

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

In the Matter of)	Docket No. 72-1051
Holtec International)	
(HI-STORE Consolidated Interim Storage Facility))	September 14, 2018
)	

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**PETITION 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 INTERVENE AND REQUEST FOR AN ADJUDICATORY HEARING**

I. INTRODUCTION

Pursuant to 10 C.F.R. § 2.309, 10 C.F.R. Part 72, and the hearing notice published by the Nuclear Regulatory Commission (“NRC or Commission”) at 83 Federal Register 32919 (July 16, 2018), 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 (“DWM,” “CACC,” “PC,” “SLOMFP,” “NEIS” “CEC,” and “NISG,” or “Petitioners”) hereby petition and move for leave to intervene and request a hearing before the Nuclear Regulatory Commission on the application of Holtec International (“Holtec”) for a license to construct and operate the HI-STORE Consolidated Interim Storage Facility in Lea County, New Mexico (“Holtec CISF”).

In the first year of activity, Holtec proposes to store up to 8,680 metric tons of uranium of commercial spent nuclear fuel (“SNF”) and greater-than-Class-C radioactive waste (“GTCC”) in

the HI-STORM UMAX Canister Storage System over a 40-year license term. Ultimately, Holtec anticipates delivery to the site, and storage of, 100,000 to 173,000 metric tons of SNF and GTCC waste for from 100 to 300 years, or more..

This Petition sets forth with particularity the contentions raised by the above-named Petitioners. Petitioners DWM, CACC, PC, SLOMFP, NEIS and CEC have properly demonstrated that they should have representational legal standing through their members to oppose the Holtec application and pursue its dismissal, with prejudice.

II. LEGAL STANDING OF PETITIONERS TO INTERVENE

A. Description of the Proceeding

This proceeding concerns the application submitted to the NRC by Holtec for a specific license pursuant to Part 72 of Title 10 of the Code of Federal Regulations, which contains the “Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High- Level Radioactive Waste, and Reactor-Related Greater Than Class C Waste.”

On March 19, 2018, notice of the NRC’s acceptance and docketing of the application and the public availability of the application appeared in the Federal Register (83 FR 12034). Notice of hearing and opportunity to petition for leave to intervene was published in the Federal Register on July 16, 2018. The within Petition is the response by the intervening organizations to the latter notice. Petitioners delineate their standing to intervene in Section II, *infra*. In Section III, they set forth their contentions.

B. Fundamental Prerequisites for Standing

To demonstrate legal standing in this licensing proceeding, the Petitioners must assert an actual or threatened, concrete and particularized injury-in-fact falling within the zone of interests

protected by the statutes governing NRC proceedings. The injury-in-fact must be fairly traceable to the challenged licensing action and must be likely to be redressed by a favorable decision.

International Uranium (USA) Corp. (White Mesa Uranium Mill), CLI-01-18, 54 NRC 27, 30 (2001); *Sequoyah Fuels Corp.* (Gore, Oklahoma Site Decommissioning), CLI-01-2, 53 NRC 9, 13 (2001); *Quivira Mining Co.* (Ambrosia Lake Facility, Grants, New Mexico), CLI-98-11, 48 NRC 1, 5-6 (1998); *Duke Cogema & Webster* (Savannah River Mixed Oxide Fabrication Facility), LBP-01-35, 54 NRC 403, 413 (2001) . Generally, the Petitioners are membership organizations situated along many anticipated rail, highway and barge routes by which SNF and GTCC will be transported from nuclear power reactor sites to Holtec. Petitioners oppose the licensing and construction of the Holtec CISF. Later in this Petition, they proffer contentions respecting flaws, defects and unlawful proposed practices associated with the transportation plan for Holtec, along with contentions addressing flaws, defects and unlawful proposed practices at the Holtec site in New Mexico. Once a party demonstrates that it has standing to intervene on its own accord, that party may then raise any contention that, if proved, will afford the party relief from the injury it relies upon for standing. *See, e.g., Duke Power Co. v. Carolina Environmental Study Group*, 438 U.S. 59, 78-81 (1978) (rejecting a requirement for a “nexus” between the injury claimed and the right being asserted); *Sierra Club v. Morton*, 405 U.S. 727, 740 n.15 (1972) (“The test of injury-in-fact goes only to the question of standing to obtain judicial review. Once this standing is established. the party may assert the interests of the general public in support of its claims for equitable relief.”). *See generally* 3 K. Davis and R. Pierce, Administrative Law Treatise § 16.13 (1994); *Yankee Atomic Electric Company* (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996).

