that the public does NOT consent.

DOE must analyze all the current reactor storage sites and state the impacts for each site for leaving the casks in place and also for contamination left behind. All questions must be answered, such as how long will the casks last and how long will they be safe?

This Holtec Proposal Is Contrary to Current Law

Current law only allows the DOE to take title to commercial spent fuel "following commencement of operation of a repository" or at a DOE-owned and operated monitored retrievable storage facility. Holtec's proposed site meets neither requirement, as it is a private facility. Its Environmental Report (ER) does not discuss those legal requirements and is therefore incomplete and inadequate. The ER states: "DOE would be responsible for transporting Spent Nuclear Fuel (SNF) from existing commercial nuclear power reactor storage facilities to the CIS Facility." (ER, Page 155) Current law does not authorize or fund DOE to do such transportation to a private storage facility. The ER does not discuss how DOE could legally do what the ER states and is inadequate and incomplete. ***The NRC should not proceed with this licensing process until such time as future transportation of high-level radioactive wastes is documented and analyzed in detail.***

The waiver of any connection or "linkage" between development of centralized interim storage facilities (CISFs) and progress toward opening a repository only increases the risk that stored wastes will simply be allowed to remain in centralized, so-called "interim," surface storage facilities indefinitely into the future. In other words, they could become *de facto* permanent "parking lot dumps."

Former U.S. Senator Jeff Bingaman (D-NM), when he was Chairman of the Energy and Natural Resources Committee, warned against this de-linkage in 2012. In fact, the requirement for a permanent disposal repository being opened and ***operating*** was, and still is, essential and foundational in the Nuclear Waste Policy Act, which is the benchmark law on commercial irradiated nuclear fuel and highly radioactive waste management. This was, and still is, a safeguard against interim storage sites becoming *de facto* permanent dumps.

Note that this linkage requires a specific *operating* repository, not just a licensed one, nor just someone's proposed repository for someday, somewhere, some way. Current DOE projections for the opening of a permanent burial dump are by 2048, 30 years from now, although they don't know what, where, or how.

In 2048, it will be 106 years after Enrico Fermi generated the first cupful of high-level radioactive waste of the Atomic Age as part of the Manhattan Project's race for the

atomic bomb. 2048 will be 99 years after the first so-called civilian, or commercial, irradiated nuclear fuel was generated, at the Shippingport atomic reactor near Pittsburgh, PA. Such long delays in high-level radioactive waste management and disposal are a red flag warning about Holtec/ELEA's CIS facilities becoming long-term, or even *de facto* permanent, surface storage parking lot radioactive waste dumps.

Holtec Must Remove Claims of Copyrights and All Redactions in the Environmental Report

The ER Cover Page includes a notice that it is "a copyrighted intellectual property of Holtec International. All rights reserved." The notice further states for members of the public to excerpt "any part of this document... is unlawful without written consent of Holtec International." It is totally inappropriate to include such a statement or to state that we or other members of the public cannot quote any part of the document, as that substantially restricts our ability to comment on the ER, which is our legal right. NRC must require Holtec to produce an ER that has no such copyright restrictions and has no redactions.

High Risks Would Be Passed to Taxpayers as High Profits Line Private Pockets

Holtec/ELEA hatched this plan as a regional development scheme. This is an example of the tail wagging the dog. The whole scheme is based on the fact that the Eddy Lea Energy Alliance has some land that they want to develop. DOE must analyze if the proposed site is the best location.

Please explain why all these high risks are being taken in the first place. Certainly not to benefit public health, safety, security, or environmental protection, despite Holtec/ELEA and nuclear power industry claims to the contrary. The transfer of title, liability, costs, and risks for the highly radioactive irradiated nuclear fuel from the companies that generated and profited from its generation must be analyzed. Will the federal taxpayers end up paying, if the DOE is stuck paying all the bills? And/or will the nuclear electricity ratepayers be stuck with the bill, if Holtec/ELEA's lobbyists can finagle access to the funds remaining in the Nuclear Waste Fund coffers?

Holtec/ELEA can make large profits "temporarily storing" these highly radioactive wastes (for 40 years, to 120 years, to permanently?), without having to shoulder any of the costs, or risk-liabilities. NRC must analyze the impacts of a for-profit corporation managing the CISF. What if they go bankrupt and walk away? What if the storage system turns out to be faulty? Who, if anyone, will repair any mistakes? Who takes liability?

