UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
Before the Atomic Safety and Licensing Board

In the Matter of	)	Docket No. 72-1051
Holtec International	)	October 16, 2018
(HI-STORE Consolidated Interim Storage Facility)	)	
	)	

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COMBINED REPLY OF DON'T WASTE MICHIGAN, CITIZENS' ENVIRONMENTAL COALITION, CITIZENS FOR ALTERNATIVES TO CHEMICAL CONTAMINATION, NUCLEAR ENERGY INFORMATION SERVICE, PUBLIC CITIZEN, INC., SAN LUIS OBISPO MOTHERS FOR PEACE AND NUCLEAR ISSUES STUDY GROUP TO HOLTEC AND NRC ANSWERS

Now come Petitioners Don't Waste Michigan, Citizens for Alternatives to Chemical Contamination, Public Citizen, Inc., San Luis Obispo Mothers for Peace, Nuclear Energy Information Service, Citizens' Environmental Coalition, and Nuclear Issues Study Group ("Joint Petitioners"), by and through counsel, and hereby reply in support of their September 14, 2018 "Motion to Intervene and Request for an Adjudicatory Hearing" in this licensing application case of Holtec International ("Holtec") to construct and operate the HI-STORE Consolidated Interim Storage Facility in Lea County, New Mexico ("Holtec CISF").

Joint Petitioners respond in this memorandum to "Holtec International's Answer Opposing the Don't Waste Michigan, Citizens' Environmental Coalition, Citizens for Alternatives to Chemical Contamination, Nuclear Energy Information Service, Public Citizen, Inc., San Luis Obispo Mothers for Peace, and Nuclear Issues Study Group Petition to Intervene and Request for an Adjudicatory Hearing on Holtec International's HI-STORE Consolidated

Interim Storage Facility Application" ("Holtec Answer") and the "NRC Staff's Consolidated Response to Petitioners to Intervene and Requests for Hearing filed by: Alliance for Environmental Strategies, Beyond Nuclear, Inc., Don't Waste Michigan, et al., NAC International, Inc., and the Sierra Club." ("NRC Answer").

I. Joint Petitioners Have Established Legal Standing To Intervene

A. Holtec's Shipping Policies Pose Threats Of Harm, Supporting Standing Claims

Holtec's business plan supports Petitioners' claims to legal standing. The initial, "routine" shipments that are incident-free are nonetheless analogous to extremely powerful mobile X-ray machines that cannot be turned off, delivering harmful doses at close range randomly. Even "routine" shipments can cause damage to property values nearby.

In addition to incident-free shipments, there is the looming reality that Holtec knowingly and intentionally will send back to the originating nuclear plant sites any and all canisters of Spent Nuclear Fuel ("SNF") and Greater-than-Class-C ("GTCC") waste that it finds, upon arrival in New Mexico, to be leaking, breached or showing exterior radioactive contamination. This "return to sender" policy potentially will translate, over 20 years and 10,000 SNF/GTCC deliveries, into the intentional return of an unknown quantity of leaky, contaminated or damaged canisters back along the routes from whence they came. Return-to-sender poses the potential for multiple regulatory and possibly federal criminal law violations by deliberately exposing potentially thousands of citizens along these routes to potential radiological exposure or accident.

Holtec asserts that Joint Petitioners have made no showing why the standards in subsection 10 C.F.R. § 71.47(a) would not apply to any return shipments. Holtec Answer at 64. Notably, Holtec makes no mention of that regulation's applicability to returned shipments of

SNF/GTCC anywhere in its application. Even if that regulation provides standards for return shipments, Holtec has not accounted for canisters arriving at Holtec that are leaking or contaminated beyond them. Holtec will not have the technological ability on hand to remediate serious, problematic arrivals of waste that exceed NRC limits. Will they simply be turned around and sent away? If so, then leaking or flawed canisters shipped over great distances to Holtec will retrace through the same populated areas, with the same delays, infrastructure weaknesses, vulnerabilities to sabotage or terrorism and risks of accident that pertained during transit to New Mexico.

Nowhere in its application does Holtec explain its "site requirements" governing acceptance of casks at the site. But the firm insists that it will impose a stricter standard of acceptance than NRC regulations require: "the arriving package from the sender plant site has been assayed and declared to be free of *any* external contamination." SAR at Section 3.0, p. 192 of 651 (Emphasis added). Holtec thus pledges zero contamination, which is a tougher standard that NRC's allowance for a dose rate of 10 mR/hr. at 6 feet distance, and the related 200 mR/hr. at the cask surface allowable dose rate. Does Holtec really mean that, or has it simply exaggerated the purity of its self-regulation to try to cause denial of admission of Contention 7? In any event, Holtec has unexpectedly, by its Answer, identified an issue of fact within its own application concerning its site requirement and has provided another issue supporting the standing of Joint Petitioners to litigate this striking statement in adjudicatory circumstances.

The larger issue is that Holtec provides no clear understanding concerning what will be considered problematic casks, hence there are no standards for acceptance and rejection to evaluate alongside 10 C.F.R. § 71.47. Holtec advances the suspect notion that 100% of the

arriving casks will fall within the limits specified by § 71.47, and that some nonconforming casks will be turned around and sent home without complication. The company's assurances that NRC regulations will protect the public on the return trip ring hollow:

> 10 C.F.R. § 71.47 provides "external radiation standards for all packages" and specifically allows a certain level of radiation on the external surface of the package during transportation. 10 C.F.R. § 71.47(a). *Even this radiation limit is not absolute; it can be exceeded if certain additional conditions are met. 10 C.F.R. § 71.47(b).*

Holtec Answer at 63 (Emphasis added). As further discussed below in the Petitioners' reply in support of Contention 7 which addresses Holtec's vaunted "Start Clean/Stay Clean" policy, the company reveals nothing in the Environmental Report about how § 71.47 will work as a component of its business plan. In light of the dangers inherent in SNF and GTCC waste transport, Joint Petitioners have shown the threat of injury sufficient to give them standing.

Holtec engages in arguments over facts and the supposed protective nature of NRC regulations to deny standing. Holtec is attempting to conduct a trial by lawyer representation at this very early stage of this proceeding. But it is Holtec's act of asserting its suspect business plan of return-to-sender within the larger scheme of its application, which proposes a project which cannot be approved by the NRC, that forms the locus of Petitioners' standing. Since standing must be based upon an injury that is "fairly traceable to the challenged action of the defendant … Petitioners must therefore demonstrate a plausible chain of causation between the licensed activity and the alleged injury." *Cogema Mining, Inc.* (Irigaray and Christensen Ranch Facilities), LBP-09-13, 70 N.R.C. 168, 176-177 (2009), citing *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560 (1992). Here, Joint Petitioners challenge Holtec's authority to apply for and receive a CISF license, as well as the NRC's jurisdiction to review and approve such license applications. If the NRC proceeds with the licensing of Holtec, it could be built, leading to real and/or threatened

injuries to Joint Petitioners' members. Transportation of 10,000 canisters from far-flung places to Holtec is the *sine qua non* of Holtec's business plan; but for the NRC and Holtec violating the NWPA, Joint Petitioners' members would not be concerned that a nuclear waste storage facility may be constructed which will compel thousands of transports proximate to their members, and cause or threaten injuries to their health, safety, environment, and property. Thus, the radiological injuries Joint Petitioners' members will suffer from the Holtec CISF are fairly traceable to Holtec's application and advocacy for its approval, and the NRC's act of according any credence whatsoever to that application.

There is another justification supporting a finding of legal standing here. Holtec asserts that its business plan for the CISF, which is not licensable, coupled with the NRC Staff's oversight, which is regulatorily malfeasant, somehow should be allowed to trump the public's standing to oppose deliberate radiation exposure risks borne by members of the public. What is at stake for Holtec is the pursuit of billions in profits; at stake for Joint Petitioners' members threats of damage to public health and the environment. Holtec's express written intentions of exposing the public to risks from the most lethal substances on the planet and the NRC Staff's accommodation of that whim could someday be viewed as evidence of criminal premeditation by a grand jury if Holtec and the Staff have bet wrong. The public's inherent right to challenge corporate behavior that directly poses threats to health and safety compels vindication in the form of granting Petitioners standing to oppose those very possibilities. This is particularly true in light of the extreme dangerousness from handling and transporting SNF and GTCC. Since NRC Staff is apparently unwilling to recognize this public right to self-protection from inherently dangerous projects, the people's inherent right to intervene for self-protection must control the standing

determination.

B. The NRC Staff Misuses Its Inadequate Regulatory Oversight To Undercut Joint Petitioners' Claimed Standing

In an unctuous argument, the NRC Staff accuses the Joint Petitioners of failing to support their assertions "that the portions of the transportation routes to which the declarants claim proximity will be used to transport SNF or GTCC waste to the Holtec facility." The Staff says that the declarants for the Joint Petitioners have not established that the rail or truck routes near where they live, recreate or work are the routes that Holtec will use for transporting SNF/GTCC to New Mexico.

Holtec's information about its transportation plans is grossly incomplete. While conceding that 95% or so of the canisters will be delivered by rail, Holtec provided only a single map in the application to show anticipated routes, and that map reveals the expected rail routes of waste delivery from only four reactors. *See* Figure 4.9.1 at ER p. 207/543, "Transportation Routes for SNF." It is the *only* portrayal of expected transportation paths in the entire Holtec application, and purports to show routing for "Maine Yankee to CISF," "San Onofre to CISF," and "CISF to Yucca Mountain."

Because many of the Joint Petitioners are not found along the Figure 4.9.1 routes, the NRC Staff improperly blames the Petitioners, who are clamoring for maps[1] detailing Holtec's anticipated routes, for their supposedly inability to show that they live/work/recreate proximate to Holtec's intended shipping corridors. The Staff treats as insufficiently proven several declarations by some of Joint Intervenors' members who clearly have shown their proximity to

[1]Petitioners' Contention 9 expressly seeks disclosure of probable rail transportation routes.

rail routes certain to be used to ship SNF/GTCC waste to Holtec.

And even as the NRC Staff runs interference for Holtec, Holtec objects in its Answer that it's way too soon, and worse, "unreasonable," for the company to be required to disclose transport routes:

> . . . [B]ecause it is premature for Holtec to identify specific transportation routes and then attempt to evaluate their environmental impacts, Petitioners are demanding a "crystal ball inquiry"[2] that is not required under NEPA.
>
> No agreement has been entered into with any customers, be they a nuclear utility holding title to SNF, other entities owning SNF, or the DOE to store SNF at the CISF.
>
> Petitioners request for a NEPA evaluation of future, specific SNF transportation routes is also premature because optimal road and rail routes can change over time. The NRC generally approves road routes for five-year periods and rail routes for seven-year periods. NUREG-0561181 at 5. Before commencing a shipment by rail, the applicant "should verify with the rail carrier that a route the NRC has previously approved is still the route posing the least overall safety and security risk" and "submit a request to the NRC to amend the approved rail route if conditions warrant changes to certain segments of the route." Id. at 6. Road routes should be physically inspected and re-inspected as warranted in light of changing road conditions due to significant road construction, demolition, or construction of rest areas. Id. at 5-6. *Thus, identifying specific transportation routes now is premature, unnecessary, and unreasonable*.

Holtec Answer, pp 67-68 (Emphasis added).

Perhaps the real reasons that only two specific routes have been identified are that the underlying CISF proposal has no legal basis; that utilities are hesitant to sign a contract to transport waste to a fictitious facility that no governmental agency has the power to authorize;

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[2]Holtec terms the public's demand for on disclosure of routing information "crystal ball inquiry." The phrase comes from *Scientists' Inst. for Pub. Info., Inc. v. Atomic Energy Comm'n*, 481 F.2d 1079, 1092, 156 U.S.App. D.C. 395 (D.C. Cir. 1973), where the court held that in preparing an EIS, an "agency need not foresee the unforeseeable, but . . . [r]easonable forecasting and speculation is . . . implicit in NEPA. . . ." The court warned that "we must reject any attempt by agencies to shirk their responsibilities under NEPA *by labeling any and all discussion of future environmental effects as 'crystal ball inquiry'"* and concluded that while NEPA does not demand forecasting that is "not meaningfully possible," an agency still must fulfill its duties to "the fullest extent possible." *Id.* For Holtec to call the public's insistence on having specific transportation route information, now, "crystal ball inquiry" and unnecessary under NEPA–even though it can identify routes from which to extrapolate sweeping conclusions predicated solely on assumed trouble-free deliveries–swaps irony for burlesque.

that Holtec just won't undertake the project without guaranteed Federal deliverance; and that the only way to get its unlawful project approved is by concealing information to thwart challengers.

Since Holtec balked at "prematurely" providing route information, the Joint Petitioners turned to a logical source of rail transport information, *i.e.,* routing maps compiled by the State of Nevada in the Yucca Mountain repository licensing case, which Petitioners recited at footnote 2 of their original petition, and which they reproduce here.[3] Petitioners reasoned that due to the overweight nature of SNF casks in transport, only the highest class, best-maintained trunk railroad lines would be used for the 20 years of transporting nearly 10,000 separate rail deliveries.

Holtec's refusal to place in the ER maps showing all expected routes for the largest movement of radioactive waste in the history of humanity must not be scored against the Joint Petitioners. The NRC Staff picked the calendar dates for commencement of this licensing proceeding, entrapping the public in a 60 day time window to intervene, and forcing the public to rely on an environmental report that is 25% redacted and contains but a single map showing routes for 3% of the 120+ nuclear power plants that may become Holtec customers. The NRC Staff's failure to require disclosure of all expected rail routes by Holtec has fostered its disingenuous objection to Petitioners' standing.

C. Joint Petitioners Have Demonstrated Actual Injury Standing In The Form Of Minor Radiological Exposure

Holtec inveighs against the Joint Petitioners for not having articulated the particulars of a

[3]http://www.state.nv.us/nucwaste/news2017/115th%20Congressional%20Districts%207252017.pdf (at page 3); http://www.state.nv.us/nucwaste/news2017/State%20Maps.pdf; https://www.nirs.org/wp-content/uploads/factsheets/mibargefactsheet92804.pdf; http://www.state.nv.us/nucwaste/news2017/pdf/Cities_Affected.pdf

large-scale radiological accident:

> Petitioners do not provide a plausible explanation of how a cask could be breached during transport or why any "scenarios not contemplated by Holtec" might reasonably be expected to occur. Moreover, Petitioners have not provided a description of how, if an accident were to occur, radiological contaminants could spread and cause injury to their members. Petitioners do not show that an injury is "certainly impending" from the proposed action. Instead, Petitioners have asserted injury-in-fact entirely on the tenuous assumption that a hypothetical accident occurring in an area near one of the Petitioners' member's place of residence, work, or recreation could expose the member, the member's family, or the member's property to radiation.

Holtec Answer at 19.