The notion of “injury-in-fact” includes even radiation impacts that do not necessarily amount to a regulatory violation. See *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403, 417 (2001) (citing *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 247-48 (1996)). Even a minor exposure to radiation--within regulatory limits--will suffice to state an injury-in-fact. *Id.*

In *Duke Cogema Stone & Webster*, the ASLB conferred standing on grassroots organizations whose individual members were concerned about encountering truckloads of mixed oxide nuclear fuel on highways at some distance from nuclear reactors in the region:

Each of these individuals also has stated an injury in fact. They all have asserted the threatened harm to their health from unwanted doses of ionizing radiation from the MOX fuel that will be transported from the MFFF to the mission reactors over the same public highways the Petitioners’ members travel because of their close geographic proximity to the MFFF or the mission reactors. As the intervention petitions indicate, incident-free shipping of plutonium provides a dose of ionizing radiation, albeit small, to anyone next to the transport vehicle and a minor exposure to radiation, even one within regulatory limits, is sufficient to state an injury in fact. See *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 247-48 (1996). Further, the asserted harm here — injury to the health and safety of Petitioners’ members from ionizing radiation — is clearly encompassed by the health and safety interests protected by the Atomic Energy Act.

Id., 54 NRC at 417.

Not only actual injury, but the mere threat of injury from radiation exposure is sufficient to satisfy the “injury in fact” requirement of traditional standing. See *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). “A threatened unwanted exposure to radiation, even a minor one, is sufficient to establish an injury.” See *Millstone*, CLI-03-14, 58 NRC at 216.

A petition to intervene must provide information supporting the petitioner’s claim to

standing, including: (1) the nature of the petitioner’s right under the governing statutes to be made a party; (2) the nature of the petitioner’s interest in the proceeding; and (3) the possible effect of any decision or order on the petitioner’s interest.10 C.F.R. § 2.309(d)(1).

In determining whether an individual or organization should be granted party status “as of right,” the NRC applies judicial standing concepts that require a participant to establish: (1) it has suffered or will suffer “a distinct and palpable harm that constitutes injury-in-fact within the zone of interests arguably protected by the governing statute[s].” (*e.g.* in this case, the Atomic Energy Act of 1954 (“AEA”), 42 U.S.C. §§ 2011-2297; National Environmental Policy Act of 1969 (“NEPA”), 42 U.S.C. §§ 4321-4347; Nuclear Waste Policy Act, 42 U.S.C. §§ 10101 *et seq.* (“NWPA”); and National Historic Preservation Act, 16 U.S.C. §§470-470t (“NHPA”)); (2) the injury is fairly traceable to the challenged action; and (3) the injury is “likely to be redressed by a favorable decision.” *Georgia Institute of Technology* (Georgia Tech Research Reactor), CLI-95-12, 42 NRC 111, 115 (1995) (reciting standards for judicial standing). Standing will lie “where ‘a plaintiff demonstrates that the challenged agency action authorizes the conduct that allegedly caused the plaintiff’s injuries, if that conduct would allegedly be illegal otherwise.’” *Am. Trucking Ass’n v. Fed. Motor Carrier Safety Admin.* , 724 F.3d 243, 248 (D.C. Cir. 2013) (quoting *Animal Legal Def. Fund, Inc. v. Glickman*, 154 F.3d 426, 440 (D.C. Cir. 1998) (*en banc*)).

In the Holtec matter, the Petitioners urge that the statutory and regulation provisions of AEA, NEPA, NWPA and NHPA are not being followed. The Petitioners oppose the Holtec facility’s construction and operation, and further seek a more stringent regulatory regime governing the estimated 10,000 transport trips of spent nuclear fuel, the granting of which by the

Commission would provide greater protection for the health and safety of their members. Because Petitioners are able to show that their claimed actual or threatened injuries could be cured or ameliorated by some action of the Commission either to deny the license to Holtec, or to imposed conditions on a license, they have established redressability. *Sequoyah Fuels Corp.* (Gore, Oklahoma, Site Decommissioning), CLI-01-2, 53 NRC 2, 14 (2001).

C. Requirements for Organizational Standing

Showings of injury, causation, and redressability are necessary regardless of whether a petitioner is an individual, or an organization seeking to intervene in its own right. *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-98-21, 48 NRC 185, 195 (1998); *Georgia Tech Research Reactor*, CLI-95-12, 42 NRC 115.

A membership organization has standing to intervene as representative of its members by demonstrating that an individual member has authorized the organization to represent her interests. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-98-13, 48 NRC 26, 30-31 (1998); *Georgia Tech Research Reactor*, CLI-95-12, 42 NRC at 115. The petitioning organization further must depict that the interests it seeks to protect are germane to its purposes and that neither the claim it asserts nor the relief it requests require the participation of an individual member in the proceeding. *Private Fuel Storage*, CLI-98-13, 48 NRC at 30-31; *Savannah River Mixed Oxide Fabrication Facility*, 48 NRC at 414.