Dr. Mark Cooper of the Vermont Law School calculated that the first 200 years of commercial irradiated nuclear fuel storage will cost \$210 to 350 billion (yes, with a B).¹ Cooper's estimate assumed: (1) two centralized interim storage facilities (2) one

¹ Expert witness comments to the U.S. Nuclear Regulatory Commission's Nuclear Waste Confidence/Continued Storage of Spent Nuclear Fuel Environmental Impact Statement
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July 30, 2018

permanent geologic repository, and (3) ongoing on-site storage at nuclear power plants, as needed. His calculations effectively doubled the estimated costs of nuclear-generated electricity since they did not include waste disposal. Those irradiated nuclear fuel management costs have never been accounted for, not in a half-century of commercial irradiated nuclear fuel generation in the U.S. Thus, consolidated interim storage, as at Holtec/ELEA in NM, as well as WCS in TX, would be yet another significant public subsidy. These cumulative costs should be analyzed in full.

Who Ultimately Pays and the Effect on the Proposed Scheme Must Be Analyzed

At NRC public comment meetings in Hobbs, NM and Andrews, TX in mid-February 2017, then WCS CEO Rod Baltzer said that the federal taxpayer is already obligated to pay for irradiated nuclear fuel storage because DOE signed contracts with nuclear utilities in the mid-1980s, pledging to begin “taking out the garbage” in 1998. He pointed out that the utilities have sued DOE for breach of contract, and won damages from the U.S. Judgment Fund, which draws taxpayer funding from the U.S. Treasury, **not** nuclear-generated electricity ratepayer funding from the Nuclear Waste Fund.

Under the amended Nuclear Waste Policy Act, the nuclear utilities (meaning their electricity consumers, a.k.a. ratepayers, as well as shareholders) are responsible for interim storage of irradiated nuclear fuel. Federal taxpayers are responsible for final disposal, in a so-called “deep geologic repository.”

Does Holtec/ELEA intend to foot the bill for its CISF in Southeast NM? Does it intend to assume title and liability for the irradiated nuclear fuel? Or will the nuclear power utilities retain title and liability, pay all costs, and assume all risks? It seems that Holtec/ELEA doesn't want to shoulder the costs, risks, and liabilities. It would prefer that DOE (that is taxpayers, and/or ratepayers) shoulder those, while it simply pockets the profits.

Current law requires a final disposal repository to be constructed and operating (not just licensed by NRC), before DOE can take title and liability for commercial highly radioactive irradiated nuclear fuel wastes and start paying for costs such as transportation to that permanent dumpsite.

DOE **cannot** pay federal taxpayer dollars for privately owned and operated CISFs, absent an operating permanent geological repository, including both Holtec/ELEA's scheme in NM, and WCS's scheme 38 miles away in TX. This is not legal under the Nuclear Waste Policy Act, that is to say current operative law.

This is very risky for U.S. federal taxpayers and/or nuclear electricity ratepayers. The link between an operating final disposal repository and a centralized interim storage facility in the Nuclear Waste Policy Act is to guard against the latter from becoming a

proceeding, December 2013. See [his expert comments here](#), as well as the related [press release here](#)

de facto permanent, surface storage “parking lot dump,” the costs, liabilities and risks of which the U.S. federal taxpayer and/or ratepayers may get stuck with in perpetuity.

This end run around the precautionary linkage between an operating repository and one or more consolidated interim storage facilities that Holtec/ELEA seeks would be a huge boon to the nuclear power industry. It would expedite the transfer of all costs, risks, and liabilities for irradiated nuclear fuel from the nuclear utilities that profited from its generation, onto the backs of U.S. federal taxpayers and/or ratepayers, sooner rather than later -- even before a repository is operating. This would be long before the DOE's most recent estimate when a repository can be possibly opened in the year 2048.

The Impacts of Permanent Storage Must Be Analyzed

The Environmental Report must analyze the impacts of this “interim storage” becoming a dangerous *de facto* permanent facility because the waste will likely never be disposed of in a scientifically viable geologic repository using a reliable isolation system. The ER is inadequate and incomplete because it does not analyze the impacts of the spent fuel being left at the Holtec site indefinitely, which is a reasonably foreseeable circumstance. The NRC must include such long-term analysis in its draft environmental impact statement (EIS).