Holtec's response is grossly inaccurate. The declarants for Joint Petitioners each identified threats from routine radiation emissions that they might face from the canisters and casks in transit:

> I understand the casks, once set on rail cars, will be extremely heavy and concentrated loads on the tracks, and similarly will be unusually heavy loads on the specially-built truck trailers used to transport them on highways. I am concerned that scenarios not contemplated by Holtec in its ER could occur, such as a radioactive cask being so overweight that it derails and sits for days or longer in an area in which I live/work/recreate; or a truck trailer load bearing failure that requires transfer of the transport cask onto another trailer near me or others in my household.
>
> The thought of being stuck in traffic at a rail crossing or on a parallel highway near a cask containing SNF or GTCC causes me concern for my health and safety and that of people and animals in my household. Multiple transports in the thousands suggests to me that there may be cumulative radiation effects on people, plants and property from even normal transports of SNF and GTCC wastes along the proposed rail and highway routes.

But even so, the ER contains Holtec's admitted risks of radiologic accident from transporting SNF/GTCC to the Holtec facility. *See e.g.*, ER at 4-34 (the application analyzes "a spectrum of accidents that ranged from high-probability accidents of low severity and consequences to severe accidents with radiological consequences"). Further, the ER asserts that the "maximum reasonably foreseeable accident associated with SNF transport to the CIS

Facility" could cause increased radiation exposure:

> If the accident occurred in an urban area, the estimated population radiation dose would be about 16,000 person-rem. If the accident occurred in a rural area, the estimated population radiation dose would be about 21 person-rem. Because these risks are for the entire population exposed during the accident, the risk to any single individual would be small. In an urban area or rural area, the radiation dose from the accident for the maximally exposed individual would be 34 rem; this is based on the individual being 1,100 feet downwind from the accident, where the maximum dose would occur (DOE 2008, Section 6.3.3.2).

ER § 4.9.3, p. 201/543 of .pdf.

Thus Joint Petitioners have shown radiological injury from routine as well as accidental exposures. In both types of injury scenarios, members' interest in and right to travel will also be impaired, because they will either not know which route is safest to avoid radiological injury from nearby transportation of SNF/GTCC, or they will be unable to avoid unsafe routes because of limited highway options in some areas. "[T]he emission of non-natural radiation into appellees' environment would also seem a direct and present injury, given our generalized concern about exposure to radiation and the apprehension flowing from the uncertainty about the health and genetic consequences of even small emissions like those concededly emitted by nuclear power plants." *Duke Power Co. v. Carolina Environmental Study Group*, 438 U.S. 59, 74 (1978).

"A threatened unwanted exposure to radiation, even a minor one, is sufficient to establish an injury." *Dominion Nuclear Connecticut, Inc*. (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 216 (2003); *see also Duke Power Co. v. Carolina Environmental Study Group, Inc*., 438 U.S. 59, 74 (1978). Petitioners have demonstrated threats of unwanted radiation exposure to their members and should be accorded injury-related standing.

D. Joint Petitioners Have Articulated Satisfactory Proximity Standing

Contrary to the NRC Staff's argument, the Joint Petitioners' members have revealed, through their declarations, geographical proximity to rail and truck lines, and to a possible barge route such as requires that they be granted legal standing.

If the petitioner shows proximity to a source of dangerously radioactive materials, she does not have the burden of articulating a plausible means through which those materials could cause harm to her; the inherent dangers of the radioactive materials comprise the obvious potential for offsite consequences. *U.S. Army Installation Command* (Schofield Barracks, Oahu, Hawaii, and Pohakuloa Training Area, Island of Hawaii, Hawaii), CLI-10-20, 71 NRC 216, 218 (2010), citing *USEC, Inc*. (American Centrifuge Plant), CLI-05-11, 61 NRC 309, 311 (2005). Petitioners have also demonstrated proximity standing and should be allowed to proceed because of it.

The NRC Staff's blanket rejection of the Joint Petitioners' declarations undermines the validity of the Staff's supposed reason for repudiation. Joint Petitioners have standing to proceed with their contentions in opposition to the Holtec application based on the proximity presumption, through members who reside, recreate or work nearby anticipated truck, rail and barge routes by means of which SNF/GTCC casks will be transported. They thus have frequent and regular contacts within the radius of potential obvious offsite consequences from the transportation routes to the Holtec CISF, including:

- Don't Waste Michigan member Michael J. Keegan of Monroe, Michigan who stated that the water intake that supplies his drinking water is located 1/4 mile south of Fermi 2 nuclear reactor and its nearby independent spent fuel storage installation, or ISFSI. Keegan lives 8 miles

from Fermi 2, has studied U.S. DOE maps and averred notes that the railroad line likely to transport SNF and GTCC waste casks away from Fermi is 6 miles from his home. He further had calculated that several hundred casks are likely to be delivered from Fermi 2 to Holtec.

- Don't Waste Michigan member Hedi Kaufman, who also lives in Monroe, Michigan and gets her drinking water from the same intake as Michael Keegan. Mrs. Kaufman had also studied DOE maps and determined that she lives 2.5 miles from the railroad route most likely to deliver SNF and GTCC waste from Fermi to Holtec in New Mexico; she resides less than four miles from Fermi 2 reactor and the ISFSI. She believes SNF/GTCC will be transported on that rail.

- DWM member Martin R. Kaufman, who resides in Monroe, Michigan with Hedi and swore to the same facts.

- DWM member Maynard Kaufman, who resides in Bangor, Michigan and learned from the DOE maps that he lives about a mile from a major rail route near his property that is connected to the Palisades nuclear power reactor and ISFSI about 10 miles away. He believes that several hundred, or more, cargoes of SNF and GTCC waste will be transported on that rail line to Holtec.

- DWM member JoAnne Beeman, who resides in Charlevoix, Michigan, less than 2 miles from the Big Rock Point ISFSI. She frequently travels on U.S. highway 31 between Charlevoix and Petoskey, a designated Heavy Haul Trucking Route, and anticipates the overloaded trucks carrying SNF and GTCC waste casks will use that route en route to New Mexico.

- Citizens Environmental Coalition ("CEC") member Thomas Ellis, who resides in

Albany, NY, less than 10 miles from a major railroad route which he identified from DOE maps. He believes hundreds of casks of SNF and GTCC waste will be delivered to Holtec in New Mexico. There are several nuclear power plants east and northeast of Albany.

- CEC member Linda DeStefano, who resides in Syracuse, NY, less than 10 miles from a major rail route she identified on DOE maps and believes will be used to transport SNF and GTCC waste to Holtec's CISF. She believes hundreds of casks of SNF and GTCC waste will be delivered to Holtec in New Mexico. There are several nuclear power plants east and northeast of Syracuse.

- CEC member Peter Swords, who lives in Syracuse and found from DOE maps that his home is less than 2 miles from the major rail route that he believes will be used to transport hundreds of casks of SNF and GTCC waste to Holtec in New Mexico. There are several nuclear power plants east and northeast of Syracuse.

- CEC member Charley Bowman, who resides in Getzville, New York and learned from DOE maps that he lives 8.2 miles from a major rail route on which he believes hundreds of casks of SNF and GTCC waste will be delivered to Holtec in New Mexico. There are several nuclear power plants east and northeast of Getzville.

- CEC member Joanne Hameister, who resides in East Aurora, NY, 15 miles from the major rail line she identified after reviewing DOE maps. She believes hundreds of casks of SNF and GTCC waste will be delivered to Holtec in New Mexico over that route. There are several nuclear power plants east and northeast of East Aurora.

- CEC member Lynda Schneekloth, who resides in Buffalo, NY and lives 1.5 miles from a major rail route she identified from DOE maps. She believes the rail line will be the likely

corridor for transport of at least hundreds of cargoes of SNF and GTCC waste from eastern nuclear power reactors to Holtec in New Mexico. There are several nuclear power plants east and northeast of Buffalo.

- San Luis Obispo Mothers for Peace ("SLOMPF") member Jane Swanson, resident of San Luis Obispo, CA, who lives near the Diablo Canyon nuclear power plant. Ms. Swanson produced an amended declaration, attached to this Reply, in which she states that the rail line from Diablo Canyon passes within 12 miles of her home, that "it will be necessary to transport those wastes by truck from the Diablo plant to the railroad, and the intersection of the only road leading away from the Diablo Canyon plant to the Highway 101 freeway or its frontage roads is within three miles of my home...." As a consequence, Ms. Swanson is "concerned for my personal safety and that of others who live in my household from radiation exposure in the event of a serious transport accident, vandalism or a terrorist attack on a shipment."

- SLOMPF member Jill ZamEk, who lives in Arroyo Grande, CA, near Diablo Canyon and states that the plant is approximately 12 miles from her home. "If transport of SNF/GTCC is by rail, the only rail line for at least 10 miles in any direction from Diablo Canyon passes within 4 to 5 miles of my home. The major U.S. highway nearest the plant, on which truck transports of SNF/GTCC passes within 2 miles of my home. If the SNF/GTCC is loaded on a barge to be sent elsewhere by water, the barge loading area for Diablo Canyon is 10 miles from my home." She is concerned for her personal safety.

- Public Citizen member Petuuche Gilbert, who lives in the Pueblo of Acoma, New Mexico and following study of DOE maps learned that his home, place of work, places of recreation and hospital all are within 1 mile of from major rail and highway corridors over which

he believes SNF and GTCC waste will be transported en route to Holtec.

- Public Citizen member Lon Burnam, who resides in Fort Worth, Texas and after according to DOE maps, lives 2 miles from major rail and highway corridors over which he believes SNF and GTCC waste will be transported en route to Holtec.

- Citizens for Alternatives to Chemical Contamination ("CACC") member Connie Beauvais, who resides in Bath, MI, about four miles from the interchange of Interstate 69 and U.S. Highway 127. According to DOE maps, Ms. Beauvais lives less than 3 miles from a major rail route which she believes will be used to transport hundreds of shipments of SNF and GTTC waste from Michigan nuclear power reactors to Holtec.

- Chambre V. Beauvais, CACC member who resides with Ms. Beauvais and swore to the same facts.

- CACC member Nancy Ann Refior, who resides in East Lansing, Michigan, and according to DOE maps, lives less than 2 miles from a major rail route which she believes will be used to transport hundreds of shipments of SNF and GTTC waste from various Michigan nuclear power reactors to Holtec.

- CACC member John T. Benetti, who resides in Dimondale, Michigan and who concluded from DOE maps that he lives less than 3 miles from a major rail route which he believes will be used to transport hundreds of shipments of SNF and GTTC waste from Michigan nuclear power reactors to Holtec.

- Nuclear Energy Information Service ("NEIS") member Joyce Harant, of Peoria, Illinois, who has learned from DOE maps that a major likely highway transport route is within 1/10 of a mile from her home, which she believes may be used to transport several thousand, or

more, cargoes of SNF and/or GTCC wastes to the Holtec facility.

● NEIS member Patricia L. Walter, of Glenview, Illinois, a Chicago suburb, who concluded upon seeing DOE maps that a major railroad line is within 2 miles of her home and that it may be used to transport several thousand, or more, cargoes of SNF and/or GTCC wastes to the Holtec facility.

● Leona Morgan, member of the Nuclear Issues Study Group in Albuquerque, New Mexico and found that according to DOE maps, she lives within one mile of a main rail line likely to be used for transport of spent nuclear fuel and GTCC waste to the Holtec CISF and that hundreds or thousands of such shipments may pass on that line through Albuquerque en route to Holtec.

E. Joint Petitioners Possess Standing Conferred By Act Of Congress

In *Massachusetts v. EPA*, 549 U.S. 497, 127 S.Ct. 1438 (2007), the plaintiffs challenged the EPA's failure to address climate change through the Clean Air Act. In finding that the plaintiffs had standing, the court first quoted noted that the decision of *Baker v. Carr*, 369 U.S. 186, 204, 82 S.Ct. 691 (1962), specified the basis of standing as whether plaintiffs have "such a personal stake in the outcome of the controversy as to assure that concrete adverseness which sharpens the presentation of issues upon which the court so largely depends for illumination."

In *Massachusetts*, the court noted that a party granted a procedural right by legislation to protect concrete interests, such as the right to challenge agency action, has standing without meeting all the normal standards for redressability and immediacy. With respect to NEPA cases, the U.S. Eighth Circuit Court explained that the injury-in-fact was not the consequences of the proposed federal action, but rather the "increased risk of environmental harm stemming from the

agency's allegedly uninformed decision-making." *Sierra Club v. Corps of Engineers*, 446 F.3d 808 (8th Cir. 2006).

Joint Petitioners' members have established legal standing by means of one or more of the above bases. They have provided evidence that the interest of at least one of its members will be harmed; have identified that member by name and address; and have proven that the organization is authorized to request a hearing on behalf of that member. In addition, each member of Joint Petitioners has depicted individual standing in order to assert representational standing on his or her behalf, and the interests that the Joint Petitioner representative organization seeks to protect are in each instance germane to the petitioning organization's own purpose.

II. OBJECTION: With No Federal Authorization for the Holtec CISF, Petitioners' Continuing Objection to Going Forward With This Proceeding Is Not A Permissible Challenge to the Commission's Subject Matter Jurisdiction

Holtec objects to Petitioner's objection "that the NWPA prohibits the NRC from licensing the CISF and that the NRC's regulations at 10 CFR Part 72 do not authorize the facility," and in that respect, Petitioners completely agree with Holtec. Petitioners object to Holtec's proposal because it depends on a legal and contractual framework that does not exist.

Under existing law, financial guarantees to Holtec can come from DOE only after DOE begins to take title to spent nuclear fuel at the geological repository. There is no legal authority under the Nuclear Waste Policy Act of 1983, as amended, nor anywhere else in the Atomic Energy Act, for DOE to enter into any agreement with Holtec to pay for centralized interim storage facility construction, operations, maintenance, decommissioning, or liabilities. Yet Holtec insists it must have such an arrangement in order to conduct business.

In its draft "License for Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste,"[4] Holtec states (¶ 17) that "the construction program will be undertaken only after a definitive agreement with the prospective user/payer for storing the used fuel (USDOE and/or a nuclear plant owner) at HI-STORE CIS has been established."

Holtec huffs (Answer at 32) that "Joint Petitioners' contention relies entirely on reading out of the application the acknowledgment *(sic)* that the Applicant may obtain its funding by enter into contracts with utilities rather than with DOE." Holtec's insistence that private utilities might contract with the firm poses an issue of fact within the license application. The NRC is being asked, in effect, to approve *two* applications, one that postulates a legal pathway to financing and decommissioning but is economically improbable; and one that lays out a legally impossible pathway. The environmental impacts and implications of each option differ significantly and Holtec uses the supposed option of private utility payers to camouflage the prerequisite of Federal largesse.