The May 2018 Nuclear Waste Technical Review Board (NWTRB) Geological Repository report admits technology does not exist to make a geological repository work even in the short term. And they do not have any idea how they will do that. Unsubstantiated hope is not a strategy. It's long past time for DOE to admit to the world that they have no short-term solution, let alone a long-term solution for a permanent repository.²

The Impacts of Potential Reprocessing Must Be Analyzed

NRC must analyze the possibility of the waste being reprocessed at the site, since consolidating waste is the first step to dangerous reprocessing to extract plutonium, increasing nuclear weapons proliferation, massive water use, and intense, irreversible environmental contamination. Reprocessing was proposed at this same site before (under the abandoned Global Nuclear Energy Plan) and must be addressed in the draft EIS.³

More Alternatives Must Be Analyzed

Keeping the spent fuel casks in some form of Hardened On Site Storage (HOSS) at the generating reactor sites until such time as a permanent geologic repository is opened must be analyzed. That alternative is not included in the ER's analysis of the safety and cost impacts of the Holtec CIS proposal. The NRC must include such an analysis in its draft EIS as an eminently reasonable alternative. Segmentation must be avoided and

² NWTRB *Geologic Repositories: Performance Monitoring and Retrievability of Emplaced High-Level Radioactive Waste and Spent Nuclear Fuel*, May 2018

http://www.nwtrb.gov/docs/defaultsource/reports/nwtrb_perfmonitoring.pdf?sfvrsn=6

³ For the record, Nuclear Watch New Mexico staunchly opposes reprocessing.

can occur when an action is broken down into small parts in order to avoid the appearance of significance of the total action. An action can be too narrowly defined, minimizing potential impacts in an effort to avoid a higher level of NEPA documentation.⁴

The alternative of consolidated storage being done at an existing licensed Independent Spent Fuel Storage Facility (ISFSI) must be analyzed. According to the NRC website, there are 64 reactor sites with general-licensed ISFSIs in various part of the nation. The ER must analyze why one or more of those sites could not provide some or all of the consolidated storage proposed by Holtec. The NRC must also include such an analysis in its draft EIS.

The Consequences to an Accident-Exposed Individual Must Be Analyzed

Terms like “collective dose risk” and “person-rem” are used to ignore the potential impacts to a single individual. The ER even states, “Because the risks are for the entire population of individuals along the transportation routes, the risk to any single individual would be small.” (Pg. 201) This is no excuse to understate potential individual impacts and doses.

We do not consent to the HOLTEC/ELEA proposal to establish, operate, and sustain such a facility without a comprehensive public health assessment performed by the Centers for Disease Control and Prevention or the National Institutes of Health. It is our belief that the current hazards and health effects may unnecessarily endanger Lea and Eddy County populations.

Cracked and Leaking Casks Must Be Addressed

The ER does not analyze exactly how radioactive wastes from a cracked and leaking canister would be handled, since there is no wet pool or hot cell at the site. If a cask arriving at the site is cracked or leaked, it might not be allowed to “return canisters.” (ER, Page 214). The ER is inadequate and incomplete because it does not analyze these situations. The NRC draft EIS must include such an analysis.

We do not consent to containers that violate quality assurance and quality control (QA/QC) standards being used to ship highly radioactive waste. Fifteen years ago, Commonwealth Edison/Exelon whistleblower Oscar Shirani and NRC Midwest Region dry cask storage inspector Dr. Ross Landsman revealed major QA/QC violations with Holtec casks. They questioned the structural integrity of Holtec casks *sitting still, going zero miles per hour*, let alone at 60 mph or faster on the rail lines. NRC has never adequately addressed these QA violations, so we have to assume they have continued right up to the present.

Holtec containers have received an NRC rubber-stamp permit not only for on-site storage at more than a third of U.S. reactors, but also for rail/barge/heavy haul truck

⁴ 38 CFR 200.4 - Implementation of NEPA

transport. To make matters worse, Holtec is the lead partner in the scheme to establish the parking lot dump targeted at New Mexico.

Holtec is not the only highly radioactive waste container with QA/QC failures, however. Nuclear Assurance Corp. (NAC), Ventilated Storage Casks (VCS), Areva TransNuclear (TN NUHOMS) and others have violated QA/QC standard, as well. In fact, cask quality assurance violations run rampant across the industry, enabled by NRC complicity and collusion. Nevertheless, Holtec claims it can accommodate NAC's, TN NUHOMS' and even VSC's casks at its NM CISF. So, all cask models' QA violations are of concern. (Furthermore, NAC and TN NUHOMS are central to the WCS's proposed CISF, just 38 miles from the Holtec/ELEA CISF site.)

Risks of "Routine" Shipments, Which Are Like "Mobile X-ray Machines that Can't Be Turned Off", Must Be Analyzed

Even "routine" or "incident-free" shipments of highly radioactive irradiated nuclear fuel – such as those bound for CISFs like Holtec/ELEA, NM or WCS, TX – carry health risks to workers and innocent bystanders, and residents along the shipping routes nationwide. This is because it would take so much radiation shielding to completely block the gamma- and neutron-radiation being emitted by the highly radioactive waste that the shipments would be too heavy to economically move. So, NRC has compromised and "allows" or "permits" a certain amount of dangerous gamma- and neutron-radiation to emanate from the shipping container, exposing nearby people to hazardous radioactivity.

NRC's regulations allow for up to 10 millirem per hour (mR/hr) of gamma radiation to be emitted, about six feet (two meters) away from a shipping cask's exterior surface. That's about one to two chest X-rays worth of gamma radiation, per hour of exposure.

Since the radiation dissipates with the inverse square of the distance, this means that NRC's regulations "allow" for up to 200 mR/hr at the surface of the cask's exterior. That's 20 to 40 chest X-rays worth of gamma radiation per hour, which NRC "allows" to radiate, right at the cask's surface.

NRC has done a cost-benefit analysis – the cost to human health compared to the benefit of the nuclear power industry's bottom line – and deemed these exposure levels "acceptable" or "permissible."⁵

⁵ "Permissible" or "acceptable" should never be confused with "safe" or "harmless" – exposures limited to 200 mR/hr, or even 10 mR/hr, still do carry health risks. After all, any level of radiation, no matter how small, has long been confirmed to cause cancer. For more information, see:

<https://web.archive.org/web/20160325141005/http://www.nirs.org/press/06-30-2005/1>

More Cumulative Impacts Must Be Analyzed

The ER mentions the Waste Isolation Pilot Plant (WIPP) but does not analyze the impacts of a radiologic release from WIPP on the proposed CIS site. This must be done along with analyzing the impacts of an expanded WIPP, which is reasonably foreseeable. Also, expanded military flight tests are being proposed for the area.

We do not consent to the targeting of DOE sites, already heavily contaminated with radioactivity and burdened with high-level radioactive waste, to become “parking lot dumps” for the importation of other sites’ reactor wastes. The proposal to open a “parking lot dump” in Eddy-Lea Counties in southeastern New Mexico near WIPP is a case in point. WIPP is the U.S. national dump-site, in a salt formation 2,000 feet below ground, for transuranic contaminated radioactive wastes from the U.S. nuclear weapons complex. Although DOE assured the public that WIPP could not possibly leak in the first 10,000 years, the facility suffered a transuranic radioactive waste leak to the environment after just 15 years of operations. Nearly two-dozen workers at the surface suffered inhalation doses of ultra-hazardous, alpha-emitting contamination, including plutonium. Transuranics were also transported downwind, to be further distributed by wind and rain over time. The burst of a single drum 2,000 feet underground caused the radioactive release. The root cause of the burst was a chemical reaction due to the mixing of chemically reactive nitrates and lead in the radioactive wastes, which sparked the ignition. The fire was sustained by the inclusion of organic (meaning fibrous, plant-based) *kitty litter*, meant to absorb liquids. The burst of the single drum completely shut down WIPP for almost three years. DOE estimates the recovery cost at \$500 million; the *L.A. Times* estimates one billion dollars. Estimates of two billion dollars can be found in the fine print of DOE documents.

The Holtec/ELEA site is located 16 miles from the WIPP site. Impacts of releases from these two sites on each other must be analyzed.

We do not consent to a *de facto* permanent surface storage “parking lot dump” targeted at Waste Control Specialists, LLC (WCS) in Andrews County, Texas – right on the state line at Eunice, NM. WCS applied to NRC for a CISF construction and operation license on April 28, 2016. WCS already dumps all categories of so-called “low” level radioactive waste – Class A, B, and C – into the ground, either directly above, or immediately adjacent to, the Ogallala Aquifer. The Ogallala Aquifer serves as a vital supply of drinking and irrigation water for numerous states on the Great Plains, from Texas to South Dakota, including parts of eastern NM. WCS effectively serves as a national dump site for such radioactive wastes.⁶ WCS also accepted many scores of barrels from the Los Alamos Nuclear Lab in New Mexico, containing the same volatile mix as burst in the WIPP underground in 2014.

⁶ Several state environmental agency staffers resigned their career jobs in protest over the outrageous decision to allow WCS to open for “low” level radioactive waste dumping in the first place.