If all were at stake were constructing and operating a lawful, private utility-sponsored interim storage facility, Private Fuel Services in Utah would be open and Holtec would be marketing canisters for that venture and making considerable sums of money. But PFS is not open and the notable difference in Holtec's approach now is that the company seeks the arrangement of Federal welfare for consolidated storage in New Mexico–billions in governmental largesse from the beginning through to the decommissioning of the CISF, replete with Federal absorption of all liability for spills, leaks, massive accidents and irradiation of people and the environment.

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[4]https://www.nrc.gov/docs/ML1731/ML17310A223.pdf

And so long as that is the Holtec objective, Petitioners will continue to object to the initiation and continuation of this proceeding.

The reasons that Petitioners are fully within their rights to persist in objecting to this illegitimate proceeding are several:

A. The Commission Granted Explicit Permission To Object Via Contention Filing

In *Waste Control Specialists, L.L.C.* (Consolidated Interim Storage Facility), CLI-17-10, 85 N.R.C. 221 (2017) ("CLI-17-10"), the Commission held that petitioners could raise their NWPA-related claims "after the hearing is re-noticed; 10 C.F.R. § 2.309(f)(1) specifically permits petitioners to present contentions that raise issues of law." *Id.* at 222. These Petitioners have raised a contention pursuant to that order.

B. The Objection Encompasses a Fundamental Issue Going to Heart of This Proceeding

Moreover, since the question of organic legality raises a "fundamental issue that goes to the very heart of [this] proceeding" it may be considered apart from Holtec's or the NRC Staff's assertions that Petitioners have not timely filed their objection according to 10 C.F.R. Part 2 procedural rules. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-11, 55 N.R.C. 260 (2002). In *Private Fuel Storage*, the Commission ruled that claims of NWPA noncompliance raised "a fundamental issue going to the very heart" of the proceeding, therefore warranting "immediate merits consideration" by the Commission. 55 N.R.C. at 264. The Commission reasoned that "if in fact NRC has no authority to issue P.F.S. a license, completion of the licensing process would be a waste of resources for all parties as well as the Commission." *Id.* Thus the Commission overruled timeliness objections to a petition challenging its jurisdiction to conduct the Private Fuel Storage licensing proceeding under the NWPA even

though the State of Utah took four years to get around to filing the petition. *Id*. The Commission found "countervailing concerns that make immediate merits consideration appropriate." *Id.*

C. The NRC Has No Subject Matter Jurisidiction

Holtec's insistence that laches bars its presumptuous monetary and contract demands ignores the longstanding principle that the NRC, as a quasi-judicial agency, possesses the inherent power to determine whether it has jurisdiction over the Holtec application, which establishes the subject matter of this legal proceeding. Each day that Holtec's unauthorized, unlawful application remains pending and is given credence by NRC Staff processing is evidence of a continuing wrong against the Commission, the opposing parties, and the public. Holtec may not claim the applicability of laches here. Petitioners' objections are not "impermissibly tardy;" they have been timely raised against the continuing unlawful nature of this legally baseless proposal.

Holtec's laches defense–that Petitioners should have objected months ago, tied to public notification--is an equitable doctrine. Laches bars the late filing of a claim if a party would be prejudiced because of actions taken during the interim in reliance on the right challenged by the claimant. But there was no "right" being exercised by Holtec in submitting an application that flagrantly deviates from the regulatory authority exercisable by the NRC. Moreover, "the evidence must show both that the delay was unreasonable and that it prejudiced the defendant." *Van Bourg v. Nitze*, 388 F. 2d 557, 565 (D.C. Cir. 1967), quoting *Powell v. Zuckert*, 366 F.2d 634, 636 (D.C. Cir. 1966). There was no delay here. Petitioners timely objected via filing their Petition to Intervene, as allowed by the Commission. And Holtec cannot show that it has been prejudiced by Petitioners raising their subject matter jurisdiction objection at this very early stage

of the proceeding at a point in time explicitly approved by the Commission.

The absence of subject matter jurisdiction may be raised at any time in a Nuclear Regulatory Commission proceeding without regard to timeliness considerations. *Toledo Edison Co.* (Perry Nuclear Power Plant, Unit 1; Davis-Besse Nuclear Power Station, Unit 1), LBP-92-32, 36 NRC 269, 287 fn. 46 (1992), *aff'd on other grounds, City of Cleveland v. NRC*, 68 F.3d 1361 (D.C. Cir. 1995). In *Toledo Edison Co.*, the Commission stated that "It is, of course, well established that the absence of 'subject matter' jurisdiction may be raised at any time in a proceeding without regard to timeliness considerations. *See generally* SA Wright & Miller. Civil Practice and Procedure, § 1350 (2d ed. 1990). . . . [I]f the 'bedrock' issue is indeed a 'jurisdictional' matter, this would provide another reason for declining to bar any of the claims before us on the ground of laches." *Id*. at 287 fn. 46.

"The jurisdiction of a court over the subject matter of a claim involves the court's competency to consider a given type of case, and cannot be waived or otherwise conferred upon the court by the parties. Otherwise, a party could 'work a wrongful extension of federal jurisdiction and give district courts power the Congress denied them.'" *Jackson v. Seaboard Coast Line R.R.*, 678 F.2d 992, 1000-01 (11th Cir.1982) (quoting *American Fire & Cas. Co. v. Finn*, 341 U.S. 6, 18, 71 S.Ct. 534, 542, 95 L.Ed. 702 (1951)) (internal footnotes and citations omitted). A decision on the merits by a court lacking subject-matter jurisdiction is an utter nullity, without binding effect. *See Steel Co. v. Citizens for a Better Env't*, 523 U.S. 83, 101-02 (1998).

The issue of the Commission's ongoing lack of subject matter jurisdiction over Holtec's application may be raised at any time. So long as Holtec is allowed to fritter away the resources

of its opponents on an unlawful application, abetted by the NRC Staff, the Joint Petitioners will renew and pursue their objections.

III. CONTENTIONS

While the threshold admissibility requirements are not supposed to be turned into a "fortress to deny intervention," *Power Authority of the State of New York, et al.* (James FitzPatrick Nuclear Power Plant; Indian Point Nuclear Generating Unit 3), CLI-00-22, 52 NRC 266, 295 (2000), Holtec and the NRC Staff prefer things to be that way..

Contention No. 1: Improper Cultural Resources Redaction

Joint Petitioners contend that the NEPA functions of disclosure for purposes of public consultations and involvement in mitigation plans and commenting have been thwarted by the redaction of 144 pages of the Environmental Report.

Holtec and the NRC Staff each have quite missed the point of Petitioners' contention. Their response is to accuse Joint Petitioners of failing to avail themselves of SUNSI access. SUNSI access, however, would not resolve the contention, by means of which Petitioners are attempting to exercise their rights under the National Historic Preservation Act and NEPA.

An alleged injury to a purely legal interest is sufficient to support standing. *Cleveland Elec. Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), LBP-90-15, 31 NRC 501, 506 (1990), *reconsid. denied*, LBP-90-25, 32 NRC 21 (1990) (petitioner derived standing by alleging that a proposed license amendment would deprive it of the right to notice and opportunity for hearing provided by § 189a. of the AEA). The legal interests in this contention are the rights under the National Historic Preservation Act and the National Environmental Policy Act to public consultations and involvement in mitigation plans and commenting on the cultural

properties ostensibly identified in the ER but redacted from public access.

The cumbersome, time-consuming and resource-draining SUNSI enrollment procedure is a serious deterrent to its use. The process for access to sensitive unclassified non-safeguards information ("SUNSI") requires the requestor to demonstrate a reasonable basis to believe that he or she is likely to establish standing to intervene and he or she must demonstrate a need for the information. The requestor has to provide sufficient information, including an explanation of the content of possible contentions, and related to that, the need for the information in order to participate meaningfully in an adjudicatory proceeding.

While the chase for SUNSI continues, the requestor must still comply with the deadline for filing his, her or its petition to intervene in the licensing case, including statements of standing and all contentions whose formulation does not require access to SUNSI. At some point, the NRC Staff informs the requestor of the Staff's ruling whether the requestor has shown a sufficient basis to establish standing along with the need for SUNSI. If the Staff finds a need for SUNSI plus a likelihood of standing, the Staff begins to process the requested documents, including making redactions or reviewing redacted documents). If NRC Staff instead finds no need or no likelihood of standing, the requestor is left to appeal by filing a motion seeking a ruling to reverse the NRC Staff's decision with presiding officer. After the Staff responds, if a ruling is made in favor of the requester to provide SUNSI, the NRC Staff then completes information processing (in which it still retains the power of redaction) and files a file motion for Protective Order and draft Non-Disclosure Affidavit to be signed by all people cleared for SUNSI.

Following this tedious and lengthy process, the requester is forbidden to communicate the

information to anyone except another person with established SUNSI clearance.

Notably, requests for access to topical SUNSI in order to fully understand and research potential issues, and requests based on speculation that the requestor's case could otherwise be harmed without access, have been held inadequate as a demonstration of legitimate need for access to SUNSI. *STP Nuclear Operating Co.* (South Texas Project Units 3 & 4), LBP-09-05, 69 NRC 303, 313-314 (2009). Thus there is a significant potential that access under SUNSI would not be granted to Petitioners or their representative.

The protracted, disincentive-cloyed SUNSI process, even if successfully pursued by Petitioners, is incapable of yielding the result sought by Petitioners, who at all times have sought *public* disclosure of details that would allow the *public* to ascertain for themselves whether the two unidentified cultural resources that would be directly affected by the project are eligible for nomination to the National Register of Historic Places; to determine whether required consultations have occurred; and to ascertain whether there are mitigation measures available if the properties have been destroyed and advocate for mitigation or preservation. According to the Environmental Report, the public cannot tell even now at this point whether the putative historical or cultural resources would be destroyed by the project; Holtec did not explain how they would be "directly affected"by the CISF project.

Petitioners submit that the public must be afforded its statutorily guaranteed participatory role in determining the fate of and, if need be, mitigation measures for, the affected cultural resources. SUNSI offers no solution for that, only disclosure will.

Contention No. 2: Insufficient Assurances of Financing

Holtec and the NRC Staff have adopted a highly speculative view of Holtec's pre-

disposal responsibilities for spent nuclear fuel. Holtec has presented essentially two applications to the NRC. One postulates a legal pathway to financing and decommissioning but is economically improbable; and the other one lays out a legally impossible pathway. The financial impacts and implications of each option differ significantly. Holtec uses the supposed option of private utility payer financing of the CISF to camouflage its designs on gaining up Federal largesse.

In the absence of contract terms that cannot be promulgated without new federal legislation this license application contains strong elements of speculation that are at odds with established research by the U.S. Department of Energy. Moreover, it is not the domain of the Nuclear Regulatory Commission (NRC) or WSC to speculate what the contractual requirements will be within the DOE or legislative stipulations by the U.S. Congress.

Pursuant to 10 C.F.R. § 72.22(e), Holtec is required to demonstrate "reasonable assurance" that it can fund the construction, operation and decommissioning of the CISF. At several places in its application, Holtec inconsistently states that it will solely finance the CISF from internal resources, but says at the same time that it must have definite contractual arrangements with the U.S. DOE and the outside funding that would come with those arrangements in order to undertake the CISF. An example is this:

> In accordance with 10 CFR 72.22, the construction program will be undertaken only after a definitive agreement with the prospective user/payer for storing the used fuel (USDOE and/or a nuclear plant owner) at HI-STORE CIS has been established. Construction of any additional capacity beyond this initial capacity amount shall commence only after funding is fully committed that is adequate to construct such additional capacity.

Holtec draft license, ¶ 17. According to Holtec, this statement does not support Contention 2 because it says that prospective users/payers for spent fuel storage at the CIS would be "USDOE

and/or a nuclear plant owner," and that "it is appropriate for NRC license applicants such as Holtec to rely on license conditions as a basis for demonstrating reasonable financial assurance under 10 C.F.R. § 72.22(e)." What Holtec is saying here is that the "reasonable assurance" finding regarding financing for the project can be determined retrospectively once the license has been granted. In support of this point, Holtec cites *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-00-6, 51 N.R.C. 101, 113-117 (2000).

While Joint Petitioners do not disagree in principle with this idea, the financial arrangements for PFS did not involve a line of support for PFS from the Federal government, especially finances that the U.S. DOE has no authority to provide. The proposed arrangements were these:

> PFS will not commence ISFSI construction unless and until it has committed funds sufficient to provide fully for the construction of an ISFSI (including PFS's administrative and operational costs during construction of the project) with an initial capacity of at least { }1 MTU, *whether these funds are obtained through equity contributions, through Service Agreements, or through other committed forms of financing . . .*

(Emphasis added). Declaration of John Parkyn (Dec. 2, 1999) at 2 (quoting Letter from John Parkyn, Chairman, PFS, to Director, NRC Office of Nuclear Materials Safety and Safeguards (Sept. 15, 1998) attach. B, PFSF LA RAI No. 1, Question 1-1, at 2 of 2) [hereinafter Parkyn Declaration] (quoted at *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation and LBP-00-06, 51 NRC 101, 108 (2000). PFS further pledged to use "long term Service Agreements" with its members and customers:

> PFS will not commence operations of the PFSF, and will not accept spent nuclear fuel for storage at the PFSF, unless PFS has in place *long term Service Agreements for spent fuel storage services with its members and customers sufficient to cover the costs of operating and maintaining the facility with respect to the spent fuel to be accepted and stored under the contracts. The costs for the storage of additional spent fuel at the PFSF (beyond that*

> *contracted for under the initial Service Agreements at the commencement o f operations) will simply be covered by long term Service Agreements for spent fuel storage services with PFS's members and customers. The costs of any additional construction necessary to enable the storage of additional spent nuclear fuel at the PFSF will be funded through equity contributions, the Service Agreements, or other committed forms of financing. . . .*

Id. All of the expenditures for PFS construction and interim storage usage; none of the financing involved a "definitive agreement" with the DOE. The only "definitive agreement" that is presently attainable from DOE is its "Contract for Disposal of Spent Nuclear Fuel and/or High-level Radioactive Waste,"[5] which states clearly that "the DOE has the responsibility, *following commencement of operation of a repository*. . . ." *Private Fuel Storage* is inapropos to Contention 2 because Holtec seeks to commingle lawful financing instruments with a Federal corporate welfare subsidy that does not legally exist. Reasonable financial assurance for an ISFSI applicant is provided through reasonable cost estimates based on plausible assumptions and forecasts. "Assumptions seriously at odds with governing realities will not be acceptable." *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-05-21, 62 NRC 248, 298-99 (2003).

Holtec presents a seriously misleading financing plan by counting corporate welfare from the Federal government as a potential source. In the context of this case, Holtec's repeated references to the use of DOE financing and/or private contracts to finance the CISF suggest that they are two equivalent sources of financing. Those references mislead the public as to the true prospects and feasibility of the Holtec project, and are be materially false representations. In any event, Joint Petitioners have exposed an issue of fact within the Holtec application, authored by Holtec, that must be admitted for adjudication.