Already, the potentially bursting barrels have sat out in the hot summer sun at WCS for four years, with no end in sight. Heat fueling a chemical reaction, igniting combustibles and building up pressure is the entire problem leading to burst risk. If one or more drums burst at WCS into the open air of the surface environment, the releases of plutonium and other ultra-hazardous transuranic radioactive wastes could be significantly worse than the 2014 WIPP release. That, after all, originated 2,000 feet below ground, and had to follow a long, circuitous path through thousands of feet of horizontal tunnels and two thousand feet of vertical ventilation shaft to reach the surface. But the drums at WCS are *at* the surface! WCS accepting these potentially explosive drums in such a great big hurry in the first place, without even knowing the risks they were getting into, shows what a careless company it is. It cannot and should not be trusted to store highly radioactive waste, not even temporarily (although “interim” is a delusion – the storage would become very long term, perhaps even permanent).

Risks of Potash Must Be Analyzed

Southeast New Mexico, in the area of the site, is one of the largest potash producing areas in the world. This salt can be highly corrosive and will be continuously working to corrode the containers and the steel and low-density concrete Cavity Enclosure Container (CEC) from the outside while the radiation from the SNF will be working away to deconstruct things from the inside. Most of the length of the CEC will be exposed to these salts. Holtec claims that no water will enter the vertical ventilated modules (VVM) but a major storm event combined with a tornado (common in the area) could change that. All of this needs to be evaluated in detail.

Holtec claims that screens will keep debris and animals out of the VVMs. Again, this seems like wishful thinking. How intact the screens remain, whether they corrode or break or are defective to begin with needs to be studied with the experience of other local nuclear facilities in mind to see if this is credible. It is hard to believe that the VVM Interface Pad and the Top Surface Pad act as can act as barriers and as vents for the long term.

Risks of Loss of Institutional Control Must Be Analyzed

DOE warned in its Feb. 2002 Final Environmental Impact Statement (EIS) on the proposed Yucca Mountain, Nevada national burial dump for highly radioactive wastes, that loss of institutional control over surface storage sites would eventually prove catastrophic. (Loss of institutional control means societal breakdown, so that maintenance, repair, and replacement of infrastructure and storage containers at Holtec/ELEA would be lost over long enough periods of time – in fact, even basic knowledge of the existence of the facility itself could be entirely lost/forgotten someday!)

DOE warned in its February 2002 Final Environmental Impact Statement (EIS) for the proposed Yucca Mountain burial dump for highly radioactive wastes, that loss of

institutional control over surface storage sites would eventually prove catastrophic.⁷ Entropy, the second law of thermodynamics, means that things fall apart over long enough periods of time. DOE was focused on this happening at nuclear power plant sites, if irradiated nuclear fuel was abandoned there forever. But the same is true here. DOE used the argument in its Yucca FEIS as a way of pressuring states (and their congressional delegations) to support the proposed Nevada dumpsite, lest such a catastrophe unfold in their own backyard. In contrast, the prevailing consensus in the national environmental movement since 2002 has been for Hardened On-Site Storage (HOSS), as close as possible to the point of generation, in order to prevent radioactive releases at reactor sites.⁸

Job Creation for Local Residents Must Be Analyzed

The total number of annual workers at the site could be as many as 135 when construction jobs are combined with the operating workforce. How many jobs will go to locals? The local economy is already booming. Have you tried to get a hotel room or rent an apartment in Hobbs or Carlsbad lately? Where will the profits go? Don't forget that this is first and foremost a regional economic development scheme, so economic impacts to the region must be analyzed. Are the risks for a mere 135 jobs worth the overall risks that the project entails? Does Holtec's proposal actual hurt job creation by threatening the oil and gas industry, which is actually providing thousands of relatively high-paying jobs?

Seismic Impacts on Stored Casks Must Be Analyzed

Although the ER gives a statement on recent seismic activity in the area, there is no analysis of what many 3.0 – 4.0 fracking-induced earthquakes will have on the buried casks. The ER is incomplete and inadequate. The NRC draft EIS must analyze these issues.

Environmental Injustice Must Be Addressed and Analyzed

We do not consent to the environmental injustice and radioactive racism of yet again targeting low-income communities of color with the most hazardous substances ever created, i.e. highly radioactive irradiated nuclear fuel.

For their part, the Holtec/ELEA CISF in NM, and the WCS, TX CISF are targeted at the same area. They are but 38 miles from each other. The area has numerous communities that are majority Hispanic. The area is already heavily polluted by both the fossil fuel and the nuclear industry. There are significant poverty rates amongst certain communities in this area, as well. In fact, the State of New Mexico as a whole ranks towards the very bottom of a broad spectrum of socio-economic wellness indicators, in comparison to the other 49 states.

⁷ Loss of institutional control means societal breakdown, so that maintenance, repair, and replacement of infrastructure and storage containers at Holtec/ELEA would be lost over long enough periods of time – in fact, even basic knowledge of the existence of the facility itself there could be entirely lost/forgotten someday!

⁸ See the [Statement of Principles for Safeguarding Nuclear Waste at Reactors](#)

This attempt by Holtec/ELEA, as well as WCS, to turn this area of Southeast NM and West TX into a nuclear sacrifice area is a textbook example of environmental injustice, or radioactive racism. This is all the clearer when the large number of radioactive contamination sites documented on the Sacred Trust NM state map is taken into account. As one of the poorest states, and a majority minority state, New Mexico has experienced environmental racism for decades. People of Color continue to be disproportionately impacted by hazardous and toxic wastes.”⁹ NRC should assess the multiple stresses on New Mexicans and failures to compensate them over the history of the atomic age.

Economic Injustice Must Be Addressed and Analyzed

The proposed region has valuable industries including pecan, cattle ranches, dairy, and other local farming interests that would be threatened by a CIS site. Even some of the hazardous and extractive industries that are a big part of the economy oppose the dump. New Mexico has suffered enough as a national sacrifice zone at the hands of the nuclear industry, including abandoned uranium mines, the Manhattan Project, Trinity Test, plutonium contamination in the rivers downstream from Los Alamos, uranium enrichment, and hosting the nation’s transuranic waste at the Waste Isolation Pilot Plant.

Emergency Response Must Be Analyzed

NRC’s draft EIS must assess and report on the reliability and capability of volunteer and distantly-located emergency response personnel upon which the local population will rely in the event of a radioactive accident. The draft EIS should include availability, training, equipping and notification of emergency responders along all the routes.

The Environmental Report Must Be Fact-Checked

Tetra Tech, Inc., wrote the Environmental Report for Holtec. Tetra Tech has been credibly and repeatedly accused of falsifying radiation monitoring data, dumping radioactive soil and wastes on clean on- and offsite locations, using unqualified workers to supervise radioactive scanning and cleanup efforts, and retaliating against whistleblowers at the Navy’s huge Hunters Point nuclear site in San Francisco (which is being converted to high-end housing). This is according to the US Navy, EPA and California Health Department. Based on this sordid track record, can Tetra Tech be trusted to accurately assess environmental impacts of the proposed Holtec dump?

Specific Monitoring Plans Must Be Included

DOE has identified waste storage performance confirmation activities, including seepage monitoring and waste package monitoring. Seepage monitoring would evaluate the spatial and temporal distribution of seepage flux into the repository under ambient and thermally perturbed conditions. It also would analyze the chemistry of any collected waters.

⁹ Samia Assed, Chair of the New Mexico Poor People’s Campaign; see www.nonuclearwaste.org

Waste package monitoring would include remote monitoring of external corrosion of waste packages. Most existing sensors have relatively short lives, make point rather than spatially distributed measurements, are designed for near-surface applications, lack the ability to self-calibrate, show long-term instrumental drift, require power for long-term operation, and need to be radiation- and heat-hardened. Work to improve currently available technologies will take a sustained research, development, and demonstration program over many years.

In the case of vadose zone monitoring, technology needs to be developed to measure moisture content and matric potential, two properties used to estimate seepage flux, continuously over long distances and at greater depths and harsher (high temperature, high radiation) environments than at the relatively shallow depths for which current sensors have been developed.

Proposed legislation, such as H.R. 3053 and current appropriations bills would remove these and other safety requirements from the 1982 Nuclear Waste Policy Act, the current law. Instead that law should be changed, or another law written to require the Nuclear Regulatory Commission to comply with current NWPA and NWTRB safety requirements. The NWPA only applies to the Department of Energy. Long-term research, development, and demonstration of monitoring and sensor technologies are needed to address current technology limitations.¹⁰

Impacts to the Lesser Prairie Chicken Must Be Analyzed

The proposed Holtec site is in an area that land owners voluntarily set aside land for the Lesser Prairie Chicken in an attempt to keep it off of the Endangered Species List. Please analyze the impacts of this Holtec scheme on the Lesser Prairie Chicken and what steps will be taken to keep it off of the Endangered Species List.