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[5]https://www.energy.gov/sites/prod/files/gcprod/documents/New_Standard_Contract.pdf

Contention No. 3: Underestimation of Low-Level Radioactive Waste Volume

The Environmental Report contains a gross underestimation of the volume of low-level radioactive waste ("LLRW") that will be generated by the use of concrete and other materials for bunkering of the SNF canisters, and by replacement of the canisters themselves during the operational life of the CISF.

On the topic of expected low-level radioactive waste (LLRW), Holtec underestimates the nature of its pre-disposal responsibilities for SNF/GTCC waste, which it expects the U.S. government to own. How can HOLTEC argue, using NUREG documents, for a yet-to-be transfer of title of SNF to the Federal government, in the absence of contract terms that cannot be established without new federal legislation?

The NUREG documents cited by HOLTEC do not address, much less envision, transfer of title to SNF from reactor operators to the Federal government. Moreover, it is not properly within the purview of either the NRC Staff or HOLTEC to speculate what the contractual requirements will be with the DOE, especially those governed by presidential Executive Orders. Executive Order 13123[6] requires government agencies to use life cycle cost analysis (LCCA) to minimize the government's costs of SNF ownership. Over the life of the project, facility management cost is often two to three times higher than acquisition costs. For some 15 years, the U.S. Department of Energy has performed life-cycle cost estimation for environmental restoration and waste management at its nuclear sites in its Congressional Budget Requests. In order to have a realistic grasp of minimum facility management cost computations, it is

[6]https://www.energy.gov/eere/femp/downloads/guidance-life-cycle-cost-analysis-required-executive-order-13123

obligatory that the matter of repackaging SNF and GTCC waste at the reactor sites and/or at the Holtec CISF be investigated and the facts detailed and disclosed. The incongruent plans to load the SNF and GTCC waste into uniformly-sized, multipurpose transport, aging and disposal ("TAD") canisters pose different issues of fact in conflict with the Holtec application.

There are at present zero approved transport canister types to haul the SNF from reactor sites to anticipated geological disposal. The objective of having uniformly-constructed TADs is efficiency and safety: the SNF must fit into limited space within the repository in order to control to buffer the thermal load that will emanate for thousands of years from the repository storage chambers into the surrounding geological layers of the Earth. But the fuel bundles from different reactor types vary in thermal content and as to whether or not they are now considered "high burnup fuel." Presently there is no agreed uniformity of length nor agreement on other features of TAD canisters to achieve the DOE's efficient disposal requirements.

This problem became the subject of supplementation of the Yucca Mountain Final Environmental Impact Statement. In 2006, DOE published a notice of intent to supplement in the Federal Register that said:

> Since publication of the Yucca Mountain Final EIS, DOE has continued to develop the repository design and associated plans. *As now planned, the proposed surface and subsurface facilities would allow DOE to operate the repository following a primarily canistered approach in which most commercial spent nuclear fuel would be packaged at the commercial sites in multipurpose transport, aging and disposal canisters (TADs),* and all DOE materials would be packaged in disposable canisters at the DOE sites. Waste packages would be arrayed in the repository underground to achieve what is referred to as a higher-thermal operating mode, and most spent nuclear fuel and high-level radioactive waste would arrive at the repository by rail.

71 Federal Register 60490 (October 13, 2006).[7]

[7]https://www.nrc.gov/docs/ML0927/ML092710174.pdf

In the resulting "Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada, Vol. I[8] (2008)" ("Yucca SEIS"), the DOE stated:

> In 2006, DOE proposed a modified approach to repository design, development, and operation. Central to this proposed approach is the use of a canister concept for commercial spent nuclear fuel that minimizes handling of individual spent fuel assemblies; limits the need for complex surface facilities; and simplifies repository design, licensing, construction, and operation. DOE would use a TAD canister to transport, age, and dispose of commercial spent nuclear fuel without ever reopening the canister, thereby simplifying and reducing the number of handling operations involved in the packaging of spent nuclear fuel for disposal. In addition, the canistered approach offers the advantage of the use of practices that are familiar to the nuclear industry and the NRC, which would make the repository easier to design, license, construct, and operate. Although DOE has a small amount of spent nuclear fuel of commercial origin that it could ship to the repository uncanistered in a cask, consistent with the analysis in the Yucca Mountain FEIS, this Repository SEIS assumes that it would transport and receive all DOE spent nuclear fuel and high-level radioactive waste in disposable canisters. On October 13, 2006, in the Notice of Intent to prepare "Supplement to the Final Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, NV" (71 FR 60490), DOE announced that it would prepare a supplement to the Yucca Mountain FEIS to evaluate potential environmental impacts of the modified repository design and operational plans. *In its Notice of Intent, DOE described the primarily canistered approach whereby most commercial sites would package their spent nuclear fuel in TAD canisters, and all DOE materials would be packaged in disposable canisters at DOE sites.*

Id. at p. 1-5 (Emphasis added).

The DOE's approach ever since has been as follows:

> As now proposed, DOE would use a primarily canistered approach to operate the repository; under this approach, *most commercial spent nuclear fuel would be packaged at the reactor sites in TAD canisters.* DOE would repackage commercial spent nuclear fuel that arrived in packages other than TAD canisters into these canisters in newly designed surface facilities at the repository. The Department would package essentially all DOE material in disposable canisters at the DOE sites. Most spent nuclear fuel and high-level radioactive waste would arrive at the repository by rail. Some shipments would

[8]https://www.energy.gov/sites/prod/files/EIS-0250-S1-FEIS-01-2008.pdf

> arrive by truck. At the repository, DOE would place the TAD and other disposable canisters in waste packages that were manufactured from corrosion resistant materials. DOE would array the waste packages in the subsurface facility in tunnels (emplacement drifts).

Id. at § 1.4.2, p. 1-14 (Emphasis added).

But now there is also a disconnect. Holtec clearly contemplates none of this, and merely plans to take on SNF delivered in the gamut of cask designs:

> The HI-STORM UMAX is designed to be fully compatible with all HI-TRAC transfer casks and canisters previously certified for storage by the NRC. The proposed Holtec HI-STORM UMAX Storage System at the CIS Facility would be capable of storing the SNF from all existing SNF storage systems, and would be the only licensed technology with this universal capability (Holtec 2017, Section 1.2.1). Because the storage cavity of HI-STORM UMAX is sufficiently large to accommodate every canister type in use in the United States at this time, utilizing the Holtec HI STORM UMAX Storage System would allow removal of any SNF from existing reactor sites as well as the decommissioned shutdown sites per the Department of Energy' (DOE') goal presented in *Strategy for the Management and Disposal of Used Nuclear Fuel and High Level Radioactive Waste* (DOE 2013, pg. 6).

ER pp. 33-34/543. The new DOE policy will require most casks slated for disposal to be Repackaged at the reactor sites, or at the CISFs. Holtec takes no note in its application of radioactive waste expert Robert Alvarez's observations that none of the dry casks storing spent nuclear fuel anywhere in the U.S. are licensed for disposal, and that by the time DOE expects to open a repository in 2048, the number of large dry casks currently deployed is expected to increase from 1,900 to 12,000. Holtec is blind to Alvarez's warning that repackaging for disposal may require approximately 80,000 "small" canisters.

Holtec intends to consolidate SNF at its site by acceptance of SNF encapsulated in the gamut of canister types on the market, regardless of their different dimensions. Since the DOE has clearly signaled that the transfer of SNF into TADs is not going to be provided at the repository for 70% to 90% of the SNF, then either Holtec or the reactor sites will be the places

where fuel bundles will have to be altered to fit into smaller, uniform canisters. That will require thousands of repetitions of opening the canisters and separating fuel bundles into small groupings and repackaging them. That is a dangerous undertaking that will require having a dry transfer system and other facilities and measures to try to perform the work safely.

At the Holtec site, there will be elevated risks of worker exposures and offsite transients of radioactivity. Holtec will surely be saddled with a share of the considerable costs of repackaging, but its application is not clear as to who will be paying them. A growing number of reactor sites no longer have the capability of repackaging their SNF into the as-yet undesigned TADs that will be required by DOE, including sites at Big Rock Point, Maine Yankee, Connecticut Yankee and Yankee Rowe, all cleared and presently holding only storage casks.

The specter of Holtec accepting delivery of SNF wastes in its patented HI-STORM canisters, then refusing to repackage the waste into as-yet undesigned TADs for disposal at a geological repository may be hard to imagine. But Holtec will either have to insist, as part of its "start clean/stay clean" policy, that any repackaging has to occur at reactor sites and not accept nonuniform SNF, or it will accept non-uniform SNF and along with it, the responsibility for developing its capabilities to perform repackaging. The particulars of how the SNF repackaging will take place are not present in Holtec's application. .

Robert Alvarez, Joint Petitioners' expert, former DOE senior executive and scholar at the Institute for Policy Studies, estimates that repackaging for disposal may require approximately 80,000 "small" canisters.[9] The implications of repackaging 10,000 canisters of waste into 80,000

[9]A slide show presentation and addition information by Mr. Alvarez is referenced in Joint Petitioners' September 14, 2018 "Petition to Intervene" at pp. 41-42.

distinct containers will have to occur at some reactor sites, but it likely will have to take place also at Holtec. Hauling a considerably larger number of smaller repackaged canisters to Holtec changes the transport risks and numbers of shipments as well as overall costs and timing of the consolidation.

Even as Holtec tried, in its Answer, to dodge the question of who pays for repackaging, Holtec is becoming owner of a growing number of reactor sites: Oyster Creek (New Jersey); Palisades (Michigan); Pilgrim (Massachusetts); Yankee Rowe (Massachusetts) and Connecticut Yankee (Connecticut). By taking over the licenses at these reactors, the company is assuming a share of liability and legal responsibility for the SNF. With that responsibility goes the repackaging expense, either at former Holtec reactor sites, or at their New Mexico facility.

NRC regulations at 10 C.F.R. § 51.45(c) require the ER to "include an analysis that considers and balances the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and alternatives available for reducing or avoiding adverse environmental effects." Executive Order 13123 fleshes out the requisite analysis with the explicit application of accounting rules for life-cycle estimate. Section 51.45(c) further requires that "the analysis in the environmental report should also include consideration of the economic, technical, and other benefits and costs of the proposed action and its alternatives." And § 51.45(e) mandates that the information submitted "should not be confined to information supporting the proposed action but should also include adverse information." The Council on Environmental Quality regulation that implements NEPA cost-benefit analysis, 40 C.F.R. § 1502.23, requires such analyses to be attached to the Environmental Impact Statement:

> If a cost-benefit analysis relevant to the choice among environmentally different alternatives is being considered for the proposed action, it shall be incorporated by

> reference or appended to the statement as an aid in evaluating the environmental consequences. To assess the adequacy of compliance with section 102(2)(B) of the Act the statement shall, when a cost-benefit analysis is prepared, discuss the relationship between that analysis and any analyses of unquantified environmental impacts, values, and amenities. For purposes of complying with the Act, the weighing of the merits and drawbacks of the various alternatives need not be displayed in a monetary cost-benefit analysis and should not be when there are important qualitative considerations. In any event, an environmental impact statement should at least indicate those considerations, including factors not related to environmental quality, which are likely to be relevant and important to a decision.

Holtec's ER tabulation of the quantities of LLRW and related costs of its management and disposal do not adequately address both economic and qualitative considerations. A reasonably foreseeable, non-speculative, substantial reduction in benefits should trigger the need, under NEPA, to reevaluate the cost-benefit balance of a proposed action before further irreversible environmental costs are incurred. *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), LBP-83-57, 18 NRC 445, 630-31 (1983).

Joint Petitioners respond in their Contention 4 reply, below, to the arguments by Holtec and the NRC Staff that the Continued Storage Rule and GEIS bar consideration of site-specific aspects of the Holtec proposal.

Contention No. 4: Holtec Does Not Qualify For Continued Storage GEIS Presumptions

Holtec has defined a unique site-specific spent nuclear fuel storage facility that does not qualify for the exclusions from NEPA scrutiny conferred by the Waste Storage GEIS. Severe accident mitigation during transportation to and from the Holtec CISF and at the CISF, and SNF and GTCC storage and management operations at the CISF site, may not be treated as generic issues and excused from consideration within the EIS.

There are several legal and equitable reasons the GEIS does not serve to bar consideration of site-specific aspects of the Holtec CISF.

A. Waiver Of GEIS Applicability

Joint Petitioners submit that Holtec has waived the applicability of the GEIS to its application by providing information that conflicts with GEIS findings.

● Holtec has waived use of the GEIS as a bar to site-specific consideration, and has incorporated references to NUREG-2157, the GEIS for comparison purposes to the site-specific plans. Holtec admits as much in the Environmental Report:

> *This ER constitutes a site-specific analysis* of the proposed CIS Facility at the southeastern New Mexico Site in Lea County. This ER incorporates relevant information and analyses from NUREG-2157 as appropriate, for purposes of completeness. For example, for most resources analyzed in Chapter 4 of this ER, there is a high-level comparison of the site-specific impact conclusions presented in this ER to the generic impact conclusions contained in NUREG-2157.

ER at p. 16/543 of .pdf. This comprises an equitable waiver of the Continued Storage Rule as a bar to specific NEPA investigation and analysis.

● Holtec variously has mentioned intentions of accepting from 100,000 to 173,600 MTU of SNF and GTCC wastes. The prototype CISF for the GEIS was the above-ground storage facility of Private Fuel Services, which was granted an NRC license to operate in Utah but never opened. PFS was intended to be a 40,000 MTU facility, one-fourth the size of Holtec, with differing waste volumes, risk ratios and scale of necessary equipment and support facilities. There are issues of fact as between the Holtec application and the GEIS.

● Holtec has clearly stated that Federal funding from the Department of Energy is a core necessity of the construction, operation and decommissioning of the CISF, whereas PFS was intended to operate based on funds collected from ratepayers through utility bills and direct payments by utilities. The NRC, in response to comments in the GEIS, stated that "Licensees are required to provide funding for any onsite spent fuel storage costs under 10 CFR 50.54(bb) and

10 CFR 72.22(e). Under the NWPA, licensees are also required to pay a fee into the Nuclear Waste Fund, which is to be used to fund permanent disposal of spent fuel; DOE recently suspended collection of the fee in response to the decision in *NARUC v. DOE*." GEIS p. D-407.

The NRC further stated in comment responses in the GEIS that 10 CFR § 50.54(bb) "requires licensees to submit written notification to the Commission for its review and approval of the program by which the licensee intends to manage and provide funding for the management of all irradiated fuel at the reactor following permanent cessation of operation of the reactor until title to the irradiated fuel and possession of the fuel is transferred to the Secretary of Energy. Therefore, the financial plan and financial burden of continuing spent fuel storage during decommissioning is already analyzed within the NRC's regulatory framework." GEIS p. D-502.

Holtec's proposed reliance on Federal funding sharply diverges from the funding arrangements the underlie the GEIS. Holtec's proposal involves a funding stream from DOE for which there is no federal statutory authorization. This creates an issue of fact as a divergence from the GEIS expectation.

● Despite quibbling with Joint Petitioners that they did not "explain why it is unreasonable to assume that the empty casks cannot be decontaminated. . . ," NRC Staff Answer at 34, the Continued Storage GEIS contains the same "unreasonable" assumption as the Joint Petitioners, finding that *all* 4,000 canisters and *all* 4,000 casks used at the Private Fuel Storage facility would be disposed of as LLRW. Continued Storage GEIS § 5.15.2, p. 5-47. In the end, Joint Petitioners' assumption that *all* canisters and *all* casks at Holtec likely would end up as LLRW is quite reasonable. The GEIS conflicts with the NRC's interpretation of facts within the Holtec application.

- The GEIS assumes a dry transfer system ("DTS") or other technological means of remediating leaky, damaged or contaminated casks and canisters. Holtec intends to rely on a "start clean/stay clean" management approach and will not have DTS availability. Holtec will be returning leaky, damaged or contaminated casks and canisters to the original location from which they were shipped.

- The PFS facility prototype envisioned a different waste storage scheme than is planned for Holtec, namely, PFS intended to use of hundreds of surface storage concrete pads. By contrast, Holtec would entomb canisters in concrete structures which would then be mostly buried in topsoil. The surface storage method at PFS was estimated by the NRC to produce 112,000 cubic yards of concrete as LLRW. GEIS p. 5-48, which roughly translates to about 240,000 tons. The GEIS also presumes that this material will be a combination of LLRW and decontaminated waste, so the resulting LLRW volume will be less than 240,000 tons. Petitioners predict an estimated 8,000,000 tons of concrete, which will be poured in cylinders around each SNF canister and so become LLRW as the neutrons in the waste bombard their surroundings for several feet beyond the canister walls and create irradiated fill material and concrete as well as canisters, which will have to be swapped out for transport to an end repository and are addressed separately. The quantity of concrete and fill material LLRW will differ according to the time frame for the "interim" storage, which has been variously estimated by Holtec at from 40 to 300 years or more. High burnup fuel would have an even higher neutron flow rate into surrounding materials than low burnup fuel, because there would be more neutron emitters contained in it (more fission products, more activation products, and more split atoms of U-238 and U-235. Contrary to the NRC Staff's argument, these are basic facts that do not require an expert witness.

Holtec opposes Joint Petitioners' identification of the gross disparity in calculations of LLRW concrete and fill material, and maintains that the Continued Storage Rule bars site-specific consideration, raises an impermissible challenges to the Rule and is inadmissible. Holtec Answer at 36. But by discussing the volume of concrete that would be necessary at the Holtec site for entombment, necessitating the construction of a permanent concrete mixing plant, Holtec constructively waived the protections of the continued storage rule because it provided competing and contradictory information. The environmental impacts of the creation of 8,000,000 tons of LLRW is certainly not addressed in the GEIS. When the GEIS was compiled, there was no pending proposal for a CISF, and the design and large size of Holtec (four times the volume of PFS, using partial burial of canisters in concrete) were not considered within the bounds of the GEIS. If the sizeable LLRW aspects of the Holtec scheme are not analyzed in this proceeding, it will not occur at all. The GEIS was generic and speculative; this contention is specific to the project.

- The CISF portions of the GEIS did not contemplate the present DOE policy, which is to repackage the 10,000 shipments of SNF and GTCC waste into approximately 80,000 special efficiency-designed canisters in order to distribute the thermal loading of the decaying waste into the geological formations in which the waste is to be disposed. The lack of DTS capability at Holtec contrasts even more sharply with the waste storage expectations of the GEIS. The DOE waste acceptance expectations at the ultimate geological repository also exert an influential role on CISF arrangements which diverges markedly from the GEIS assumptions. Consequently, the GEIS is even less worthy as a bar to site-specific analysis.

B. The Continued Storage Rule Expressly Permits Consideration Of Environmental Effects

The Continued Storage Rule expressly allows consideration of environmental effects in the course of an ISFSI licensing proceeding: "This section does not alter any requirements to consider the environmental impacts of spent fuel storage during the term of a reactor operating license or combined license, or a license for an ISFSI in a licensing proceeding." 10 C.F.R. § 51.23(c). Site-specific environmental concerns must therefore be addressed under other NEPA regulations, such as 10 C.F.R. § 51.45.

C. Because The CISF Is Not Legally Authorized, It Cannot Be Analyzed Under The GEIS

Holtec's proposed reliance on Federal funding sharply diverges from the funding assumptions that bound the GEIS. Holtec's proposal involves a funding stream from DOE for which there is no federal statutory authorization. Indeed, Holtec's proposal seeks financing in the alternative, by stating the project will be funded either by DOE sustenance, or private contractual arrangements. Besides creating an issue of fact as a divergence from the GEIS expectation, the proposal is actually two separate proposals, one founded on a legal financing method, the other one not. 10 C.F.R. § 51.45(d) requires that "The environmental report shall list all Federal permits, licenses, approvals and other entitlements which must be obtained in connection with the proposed action and shall describe the status of compliance with these requirements." Holtec has neglected to mention the "Federal approval" of the U.S. Congress which must be obtained.

Contention No. 5: Fracking and Mining Beneath the Holtec CISF Site

Holtec has explicitly admitted that there *will be fracking beneath the site:*

> With regard to potential future drilling on the Site, Holtec has an agreement with Intrepid Mining LLC (Intrepid) such that Holtec controls the mineral rights on the Site and Intrepid will not conduct any potash mining on the Site. Additionally, any future oil drilling or fracking beneath the Site would occur at greater than 5,000 feet depth, which ensures there would be no subsidence concerns (Holtec 2016a).

ER p. 54/543.

There is already vetted geological analysis proving that the Permian Basin is widely affected by subsidence (sinking). The Holtec site is within the Basin region.

While 5000 feet of depth may provide some comfort that subsidence (collapse of subterranean caverns) may not occur beneath the Holtec site, there are many past and present mineral extraction activities present at the site, including at least 12 abandoned hydrocarbon wells at Holtec; a long history of underground potash mining and with it, and the underground explosive charges involved in fracking in, under or near the site. To this complex human-altered geology of the site, add the dramatic Permian Basin subsidence in the 4,000-square-mile region of west Texas very near Holtec, as documented by Southern Methodist University scientists.[10] There is routine fracking activity below 5000' in the immediate region of the Holtec facility.

Respecting the land ownership patterns cited by Joint Petitioners, the information cited was taken from a publication by Holtec's partner, ELEA, entitled "Eddy Lea Alliance Site Mineral Conflict Analysis 9-16-15." There are drilling leases either hard by the Holtec site, or within its boundaries.

Hydraulic fracturing and high pressure injection disposal wells are a proven cause of human-induced seismicity. According to the U.S. Geological Survey,

> The number of earthquakes in the central United has increased dramatically over the past decade. Between the years 1973–2008, there was an average of 25 earthquakes of magnitude three and larger in the central and eastern United States. Since 2009, the average number of M3 earthquakes has jumped to 362 per year. The rate peaked in 2015 with 1010 M3+ earthquakes. Since 2015 the earthquake rate has declined, with 690 and 364 M3+ earthquakes in 2016 and 2017, respectively. Nonetheless, this rate is far higher than the average of 25 earthquakes per year. Most of these earthquakes are in the

[10]"Association between localized geohazards in West Texas and human activities, recognized by Sentinel-1A/B satellite radar imagery. http://www.nature.com/articles/s41598-018-23143-6

> magnitude 3–4 range—large enough to have been felt by many people—yet small enough to rarely cause damage. Damage has been caused by some of the larger events, including the M5.8 Pawnee and M5.0 Cushing Oklahoma earthquakes that occurred in 2016.

At the link, there is map of the central united states which shows the heaviest new quake areas, in central Oklahoma and west Texas. https://earthquake.usgs.gov/research/induced/overview.php

Also, Stanford University geophysicists have developed a detailed map of the stresses that act in the Earth throughout the Permian Basin in West Texas and southeastern New Mexico, highlighting areas of the oil-rich region that could be at greater risk for future earthquakes induced by production operations and the high-pressure injection of fluids association with hydraulic fracturing. A map at the following link shows a 75,000 square mile region experiencing stress fields in the Permian Basin, west Texas and southeast New Mexico. Many black stress lines, reflecting measured directions of maximum horizontal stress are visible near the southeastern New Mexico location of Holtec..

Far from demanding "an analysis of impacts with a low probability of occurrence, remote and speculative impacts, or 'worst case' scenarios," as Holtec suggests (Answer at 38), the Joint Petitioners are seeking an analysis of the reasonably foreseeable "proximate cause" of long-term human-induced seismicity in the immediate vicinity of the Holtec CISF, and its implications for the stability of the Holtec site .

Given that highly irradiated nuclear waste is proposed to be stored on a fracking site, the utmost care needs to be taken to assure that the ground beneath the proposed storage site is completely stable.

Joint Petitioners have established a material issue of fact as against the representations in the Environmental Report. This contention should be admitted.

Contention No. 6: Plans for a Reprocessing Facility Associated with the Holtec CISF Have Been Omitted from Cumulative Effects Analysis

The Holtec CISF is a major component of a larger plan to aggregate SNF in southeastern New Mexico for purposes of reprocessing.

Joint Petitioners stated in their initial pleading that in 2008 DOE published a "Draft Global Nuclear Energy Partnership Programmatic Environmental Impact Statement" ("GNEP PEIS;" DOE/EIS-0396),[11] in which it expressed a preference for reprocessing of spent nuclear fuel under U.S. auspices, as a supposed nonproliferation policy. GNEP proposed to institute a framework for nuclear fuel services in order to remove the need for a country to develop its own enrichment or reprocessing facilities. GNEP PEIS p. I-3. The proposed Holtec site, then owned by ELEA, was actively considered by GNEP for either as a CISF or reprocessing complex at that time. Public outcry at the time prompted DOE to stop proselytizing for reprocessing.

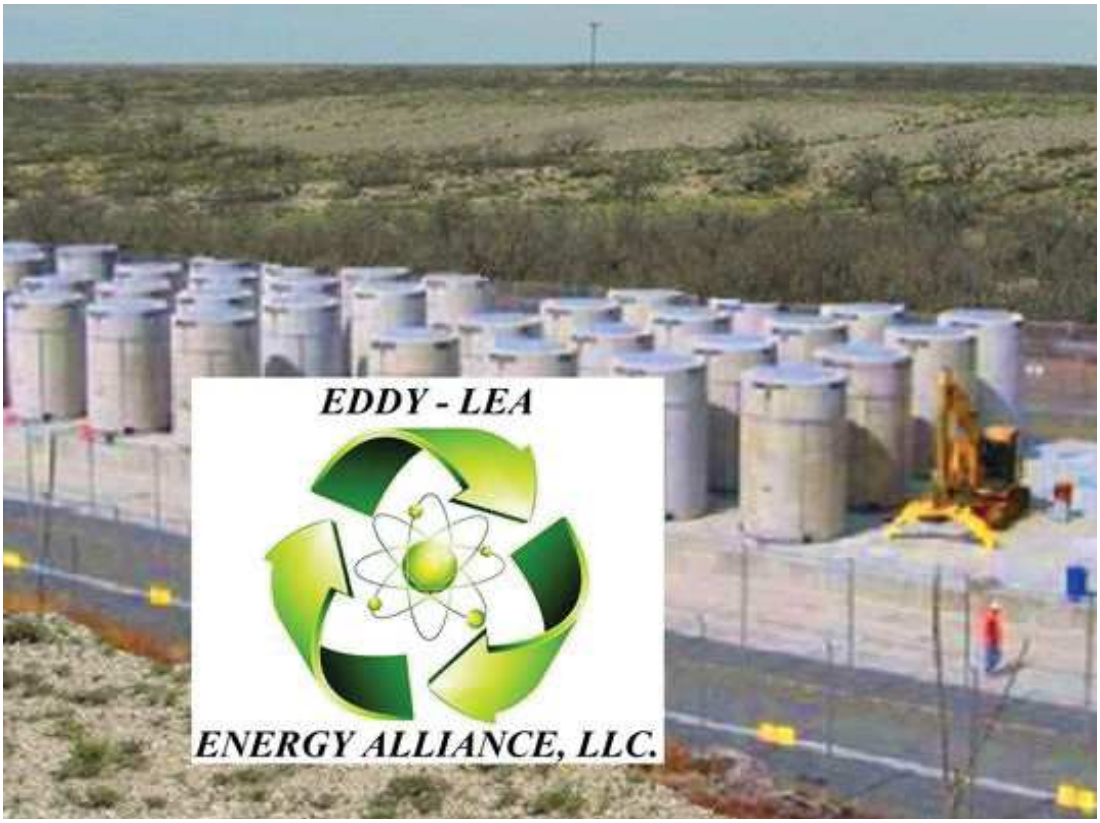
Now, the public's success in temporarily squelching the prospects for reprocessing a decade ago is being cited as the reason to not take prudent steps to ensure that the risks and expense of reprocessing are exposed and compared in the ER and DEIS to other aspects of the Holtec proposal.

During the GNEP era of the marketing of reprocessing, Areva, the French national nuclear power corporation, was in the thick of promoting it in the U.S. Areva is now Orano and is the lead partner in development of the Waste Control Specialists' proposed CISF approximately 40 miles from Holtec's New Mexico site, located in west Texas.

Reprocessing has only faded from the business news, it is not gone from the pantheon of

[11] Available at https://www.energy.gov/sites/prod/files/nepapub/nepa_documents/RedDo nt/EIS-0396-DEIS-2008.pdf

radioactive ideas for New Mexico. The best evidence of it is found in the Eddy Lea Energy Alliance's logo, which appears on the next page.

On 

Contention No. 7: The 'Start Clean/Stay Clean' Policy Is Unlawful and Directly Causes a Public Health Threat.