Spent Nuclear Fuel Must Be Assessed For Hazardous Waste

The HLW is not exclusively radioactive waste. In fact, some or even possibly most of the waste includes some hazardous materials. There is no single "style" or configuration of SNF and some of these configurations include beryllium, lead and possibly zirconium. This information is available with just a cursory look at the inventory. Detailed research may reveal additional hazardous waste. ***It appears that a New Mexico hazardous waste (RCRA) permit will be required.***

The Environmental Report Inadequately Discusses the Transportation Risks and Must Thoroughly Analyze All Transportation Options

The NRC's evaluation of the environmental impacts of building and operating a Consolidated Interim Storage Facility (CISF) at the proposed site in southeast New

¹⁰ NWTRB *Geologic Repositories: Performance Monitoring and Retrieval of Emplaced High-Level Radioactive Waste and Spent Nuclear Fuel*, May 2018
http://www.nwtrb.gov/docs/default-source/reports/nwtrb_perfmonitoring.pdf?sfvrsn=6

Mexico leads to very high-risk shipping of the irradiated nuclear fuel that is an unavoidable aspect of this Holtec/ELEA scheme.

The transportation risks given in the ER are based on a 2-year old document for another facility. "The incident-free radiological transportation analysis in this ER tiers from the analysis prepared for the proposed WCS CIS Facility in Andrews County, Texas." (ER pg. 199, quoting WCS 2016) To analyze the transportation risks for this ER, Holtec simply took the WCS report and scaled it up by 2.5 times. The transportation risks are based on three sample routes to only three reactor sites, which are supposed to represent all the routes to all the reactor sites. Yet Holtec proposes to bring ALL of the spent fuel from all of the commercial reactors all across the country.

This ER should have included transportation routes and the potential impacts of accidents or terrorism incidents on public health and safety along all the routes. The ER states that high-level radioactive waste would be transported for more than 20 years. Even one small accident would be one too many. Terrorist acts involving radioactive waste in a large metropolis could have extremely high consequences, which must be analyzed.

The ER is inadequate and incomplete because it does not include an adequate analysis of all transportation routes and modes from all reactors. The ER is inadequate and incomplete because it does not discuss how rail shipments from reactors without rail access would be accomplished and the risks and impacts of such shipments. The NRC draft EIS must analyze all these transportation risks and impacts, if the licensing process continues.

Since this is supposedly a "storage" site and not a "disposal" site, at some future point the spent fuel will need to be removed and sent to a disposal site, thus doubling the transportation risk stated in this ER. The ER is inadequate and incomplete because it does not include an analysis of such additional transportation routes, risks, and impacts.

The Exact Numbers Must be Given, Understood, and Analyzed

Holtec/ELEA has proposed moving 100,000+ metric tons of commercial irradiated nuclear fuel. In the ER, Holtec/ELEA cites the figure of 120,000 metric tons. But in fact, multiplying the first phase of 8,680 metric tons of uranium -- as described in NRC's March 30, 2018 Federal Register Notice -- by 20 phases, over 20 years, as Holtec proposes, would mean not 100,000, nor 120,000, but rather 173,000 metric tons of commercial irradiated nuclear fuel!

The Holtec/ELEA proposal is significantly larger than even the Yucca Mountain scheme. Yucca was and is limited by law to a grand total of 70,000 metric tons of highly radioactive wastes. Only 63,000 metric tons of that figure (90% of the overall limit) could be commercial irradiated nuclear fuel. (The other 10% would be DOE irradiated nuclear fuel and high-level radioactive wastes from overseas research reactors and vitrified military reprocessing wastes.)

Obviously, Holtec/ELEA's CISF plans are much bigger than even the amount of highly radioactive waste targeted at Nevada for permanent burial. Thus, the shipping impacts would also be significantly larger. Instead of 12,145 trucks and trains bound for Nevada through 44 states plus Washington, D.C., a significantly greater number bound for NM can be expected for the proposed Holtec/ELEA scheme.

For this reason, NRC must hold public comment meetings for any future draft EIS in at least as many states as DOE did for its Yucca scheme. Major cities that can expect NM-bound road and/or rail shipments would include: Atlanta; Boston; Chicago; Cleveland; Dallas/Fort Worth; Detroit; Houston; Kansas City; Los Angeles; Miami; Minneapolis/Saint Paul; Nashville; New York/Newark; Omaha; Philadelphia; Pittsburgh; Saint Louis; and Tampa.

Railway Transportation Is a Deal Breaker And Must Not Be Ignored

NRC has ignored analyzing rail transportation in the ER. Many of the nation's railbeds are in such poor condition already that trains must proceed extremely slowly. This problem of deteriorating rail infrastructure has been known for years. A comprehensive study of the condition of the railbeds, trestles, bridges etc. must be done and must include a cost estimate of the price of repairing and reconstructing this infrastructure to make it able to support shipment of 10,000 casks. Who will pay for these upgrades must also be described. Will it be left to the railroads? To the states? Construction of the facility itself should not start until all the transportation infrastructure is safely in place. Although High-Level Waste transportation has occurred in the past, under this proposal it will take place on a much larger and more frequent scale. Will there need to be dedicated rail cars and other items as they become irradiated from multiple shipments? All this must be included.