Holtec's "HI-STORE philosophy" of "Start Clean/Stay Clean," whereby incoming shipments of canisters that are contaminated, leaking or otherwise compromised will be returned to the originating power plant for dispositioning, is surely controversial

A. 10 C.F.R. § 71.47: Safety Net And Loophole

. Holtec urges that Joint Petitioners have not shown why the standards in 10 C.F.R. § 71.47(a)–the NRC standard mentioned for the very first time and not in the ER or SAR in connection with "start clean/stay clean" and the return-to-sender practice--would not apply to any return shipments. Holtec Answer at 64. This failure to explain how the public would be protected by regulations, as opposed to faith-based use of metal containers does nothing to dispel public anxiety. Holtec says "10 C.F.R. § 71.47 provides 'external radiation standards for all packages'" but further cautions that "[e]ven this radiation limit is not absolute; it can be exceeded if certain additional conditions are met. 10 C.F.R. § 71.47(b)." So "start clean/stay clean" begins with a zero tolerance for contamination when casks and canisters arrive, no explanation of what the criteria for acceptance or rejection will really be at Holtec, and the decision of what must be returned is shrouded in open-ended regulation-bending. When it isn't effusively praising its coming era of flawless cask integrity and seamless canister performance, Holtec is grudgingly admitting, buried in a pleading instead of in its plan, that the standards for return-to-sender are fluid. This confirms the issue of material fact and law between the flawless cask braggadocio and the realities of management of inherently dangerous radioactive waste.

Holtec naively assumes that 100% of the arriving casks will fall within the limits specified by § 71.47 and so can be turned around and sent home without complication. It's a nice

fiction, that fits will with their intentional lack of having a dry transfer system to handle an arrival that's contaminated or leaking beyond the relatively low thresholds of 10 C.F.R. § 71.47.

Holtec reminds us in its Answer that 10 C.F.R. § 71.47(b) and (c)[12] offer a broad loophole. Section 71.47 is referenced exactly one time in the ER or SAR, at p. 199/543 of the Environmental Report as an assumption used in the computer software RADTRAN to model the risks of radiation exposure along the routes when SNF is returned to sender: "RADTRAN assumes the maximum dose rate allowed for exclusive use shipments under NRC regulations (10 CFR 71.47 (b) (3)) and estimates the potential impacts to the populations located within one-half mile along either side of the transportation routes." So if shipping containers violate Holtec's

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[12]10 C.F.R. § 71.47(b) A package that exceeds the radiation level limits specified in paragraph (a) of this section must be transported by exclusive use shipment only, and the radiation levels for such shipment must not exceed the following during transportation:

(1) 2 mSv/h (200 mrem/h) on the external surface of the package, unless the following conditions are met, in which case the limit is 10 mSv/h (1000 mrem/h):

(I) The shipment is made in a closed transport vehicle;

(ii) The package is secured within the vehicle so that its position remains fixed during transportation; and

(iii) There are no loading or unloading operations between the beginning and end of the transportation;

(2) 2 mSv/h (200 mrem/h) at any point on the outer surface of the vehicle, including the top and underside of the vehicle; or in the case of a flat-bed style vehicle, at any point on the vertical planes projected from the outer edges of the vehicle, on the upper surface of the load or enclosure, if used, and on the lower external surface of the vehicle; and

(3) 0.1 mSv/h (10 mrem/h) at any point 2 meters (80 in) from the outer lateral surfaces of the vehicle (excluding the top and underside of the vehicle); or in the case of a flat-bed style vehicle, at any point 2 meters (6.6 feet) from the vertical planes projected by the outer edges of the vehicle (excluding the top and underside of the vehicle); and

(4) 0.02 mSv/h (2 mrem/h) in any normally occupied space, except that this provision does not apply to private carriers, if exposed personnel under their control wear radiation dosimetry devices in conformance with 10 CFR 20.1502.

© For shipments made under the provisions of paragraph (b) of this section, the shipper shall provide specific written instructions to the carrier for maintenance of the exclusive use shipment controls. The instructions must be included with the shipping paper information.

(d) The written instructions required for exclusive use shipments must be sufficient so that, when followed, they will cause the carrier to avoid actions that will unnecessarily delay delivery or unnecessarily result in increased radiation levels or radiation exposures to transport workers or members of the general public.

"site requirements," whatever those are, or perhaps NRC's stated dose rate limits, they'll simply be removed from the site. While Holtec clearly intends to practice "return-to-sender," nowhere in the ER or SAR does Holtec describe the degree or characteristics of leakiness/structural damage or other canister flaw (or cask flaw) anticipated upon delivery that might trigger return-to-sender. Holtec has yet to explain what it will do if a canister presenting at its CISF exceeds the limits of 10 C.F.R. § 71.47(b)(3), other than to hide behind the legally-inapropos continued storage rule (See Joint Petitioners' reply as to Contention 4, above).

B. Holtec Fails to Face Up To The Repackaging Juggernaut

As Joint Petitioners documented in the reply discussion of Contention 3, the ER grossly underestimates the volume of low-level radioactive waste ("LLRW") that will be generated in the form of swapped out canisters as a result of changed DOE policies on the TADs that will hold the SNF and GTCC waste in the geological repository, post-Holtec.

DOE plans to repackage the waste into uniformly-sized, multipurpose transport, aging and disposal ("TAD") canisters to fit the SNF into limited space within the repository, in a way to buffer the thermal load that will emanate for hundreds of years from the repository storage chambers into the surrounding geological layers of the Earth. But the fuel bundles from different reactor types vary in thermal content and as to whether or not they are "high burnup fuel." Presently there is no agreed uniformity of length nor agreement on other features of TAD canisters to achieve the DOE's efficient disposal requirements.

This problem became the subject of supplementation of the Yucca Mountain Final Environmental Impact Statement. Most commercial spent fuel would be packaged at the commercial reactor sites in multipurpose transport, aging and disposal canisters (TADs).

71 Federal Register 60490 (October 13, 2006).[13] In the "Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada, Vol. I[14] (2008)" ("Yucca SEIS"), the DOE stated that "this Repository SEIS assumes that it would transport and receive all DOE spent nuclear fuel and high-level radioactive waste in disposable canisters. . . . " *Id.* at p. 1-5.

The problem with the Holtec application is that it doesn't account for this major policy change by DOE. Holtec's plan is to deliver SNF and GTCC waste to its site whenever possible using the HI-STORM UMAX system, which "is designed to be fully compatible with all HI-TRAC transfer casks and canisters previously certified for storage by the NRC. The proposed Holtec HI-STORM UMAX Storage System at the CIS Facility would be capable of storing the SNF from all existing SNF storage systems, and would be the only licensed technology with this universal capability (Holtec 2017, Section 1.2.1)." ER pp. 33-34/543.

Holtec's business scheme runs headlong into the DOE policy that emphasizes canistering SNF and GTCC in special TADs at reactor sites. Since some reactor sites that Holtec has been acquiring have been completely cleared of all but storage casks, Holtec will be posed an expensive quandary concerning how and where the SNF and GTCC is removed to new TADs. There will physical dangers associated with the repackaging, and Holtec's "start clean/stay clean" practice, which does not account for the DOE change, and for which there are few criteria, will likely be tested. DOE has clearly signaled that the transfer of SNF into TADs is not going to be

[13]https://www.nrc.gov/docs/ML0927/ML092710174.pdf

[14]https://www.energy.gov/sites/prod/files/EIS-0250-S1-FEIS-01-2008.pdf

provided at the repository for 70% to 90% of the SNF, so then either Holtec or the reactor sites will be the places where fuel bundles will have to be divided up and put into smaller, uniform canisters. That will require thousands of repetitions of opening the canisters and separating fuel bundles into small groupings and repackaging them. That is a dangerous undertaking that will require having a dry transfer system and other facilities and measures to try to perform the work safely.

At the Holtec site, there will be elevated risks of worker exposures and offsite transients of radioactivity. Holtec will surely be saddled with a share of the considerable costs of repackaging, but its application is not clear as to who will be paying them. A growing number of reactor sites no longer have the capability of repackaging their SNF into the as-yet undesigned TADs that will be required by DOE, including sites at Big Rock Point, Maine Yankee, Connecticut Yankee and Yankee Rowe, all cleared and presently hold only storage casks.

The specter of Holtec accepting delivery of SNF wastes in its patented HI-STORM canisters, then refusing to repackage the waste into as-yet undesigned TADs for disposal at a geological repository may be hard to imagine. But Holtec will either have to insist, as part of its "start clean/stay clean" policy, that any repackaging has to occur at reactor sites and not accept nonuniform SNF, or it will accept non-uniform SNF and along with it, the responsibility for developing its capabilities to perform repackaging. The particulars of how the SNF repackaging will take place are not present in Holtec's application. .

Robert Alvarez, Joint Petitioners' expert, former DOE senior executive and scholar at the Institute for Policy Studies, estimates that repackaging for disposal may require approximately 80,000 "small" canisters. The implications of repackaging 10,000 canisters of waste into 80,000

distinct containers will have to occur at some reactor sites, but it likely will have to take place also at Holtec. Hauling a considerably larger number of smaller repackaged canisters to Holtec changes the transport risks and numbers of shipments as well as overall costs and timing of the consolidation. And it may multiply the SNF that is returned to sender.

Even as Holtec tried in its Answer to dodge the question of who pays for repackaging, Holtec is becoming owner of a growing number of reactor sites: Oyster Creek (New Jersey); Palisades (Michigan); Pilgrim (Massachusetts); Yankee Rowe (Massachusetts) and Connecticut Yankee (Connecticut). By taking over the licenses at these reactors, the company is assuming a share of liability and legal responsibility for the SNF. With that responsibility goes the repackaging expense, either at former Holtec reactor sites, or at the New Mexico facility. What becomes of flawed casks, leaks, and external contamination when it's waste from a Holtec site?

Contention No. 8: Missing Table of Data That Minimizes Radiation Effects from Transport of SNF Creates Contention of Omission

Upon review of Holtec's argument on this contention, Joint Petitioners hereby move to withdraw it, with prejudice.

Contention No. 9: Incomplete and Inadequate Disclosure of Transportation Routes

As discussed by Joint Petitioners in their reply as to the claimed lack of legal standing, Holtec has done a woefully inadequate job of disclosing and analyzing its planned 20-year campaign to deliver 10,000 casks and canisters to the New Mexico site. There is only one map published in the Environmental Report that shows a handful of the routes which will be used for delivery of SNF and GTCC waste to Holtec. The map shows transport routes from two reactors and represents perhaps disclosure of 3% of the waste transport that will take place over 20 years and involving an estimated 10,000 cask deliveries. It is grossly insufficient as a planning tool for

members of the public, railroad companies, emergency responders, infrastructure maintenance professionals, remediation and engineering firms, barge companies, water treatment specialists, transport container engineers, utility companies, construction trades unions, members of the U.S. House and Senate, oil and gas drilling companies, hospitals, and others.

A. 'Region' Is An Expansive Concept, Not Restricted To Vicinity Of Holtec

Holtec disagrees with Joint Petitioners' invocation of 10 C.F.R. § 72.108, "The proposed ISFSI . . . must be evaluated with respect to the potential impact on the environment of the transportation of spent fuel, high-level radioactive waste, or reactor-related GTCC waste within the region." Holtec goes to great lengths to make a rather inconclusive argument that the "region" referenced in the regulation means the immediate vicinity of the Holtec site. Joint Petitioners suggest that "region" refers to "region of influence," the 100-mile diameter social and economic region with the Holtec facility as its center. The 50-mile radius "region" is the reference in the ER for air quality,[15] socioeconomics,[16] housing characteristics,[17] region of influence (diagram),[18] construction,[19] and population,[20] to name a few. And 10 C.F.R. § 72.98 defines "region" broadly, too, directing that:

> (b) The potential *regional impact due to the construction, operation or decommissioning of the ISFSI or MRS must be identified. The extent of regional impacts must be determined on the basis of potential measurable effects on the population or the*

[15]ER § 3.5.2, p. 103/543.

[16]ER § 3.8, p. 133/543.

[17]ER § 3.8.2, p. 134/543.

[18]ER Figure 3.8.1, p. 153/543.

[19]ER § 4.8.1, p. 194/543.

[20]ER § 4.8.2, p. 195/543.

environment from ISFSI or MRS activities.

(c) Those *regions* identified pursuant to paragraphs (a) and (b) of this section must be investigated as appropriate with respect to . . . (3) Any special characteristics that may influence the potential consequences of a release of radioactive material during the operational lifetime of the ISFSI or MRS.

The ER lacks analysis of the potential regional impacts on environment given the prospect of the occasional arrival of damaged, externally contaminated or leaking SNF casks and their return shipment to the point of origin, unrepaired and continuing to leak or showing the potential for deterioration and radiological accident and above permissible dose rates to workers and passers by or nearby residents while en route back and forth. The possibilities are met with unswerving denial from Holtec and the NRC Staff. The "special characteristics" of the Holtec CISF that may influence consequences of a release of radioactive material is that there will be no means of techologically containing a leak, repackaging or otherwise remediating cask damage and possible emissions of radioactive materials from casks, contrary to the policy guidance implicit in the assumption of the Continued Storage GEIS that an interim storage facility will have such capabilities. Radiation shielding of an externally contaminated shipping container could also be required, and could be provided by a DTS, until a replacement cask could be utilized, also requiring a DTS. The "return to sender" policy of Holtec does not protect public health or adequately minimize danger to life or property. There is no reasonable assurance that the management of SNF and GTCC once delivered to the Holtec CISF and found to be in leaking, externally contaminated or damaged casks, followed by the return transport of leaking, contaminated or damaged casks to the point of origin, can be conducted without endangering the health and safety of the public.

B. The Continued Storage Rule Does Not Bar Analysis Of Site-Specific Transportation Concerns

Holtec has waived use of the GEIS as a bar to site-specific consideration, and has incorporated references to NUREG-2157 (the GEIS) for comparison purposes into its site-specific plans. Holtec admits as much in the Environmental Report:

> *This ER constitutes a site-specific analysis* of the proposed CIS Facility at the southeastern New Mexico Site in Lea County. This ER incorporates relevant information and analyses from NUREG-2157 as appropriate, for purposes of completeness. For example, for most resources analyzed in Chapter 4 of this ER, there is a high-level comparison of the site-specific impact conclusions presented in this ER to the generic impact conclusions contained in NUREG-2157.

ER at p. 16/543 of .pdf. Individual transport routes may therefore be identified and studied individually or in regional combinations, and assessed in the consideration of alternatives to supposedly superior routes. The lack of detail of transportation routes and corridors that might potentially be affected by SNF and GTCC waste transport to and from Holtec is creates a material issue of law and fact with the Holtec application. It is an equitable waiver of the Continued Storage Rule as a bar to site- or route-specific NEPA investigation and analysis.

C. The Continued Storage Rule Expressly Permits Consideration Of Environmental Effects

The Continued Storage Rule expressly allows consideration of environmental effects in the course of an ISFSI licensing proceeding: "This section does not alter any requirements to consider the environmental impacts of spent fuel storage during the term of a reactor operating license or combined license, or a license for an ISFSI in a licensing proceeding." 10 C.F.R. § 51.23(c). Site-specific transportation-related environmental concerns must therefore be addressed under other NEPA regulations, such as 10 C.F.R. § 51.45.