Legal Weight Truck Shipments Must Be Analyzed

The potential for LWT (Legal Weight Truck) shipments of irradiated nuclear fuel to Holtec/ELEA's CISF in southeast NM must be explicitly eliminated or otherwise analyzed. Holtec/ELEA states in its license application documents such as its Environmental Report that it can accommodate any and all NRC-certified casks for shipping and/or storing irradiated nuclear fuel. This would include shipping casks for LWT transport, which can contain only 4 Pressurized Water Reactor (PWR) irradiated nuclear fuel assemblies, as compared to 24 or even 37 PWR assemblies in rail-sized casks on trains, barges, or heavy haul trucks. If LWT shipments are in fact to be a part of the Holtec/ELEA CISF transport scheme, then communities along interstate highways in most states in the Lower 48 should also be extended public comment meetings.

Barge Shipments Must Be Analyzed

We do not consent to radioactive waste barge shipments on the lakes and rivers of this country, the fresh drinking water supply for countless millions, nor on the seacoasts.

There are some two dozen or more nuclear reactors in the U.S. that lack direct rail access. Yet Holtec/ELEA, as well as DOE, have chosen the “mostly rail” shipping scenario of highly radioactive wastes as their preferred policy. Rail shipping containers weigh significantly more than 100 metric tons. These are not Legal Weight, and thus cannot go down the interstate highways over long distances, as they are designed to be transported on railways. But to get these gigantic, extremely heavy containers to the nearest railhead, either heavy haul trucks on roads or barges on waterways would have to be used. Barges raise the specter of a highly radioactive waste shipment sinking, with the potential for disastrous releases of hazardous radioactivity into drinking water supplies and fisheries, or even a nuclear chain reaction on the bottom of the surface waterway (there is enough uranium-235 and plutonium-239 present in highly radioactive wastes to induce possibly lethal nuclear criticality events when exposed to water).

We do not consent to highly radioactive waste shipments on the Great Lakes; one sunk barge could radioactively contaminate the drinking water supply for 40 million people in two countries – eight states in the U.S., and two provinces in Canada – as well as a large number of Native American First Nations. In 2002 DOE disclosed that the Palisades reactor in southwest Michigan and the Kewaunee and Point Beach nuclear power plants in Wisconsin could be potential barge shipment points of origin. The barges would ply the waters of Lake Michigan, headwaters for the rest of the Great Lakes downstream, and the direct drinking water supply for many millions of people, including the Chicago metro region.

We do not consent to highly radioactive waste barge shipments. NRC must analyze the Holtec/ELEA proposal for potential transportation impacts on waterways.

Impacts Of Future Railroads and Electric Lines Must Be Analyzed

The railways and electric lines that are not in place but are needed must be analyzed. Locations of electrical lines and estimates on electric use must be given. Locations of railways and impacts of railroad construction, including upgrading existing tracks that cannot handle the weight of the HI-STAR 190 transport cask, must be given. The ER is incomplete and inadequate. The NRC draft EIS must analyze these issues, if the licensing process proceeds.

Cask Transportation Must Be Analyzed

None of today’s certified waste containers are designed for real world transport conditions (temperatures, crash speeds, submersion in deep water), and have not been physically tested contrary to dump-promoter’s inappropriate use of 40 year-old crash-test videos on totally different casks. The storage containers cannot be monitored for potential cracks and leaks, inspected, repaired or replaced, even though we know the waste will be dangerous for far longer than they will actually last. The technology is in the “future,” according to NRC staff. The Nuclear Regulatory Commission must include in its draft environmental impact statement detailed analysis of moving 10’s of 1,000’s of shipments of the deadliest radioactive waste in super-heavy, inadequate containers over deteriorating railroad tracks, roads and bridges. In other words, the impacts from

many thousands of shipments on infrastructure, people, businesses, communities, and resources throughout all potential transportation routes all across the country.

Please Consider Our Comments Carefully

We expect comprehensive answers in the draft EIS to the issues we, and many thousands of folks, have raised while providing comments on Holtec's Environmental Report and scoping comments for the NRC's pending draft environmental impact statement. New Mexico and the Nation deserve better than to suffer unnecessary radioactive risks at the hands of a regional development scheme that will profit only a few.

Sincerely,
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