D. Because The CISF Is Not Legally Authorized, The GEIS Is Inapplicable

Holtec's proposed reliance on Federal funding sharply diverges from the funding assumptions that bound the GEIS. Holtec's proposal involves a funding stream from DOE for which there is no federal statutory authorization. Indeed, Holtec's proposal seeks financing in the alternative, by stating the project will be funded either by DOE sustenance, or private contractual arrangements. Besides creating a material issue of fact in t divergence from the GEIS expectation, the proposal is actually two separate proposals, one founded on a legal financing method, the other one not. The end result of this licensing case can only be a issuance of an unenforceable legal nullity.

Contention No. 10: The Inconsistent Predicted Lengths Of The Period of Operation Of The CISF Warrant NEPA Scrutiny Of The Potential For Operations Exceeding 100 Years.

Holtec plans to provide long-term SNF storage for up to 120 years, or for however much time beyond 120 years it may take to develop a deep geological repository elsewhere. Holtec itself has recommended to the U.S. Department of Energy that a CIS facility "should have a minimum service life of 300 years."

Holtec dismissively responded that the Joint Petitioners have direct challenged the NRC's Continued Storage Rule and that they have "conflated the long-term time frame evaluated in the Continued Storage GEIS with Holtec's proposed license term." Joint Petitioners disagree. The GEIS contains many assumptions that are not characteristics of the Holtec CISF en route to the conclusion that there are no particular environmental calamities in the somewhat distant future of the CISF.

The short-term interval is the first 60 years after the end of a nuclear plant's operations and fuel is assumed to be in the spent fuel pool at the plant. The long-term period ensues for the

next 100 years and, the assumption is that all spent fuel has been moved from the spent fuel pool to dry cask storage by the end of the short-term storage time frame and that the spent fuel pool would be decommissioned within 60 years after permanent cessation of operation. GEIS p. 1-14. The third time frame, indefinite storage, assumes that a geologic repository does not become available. In this time frame, at-reactor and away-from-reactor ISFSIs would continue to store spent fuel in dry casks indefinitely. The long-term interval– which could be essentially forever--would see continuations of spent fuels at reactors and away from reactors, replacement of ISFSIs and spent fuel canisters and casks every 100 years, construction and operation of an away-from-reactor ISFSI and its replacement every 100 years, and construction and operation of a DTS, including replacement every 100 years.

The GEIS foresees "forever" as a few hundred years of relatively simple management and turnover of irradiated canisters, casks, pads and DTS's. But Holtec has waived the use of the GEIS to bar site-specific analysis,[21] and the Holtec facility will differ considerably from the assumptions underling construction and operation of a CISF as enumerated in the GEIS.

The Continued Storage Rule expressly allows consideration of environmental effects in the course of an ISFSI licensing proceeding: "This section does not alter any requirements to consider the environmental impacts of spent fuel storage during the term of a reactor operating license or combined license, or a license for an ISFSI in a licensing proceeding." 10 C.F.R. §

[21]Holtec's admission is: "This ER constitutes a *site-specific analysis of the proposed CIS Facility at the southeastern New Mexico Site in Lea County*. This ER incorporates relevant information and analyses from NUREG-2157 as appropriate, for purposes of completeness. For example, for most resources analyzed in Chapter 4 of this ER, there is a high-level comparison of the site-specific impact conclusions presented in this ER to the generic impact conclusions contained in NUREG-2157." ER at p. 16/543 of .pdf.

51.23(c). Site-specific environmental concerns may thus be addressed under other NEPA regulations, such as 10 C.F.R. § 51.45.

Holtec will not commit to construction of a DTS facility at its site, not even 100 years after commencement of operations, so smug is the applicant that there will be no leaks, breaches, flaws or external radiological contaminations of the canisters or casks. There are no accidents in Holtec's world, only aging management plans. Yet Holtec is "Plan B" if no geological repository can be identified and developed. To cap off inquiry or investigation into real-world effects of aging on metals and concrete 200 or more years out, generic suppression of reason, science, ethics and common sense are the order of the day.

The future decision transforming Holtec into a *de facto* permanent repository, if it comes to pass, may happen somewhere within the short to long-term intervals, well within the very earliest time frame for consolidated storage. There has been no genuine consideration of the implications if the decision is affirmatively rendered, or made by a nation that has exhausted its resources and consequent willingness to proceed to find a permanent geological site. Here in 2018, there is no debate, simply denial that we would allow our better selves to strand those enormous concentrations out in the desert, forever, half a dozen generations from now. And we have a GEIS to confine our ethics and inform our denial.

Notably, the D.C. Circuit Court of Appeals has in the past repudiated a mere 10,000-year compliance period for the proposed Yucca Mountain permanent geological repository for spent nuclear fuel which had been set by the U.S. Environmental Protection Agency. The National Academy of Sciences, which was instructed by Congress by the 1992 Energy Policy Act to advise the U.S. Environmental Protection Agency, had recommended that "compliance

assessment is feasible for most physical and geologic aspects of repository performance on the time scale of the long-term stability of the fundamental geologic regime - a time scale that is on the order of 106 [one million] years at Yucca Mountain." NAS also explained that humans may not face peak radiation risks until tens to hundreds of thousands of years after disposal, "or even farther into the future." So the court of appeals vacated the USEPA conclusion. *Nuclear Energy Institute, Inc. v. Environmental Protection Agency*, 373 F.3d 1251, 1257 (D.C. Cir. 2004). There is no provision beyond a few hundred years of maintenance considered in the Holtec application, and certainly no consideration of a time frame even out to 10,000 years, much less 1,000,000 years–and the NRC has attempted to shackle that debate with an arbitrary storage rule GEIS. The debate embraces one of the great ethic conundrums of this or any time.

"There is a basic law of nuclear waste often overlooked - all waste remains where it is first put."[22]

The Continued Storage Rule and its GEIS must not be allowed to foreclose site-specific consideration, and inquiry and debate, of the possibility that the Holtec CISF might become America's *de facto* permanent SNF/GTCC waste repository.

Probably the very least that the people of 2018 might do for those who live 250 years from now is to cumulative effects in that not-so far away future of licensing Holtec now.

Contention No. 11: NEPA Requires Significant Security Risk Analyses for the Massive Spent Nuclear Fuel and Greater-Than-Class-C Wastes Proposed for Interim Storage And Associated Transportation Component at Holtec's New Mexico Facility

A. The Continued Storage Rule Does Not Bar Site-Specific Consideration

[22]Then-Governor Richard Wilson Riley of South Carolina, 1982 (Cited from the findings of the Minnesota administrative law Judge Klein, 4-10-92 on the dry cask storage at Prairie Island).

Holtec's spent nuclear fuel storage facility does not qualify for the exclusions from NEPA scrutiny conferred by the Waste Storage GEIS. There are several legal and equitable reasons the GEIS does not serve to bar consideration of site-specific aspects of the Holtec CISF.

1. Waiver Of GEIS Applicability

Holtec has waived invocation of the Continued Storage Rule as a bar to site-specific consideration of the CISF proposal. Holtec refer to NUREG-2157 to provide comparisons to site-specific facts and evidence:

> *This ER constitutes a site-specific analysis* of the proposed CIS Facility at the southeastern New Mexico Site in Lea County. This ER incorporates relevant information and analyses from NUREG-2157 as appropriate, for purposes of completeness. For example, for most resources analyzed in Chapter 4 of this ER, there is a high-level comparison of the site-specific impact conclusions presented in this ER to the generic impact conclusions contained in NUREG-2157.

ER at p. 16/543 of .pdf. Holtec has equitably waived the Continued Storage Rule's applicability, assuming it was even applicable here.

Holtec further has waived any applicability of the Continued Storage Rule because its facility characteristics diverge considerably from the prototype referenced in the GEIS. Holtec is four times the size of the Private Fuel Services prototype CISF; Holtec will not have a dry transfer system to remediate leaks of radiation and contamination, or to move spent fuel from one canister to another one, also a significant difference.

Holtec's proposed alternative proposals for funding the facility involve seeking private utility contracts, or establishing arrangements with the U.S. Department of Energy to subsidize Holtec to agree to store SNF and GTCC waste and also for the DOE takes title to the SNF/GTCC waste at the reactor sites. In responses to public comments on the GEIS, the NRC stated that

"Licensees are required to provide funding for any onsite spent fuel storage costs under 10 CFR 50.54(bb) and 10 CFR 72.22(e). Under the NWPA, licensees are also required to pay a fee into the Nuclear Waste Fund, which is to be used to fund permanent disposal of spent fuel; DOE recently suspended collection of the fee in response to the decision in *NARUC v. DOE*." GEIS p. D-407. The NRC further asserted in a comment response that 10 CFR § 50.54(bb) "requires licensees to submit written notification to the Commission for its review and approval of the program by which the licensee intends to manage and provide funding for the management of all irradiated fuel at the reactor following permanent cessation of operation of the reactor until title to the irradiated fuel and possession of the fuel is transferred to the Secretary of Energy. Therefore, the financial plan and financial burden of continuing spent fuel storage during decommissioning is already analyzed within the NRC's regulatory framework." GEIS p. D-502.

Holtec's proposed reliance on Federal funding sharply diverges from the funding arrangements expected under the Continued Storage Rule. Holtec's proposal involves a funding stream from DOE for which there is no federal statutory authority.

The GEIS assumes a dry transfer system ("DTS") or other technological means of remediating leaky, damaged or contaminated casks and canisters. Holtec will have no DTS availability, and will rely on a "start clean/stay clean" management approach, which will involve the return of leaky, damaged or contaminated casks and canisters to the original location from which they were shipped.

2. The Continued Storage Rule Expressly Permits Consideration Of Environmental Effects

The Continued Storage Rule expressly allows consideration of environmental effects in the course of an ISFSI licensing proceeding: "This section does not alter any requirements to

consider the environmental impacts of spent fuel storage during the term of a reactor operating license or combined license, or a license for an ISFSI in a licensing proceeding." 10 C.F.R. § 51.23(c). Site-specific environmental concerns must therefore be addressed under other NEPA regulations, such as 10 C.F.R. § 51.45.

3. Because The CISF Is Not Legally Authorized, It Cannot Be Analyzed Under The GEIS

Holtec's proposed reliance on Federal funding sharply diverges from the funding assumptions that bound the GEIS. Holtec's proposal involves a funding stream from DOE for which there is no federal statutory authorization. Indeed, Holtec's proposal seeks financing in the alternative, by stating the project will be funded either by DOE sustenance, or private contractual arrangements. Besides creating an issue of fact as a divergence from the GEIS expectation, the proposal is actually two separate proposals, one founded on a legal financing method, the other one not. 10 C.F.R. § 51.45(d) requires that "The environmental report shall list all Federal permits, licenses, approvals and other entitlements which must be obtained in connection with the proposed action and shall describe the status of compliance with these requirements." Holtec has neglected to mention the "Federal approval" of the U.S. Congress which must be obtained.

Holtec states that it there is to be a site-specific EIS review of its proposal. Answer at 75-76, citing GEIS p. D-95. But Holtec maintains that "Taken together, the GEIS and the site-specific environmental review will provide the decisionmaker in a licensing proceeding with a complete environmental analysis. . . ." *Id.* But the three sentences immediately preceding that statement say, "Prior to the completion of a licensing action, the NRC will conduct a site-specific environmental review and document the results of this review in an EA/FONSI or EIS. The site-specific environmental review will address, among other things, the environmental impacts

of spent fuel storage during the license term. The findings of the site-specific environmental review may be challenged by a petitioner during the initial licensing of a facility. . . .” Joint Petitioners are advancing that challenge.

B. Analysis Of Terrorist Threats Is Different As Between The Ninth And Tenth Circuits

Holtec concedes that the Ninth Circuit decided in *San Luis Obispo Mothers for Peace v. NRC* that a terrorist attack is not so remote and speculative as to be beyond a NEPA analysis, but then reviews the NRC’s determination to follow contrary law from another federal circuit court. The upshot of Holtec’s discussion is that since the CISF site is in New Mexico, which is located within the Tenth U.S. Circuit Court, that “no NEPA analysis of the potential environmental impacts of hypothetical acts of terrorism is required in this proceeding.” Holtec Answer at 74.

But Holtec is not the Court. The Ninth Circuit consists of nine states.[23] There are at least half a dozen nuclear power reactors in those states, and the SNF/GTCC rail routes cross hundreds of miles of the Ninth Circuit. Transportation is the *sine qua non* of the Holtec project; without delivery of SNF and GTCC waste, Holtec cannot conduct its business. A proper perspective of the Holtec project is that it begins in far-flung states, especially since Holtec has agreed to provide cask transportation for San Onofre Nuclear Power Plant. Joint Petitioners urge that analysis of terrorist threats surely must be part of the NEPA proceeding for those reactor sites located in states in the Ninth Circuit.

C. Joint Petitioners Have Stated A ‘Contention of Omission’

The Holtec application is woefully incomplete. Though the company insists that Joint Petitioners fail to specify legal requirements for Holtec to provide claimed missing information,

[23] Alaska, Arizona, California, Hawaii, Idaho, Montana, Nevada, Oregon, and Washington.

Holtec is just avoiding the "hard look" requirement.

Where a contention alleges the omission of particular information or an issue from an application, the Commission may admit the contention for hearing. The contention remains a live controversy until and unless the information is later supplied by the applicant, which renders the contention moot. *Amergen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), LBP-06-16, 63 NRC 737, 742 (2006). The Commission has decreed that when a contention of omission has been rendered moot by provision of the missing information, the intervenor – if it wishes to raise specific challenges regarding the new information –may timely file a new contention that addresses the admissibility factors in 10 C.F.R. § 2.309(f)(1). *Oyster Creek*, LBP-06-16, 63 NRC at 744; *Entergy Nuclear Vermont Yankee, L.L.C. and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Plant), LBP-05-24, 62 NRC 429, 431-32 (2005).

Dr. Ballard hones in on "major questions of liability given Holtec's unique position in the end of fuel cycle operations, questions about waste title, and . . . unanswered questions in the license application . . . left unanswered because of the paucity of analysis of the programmatic implications of the proposed CISF." The proposal, he notes, "offers few specifics, hides behind

copyright, LLC status and other legal protections to give the NRC what they wish to hear."

Dr. Ballard zeroes in on the weakness of the CISF proposal because of the lack of effective plans for the critical component of transportation, citing Holtec because the proposal does not address the real intent of NEPA and regulations propagated to protect the public interest. rther address more than transportation. However, he emphasizes the surprisingly unaddressed transportation aspects of the Holtec proposal as that subject is covered in the ER.

By 10 C.F.R. § 72.108, "The proposed ISFSI . . . must be evaluated with respect to the potential impact on the environment of the transportation of spent fuel, high-level radioactive waste, or reactor-related GTCC waste within the region." NRC regulations mandate investigation of environmental effects of the act of transporting the SNF-filled canisters, whether they are being delivered to the Holtec CISF or returned to the point of origin.

Further, "Structures, systems, and components important to safety must be designed to accommodate the effects of, and to be compatible with, site characteristics and environmental conditions associated with normal operation, maintenance, and testing of the ISFSI or MRS and to withstand postulated accidents." 10 C.F.R. 72.122(b). The Commission will issue a license under 10 C.F.R. Part 72 upon determining "that the application for a license meets the standards and requirements of the Act and the regulations of the Commission, and upon finding that "[t]he applicant's proposed operating procedures to protect health and to minimize danger to life or property are adequate." 10 C.F.R. § 72.40(a)(5). The Commission further must find that "[t]here is reasonable assurance that . . . [t]he activities authorized by the license can be conducted without endangering the health and safety of the public." 10 C.F.R. § 72.40(a)(13).

And 10 C.F.R. § 72.90 requires that the SAR must investigate and assess site

characteristics that related to safety and environmental impact. And 10 C.F.R. § 72.98 directs that:

> (b) The potential regional impact due to the construction, operation or decommissioning of the ISFSI or MRS must be identified. The extent of regional impacts must be determined on the basis of potential measurable effects on the population or the environment from ISFSI or MRS activities.
>
> (c) Those regions identified pursuant to paragraphs (a) and (b) of this section must be investigated as appropriate with respect to . . . (3) Any special characteristics that may influence the potential consequences of a release of radioactive material during the operational lifetime of the ISFSI or MRS.

An environmental report must address these considerations:

(1) The impact of the proposed action on the environment. Impacts shall be discussed in proportion to their significance;

(2) Any adverse environmental effects which cannot be avoided should the proposal be implemented;

(3) Alternatives to the proposed action. The discussion of alternatives shall be sufficiently complete to aid the Commission in developing and exploring, pursuant to section 102(2)(E) of NEPA, "appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." To the extent practicable, the environmental impacts of the proposal and the alternatives should be presented in comparative form;

(4) The relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity; and

(5) Any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

10 C.F.R. § 51.45(b). Further, "'[t]he environmental report must include an analysis that considers and balances the environmental effects of the proposed action, the environmental impacts of alternatives to the proposed action, and alternatives available for reducing or avoiding adverse environmental effects." § 51.45(c).

Dr. Ballard's report identifies deficiently-addressed environmental and social impacts as well as omissions of factual and analytical responsibility by Holtec in the Environmental Report. These include:

- a site specific and programmatic EIS of supply and transportation elements from the end of the fuel cycle.

- giving the exact number of anticipated shipments and overall volume (explaining the 73,600-ton discrepancy in tonnage asserted by Holtec itself, 100,000 versus 173,600 tons) of shipments to the CISF; expected numbers of start clean/stay clean shipments (return-to-sender) and the number of shipments from CISF to a permanent repository based on operational lifespan of the CISF are necessary to make a best estimate of risks to communities and emergency responders, as well as the public, in the transportation corridor.

- estimates of design-based events for the whole duration of the transportation campaign so that local communities can understand what they may have to face over the lifespan of the program. This process should define scenarios for both human-induced events and natural hazards; and establishment of the threats to the thousands of shipments over time and inquiry into whether NRC regulations could be changed to help mitigate those risks.

- actual identities of participating customer utilities and expected means of transport, again to assist communities grasp the numbers of SNF shipments, and mode of transport.

- the expected transport routes, in detail.

- considerable detailing of the expected waste shipments, such as burnup history; years in dry cask storage, etc.

- details on the inventory Holtec might accept, such as fuel types and research, including by Dr. Ballard himself as a primary, internationally recognized expert on this subject.

- radionuclide inventories in shipments.

- specify plans and funding to prepare emergency responders along transport routes.

- details on the routine radiation exposures the public will face per shipment and over the lifespan of the operational life of the CISF.

- details on the more-than-routine radiation exposures the public will face in return-to-sender shipments and over the lifespan of the operational life of the CISF.

- construction of plans to secure locations for shipments in transit if there is a radiological incident involving rail, truck or barge, or other unanticipated challenge, such as extreme weather events during the course of a shipment.

- identification of titleholders of the wastes given Holtec's unique role as owner of nuclear power plants and as contractor for CISF services.

- assessment protocols for radiological, social, economic, political and legal impacts.

- establishment of defined procedures and financing mechanism for communities to recover damages associated with any design basis or human induced events, and to receive compensation for mishaps with CISF transportation and operation.

- setup of a system of regularized communications with communities along transport corridors, providing details on shipments, waste types shipped, accidents, etc.

- the massive transportation implicated by Holtec's proposal must be addressed in the NEPA document, including the totality of transportation needed to stock the CISF.

Contention No. 13: Adoption of Sierra Club Contentions By Petitioners

Pursuant to 10 C.F.R. § 2.309(f)(3), Joint Petitioners move to adopt all contentions filed by the Sierra Club in this proceeding and to re-allege them as their own as if written herein.

Joint Petitioners and the Sierra Club share many of the same issues and concerns regarding the proposed Holtec CISF at issue in this proceeding. It would serve the interests of

judicial economy and merits litigation of the issues raised in this proceeding for the parties to adopt each others' contentions. Joint Petitioners agree and designate Wallace Taylor to litigate the Sierra Club's contentions as its lead representative with respect to its contentions, and Terry Lodge will litigate Joint Petitioners' contentions as lead representative.

In a license transfer proceeding involving Indian Point, two intervenors, the Town of Cortland and Citizens Awareness Network sought to adopt each other's contentions. *See Consol. Edison Co.* (Indian Point, Units 1 and 2), CLI-01-19, 54 NRC 109, 131-33 (2001). The Commission held that where both petitioners have independently met the requirements to participate in the proceeding, the Board may provisionally allow petitioners to adopt each other's issues early in the proceeding. *Id.* at 132. That is the nature of Joint Petitioners' request, should they be granted standing in this matter, and they so move.

Sincerely,

/s/ Terry J. Lodge

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Counsel for Don't Waste Michigan, Citizens' Environmental Coalition, Citizens for Alternatives to Chemical Contamination, Nuclear Energy Information Service, Public Citizen, Inc., San Luis Obispo Mothers for Peace and Nuclear Issues Study Group, Petitioners

CERTIFICATE OF SERVICE

Pursuant to 10 C.F.R. § 2.305, I hereby certify that, on this 16th day of October, 2018, copies of the "Combined Reply of Don't Waste Michigan, Citizens' Environmental Coalition, Citizens for Alternatives to Chemical Contamination, Nuclear Energy Information Service, Public Citizen, Inc., San Luis Obispo Mothers for Peace and Nuclear Issues Study Group Motion to Holtec and NRC Staff Answers" was filed in the Electronic Information Exchange (the NRC's

E-Filing System) in the above captioned proceeding for service via automated distribution to all registered counsel and parties.

/s/ Terry J. Lodge
Terry J. Lodge, Esq.
Counsel for Petitioners

DECLARATION OF Lucy Jane Swanson

I, Lucy Jane Swanson, am the Declarant herein, and I hereby make the following statements under the penalty of perjury:

1) I am an adult citizen of the United States, am not under disability, and make the following statements voluntarily.

2) My residence address is 475 Squire Canyon Road, San Luis Obispo, CA 93401.

3) I know that the Nuclear Regulatory Commission is considering granting a license to Holtec International for the construction and operation of a HI Store Consolidated Interim Storage Facility near Hobbs, New Mexico for the purpose of storing up to 173,000 tons of high-level nuclear waste in the form of spent nuclear fuel (SNF) and greater-than-Class-C (GTCC) wastes for at least 100 years, and possibly for centuries. I also know that the proposal will require delivery over hundreds or thousands of miles of at least 10,000 shipments of SNF-filled casks and GTCC wastes to the Holtec facility, and that these very dangerous radioactive wastes will be transported by truck, barge and/or rail to Holtec. I further understand that the deliveries to Holtec will take place over 20 years and that most of the waste will come from nuclear plant fuel pool locations in the eastern United States.

4) At least 95% of the planned shipments to the proposed Holtec site in New Mexico will be railroad deliveries. I have studied the Department of Energy maps of rail and highway transportation routes, and I have made some observations about these routes which will of necessity be used to transport cargoes of SNF and/or GTCC wastes from the Diablo Canyon plant to the Holtec facility. The rail line passes within 12 miles of my home. But it will be necessary to transport those wastes by truck from the Diablo plant to the railroad, and the intersection of the only road leading away from the Diablo Canyon plant to the Highway 101 freeway or its frontage roads is within three miles of my home, as verified by the map posted on the website of the San Luis Obispo County Office of Emergency Services at http://www.slocounty.ca.gov/Departments/Office-of-Emergency-Services.aspx

5) I am concerned for my personal safety and that of others who live in my household from radiation exposure in the event of a serious transport accident, vandalism or a terrorist attack on a shipment. I believe that if there are airborne or waterborne emissions from a breached cask during transport that those in my household and I might be exposed to radiation and suffer health consequences and serious property damage. I disagree with the rosy projections of perfect transport predicted by Holtec International in the Environmental Report (ER) it has compiled on the proposal for the facility.

6) I have reviewed the ER and note that there is no planned public health impact assessment of the effects of 20 years of transports of SNF and GTCC waste and only a superficial analysis of the risks from unbreached casks in transport.

7) I note that in the ER, Holtec states that it will strictly follow a "return to sender" policy, whereby if a cask is delivered to their New Mexico facility with a radiation leakage problem, it will be returned to the point of origin. Thus actively-leaking casks will travel close to my home, place of employment and/or places where I seek recreation. I believe that the risks of a radiation accident will be increased during such shipments. The Holtec practice seems to me to be in violation of federal regulations and may even amount to a criminal act. It is certainly an adverse risk that should not be imposed on me or on my family. I note that the ER contains no analysis of the potential scenarios involving a breached cask and that there is no analysis in the ER that addresses the potential contamination of land, water and property resources or the threat to public health and the environment from such a practice.

8) I understand the casks, once set on rail cars, will be extremely heavy and concentrated loads on the tracks, and similarly will be unusually heavy loads on the specially-built truck trailers used to transport them on highways. I am concerned that scenarios not contemplated by Holtec in its ER could occur, such as a radioactive cask being so overweight that it derails and sits for days or longer in an area in which I live/work/recreate; or a truck trailer load bearing failure that requires transfer of the transport cask onto another trailer near me or others in my household.

9) The thought of being stuck in traffic at a rail crossing or on a parallel highway near a cask containing SNF or GTCC causes me concern for my health and safety and that of people and animals in my household. Multiple transports in the thousands suggests to me that there may be cumulative radiation effects on people, plants and property from even normal transports of SNF and GTCC wastes along the proposed rail and highway routes.

10) The U.S. federal government or private industry should not have the right to make transportation decisions that put at risk our public health and the environment with only spotty and incomplete investigation and analysis.

11) I hereby designate San Luis Obispo Mothers for Peace, a grassroots environmental betterment organization of which I am a member which is located in San Luis Obispo, CA, (P.O. Box 3608, San Luis Obispo, CA 93403) to represent my interests in a petition to intervene against granting an NRC license to Holtec International for the HI Store Consolidated Interim Storage Facility. I request that San Luis Obispo Mothers for Peace be accorded standing to proceed on my behalf. My interests will not be

adequately represented unless San Luis Obispo Mothers for Peace is allowed to participate as a full party in this proceeding on my behalf.

12) Further, Declarant saith naught.

Date: October 11, 2018

(Signature) Declarant Lucy Jane Swanson

(Printed Name) Lucy Jane Swanson

DECLARATION OF JILL ZAMEK

I, Jill ZamEk, am the Declarant herein, and I hereby make the following statements under the penalty of perjury:

1) I am an adult citizen of the United States, am not under disability, and make the following statements voluntarily.

2) My residence address is 1123 Flora Road, Arroyo Grande, CA 93420

3) I know that the Nuclear Regulatory Commission is considering granting a license to Holtec International for the construction and operation of a HI Store Consolidated Interim Storage Facility near Hobbs, New Mexico for the purpose of storing up to 173,000 tons of high-level nuclear waste in the form of spent nuclear fuel (SNF) and greater-than-Class-C (GTCC) wastes for at least 100 years, and possibly for centuries. I also know that the proposal will require delivery over hundreds or thousands of miles of at least 10,000 shipments of SNF-filled casks and GTCC wastes to the Holtec facility, and that these very dangerous radioactive wastes will be transported by truck, barge and/or rail to Holtec. I further understand that the deliveries to Holtec will take place over 20 years and that most of the waste will come from nuclear plant fuel pool locations in the eastern United States.

4) At least 95% of the planned shipments to Holtec in New Mexico will be railroad deliveries. I have studied Department of Energy maps of rail, water and highway transportation routes, and I have made some observations about the routes which will likely be used to transport dozens of cargoes of SNF and/or GTCC wastes from the Diablo Canyon nuclear plant to the Holtec facility. The plant is approximately 12 miles from my home. If transport of SNF/GTCC is by rail, the only rail line for at least 10 miles in any direction from Diablo Canyon passes within 4 to 5 miles of my home. The major U.S. highway nearest the plant, on which truck transports of SNF/GTCC, passes within 2 miles of my home. If the SNF/GTCC is loaded on a barge to be sent elsewhere by water, the barge loading area for Diablo Canyon is 10 miles from my home.

5) I am concerned for my personal safety and that of others who live in my household from radiation exposure in the event of a serious transport accident, vandalism or a terrorist attack on a shipment. I believe that if there are airborne or waterborne emissions from a breached cask during transport that those in my household and I might be exposed to radiation and suffer health consequences and serious property damage. I disagree with the rosy projections of perfect transport predicted by Holtec International in its Environmental Report (ER) it has compiled on the proposal for the facility.

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be in violation of federal regulations and possibly even amounts to a criminal act and an adverse risk that neither my family nor I should have to bear. I note that the Environmental Report contains no analysis of the potential scenarios involving a breached cask and that there is no analysis in the ER that addresses the potential contamination of land, water and property resources or the threat to public health and the environment from such a practice.

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10) The U.S. federal government or private industry should not have the right to make transportation decisions that put at risk our public health and the environment with only spotty and incomplete investigation and analysis.

11) I hereby designate San Luis Obispo Mothers for Peace, a grassroots environmental betterment organization of which I am a member which is located in San Luis Obispo, CA, (P.O. Box 3608, San Luis Obispo, CA 93403) to represent my interests in a petition to intervene against granting an NRC license to Holtec International for the HI Store Consolidated Interim Storage Facility. I request that San Luis Obispo Mothers for Peace be accorded standing to proceed on my behalf. My interests will not be adequately represented unless San Luis Obispo Mothers for Peace is allowed to participate as a full party in this proceeding on my behalf.

12) Further, Declarant saith naught.

Date: October 16, 2018

(Signature) Declarant Jill K. ZamEk

(Printed name) Jill K. ZamEk