In making the determination whether a petitioner has standing to intervene, a licensing board must construe the petition most favorably to the petitioner, regardless of whether an individual or an organization. *Georgia Tech Research Reactor*, CLI-95-12, 42 NRC at 115; *U.S. Department of Energy* (High Level Waste Repository), LBP-09-06, 11 (2006); *Savannah River*

Mixed Oxide Fuel Fabrication Facility, LBP-01-35, 54 NRC 414; *Progress Energy Carolinas, Inc.* (Shearon Harris Nuclear Power Plant, Units 2 & 3), LBP-08-21, 68 NRC 554, 559 (2008); *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 & 4), LBP-08-16, 68 NRC 361 (2008).

D. Non-Reactor Cases and ‘Proximity-Plus’ Standing

The Holtec license application is a “non-reactor” case. In non-reactor cases there is no presumption of standing based upon geographic proximity, which is a departure from the presumption in most nuclear power reactor cases of standing within a 50-mile radius. In non-reactor cases, the Commission has developed the “proximity-plus” test, where a petitioner must show that the activity at issue involves geographical closeness to a “significant source of radioactivity producing an obvious potential for offsite consequences.” *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 75 n.22 (1994).

The petitioning organizations’ members live, work and recreate near anticipated railroad, highway or barge route corridors through which canisters containing spent nuclear (SNF) will be passing. SNF is inherently very deadly radiotoxic material, and each transport cask will contain considerably more radioactivity (200 times or more) than was dispersed by the Hiroshima nuclear bomb. SNF “poses a dangerous, long-term health and environmental risk. It will remain dangerous ‘for time spans seemingly beyond human comprehension.’” *Nuclear Energy Inst., Inc. v. EPA*, 373 F.3d 1251, 1258 (D.C. Cir. 2004)(*per curiam*).

The harms and threats from SNF that are set forth by Petitioners’ members, or reasonably inferable from their statements, include the potential for radiation exposures from being physically stuck in traffic proximate to truck or rail loads of SNF; spills and water runoff from

accidents or leakage from those transport vehicles; downwind radioactive exposure from defective transport vehicles; and possible radioactive contamination of water sources caused by accidents. Cesium-137 is one of hundreds of listed isotopes in the SNF. If there is a fire and leakage or surface radioactive contamination on a transport cask or vehicle, Cs-137 could quite readily volatilize and escape with the smoke, driven by the heat. Radionuclides could be inhaled by emergency responders and members of the public. could be carried downwind as fallout, and could be ingested (via drinking water or contaminated food), and then lodge in and attack human muscle tissue, including the heart or thyroid gland. Cs-137 and other likely SNF isotopes must be respected in transport accidents, especially those involving fires and leaks into surface waters. It may be difficult to assess the threats of airborne or waterborne radiation from such events with precision, but the threats cannot be dismissed out of hand.

Petitioners' members raise proper allegations of threatened harms and scenarios where the health and safety of their members could be impaired. Consequently, Petitioners have set forth legitimate facts of standing for organizations to serve as representatives of their members who are exposed to threatened harm from Holtec, both as SNF in transit as well as from Holtec's CISF in New Mexico.

E. Considerations of 'Proximity-Plus' in Holtec's Transportation

Whether and at what distance from the source a person can be presumed to be affected, and thus have legal standing, is judged on a case-by-case basis in NRC administrative cases, taking into account the nature of the proposed action and the significance of the radioactive source. A petitioner must show both that he or she lives, works or recreates within a certain distance of the location of dangerously radioactive materials, but does not have the burden of

articulating a plausible means through which those materials could cause harm to him or her (because 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).

F. Plausible Means of Harm in the Holtec Transportation Scheme

There can be no dispute that SNF and greater-than-Class-C wastes (GTCC) are significant sources of radiation with obvious potential for generating consequences that could affect human health, safety and the environment. This, alone, is a matter of fact and legally, Petitioners are relieved of any burden of showing a plausible means of radioactive exposure. But there are demonstrable exposure routes with the possibility of affecting public health and safety and the environment within Holtec's application submission. Later herein, Petitioners advance the concept of "human-induced events," or HIEs, which are risky scenarios with implications for human health, safety and the environment. Generally, Holtec's Environmental Report (Rev. 1) ("ER") takes a denialist perspective of the potential harm from leaky or deteriorated or externally-contaminated transportation containers--casks--used for moving SNF and GTCC waste. Holtec rejects the idea that casks with defects, breaches, leaks, external contamination or containing defective fuel will even be delivered to the Holtec site, but if they are, they will supposedly be swiftly returned to their points of origin at nuclear power plant sites. Holtec calls this its "Start Clean/Stay Clean" policy. Petitioners call it Holtec's policy of "Return to Sender."

Holtec admits in its application that it has affirmatively created what is a serious accident potential. In the "HI-STORE CIS Safety Analysis Report, Revision 0A (October 6, 2017), Holtec

asserts:

In order to uphold the HI-STORE philosophy of “Start Clean/Stay Clean” HP personnel ensure that contamination levels on the canisters of incoming shipments meet site requirements. *Canisters exceeding the limits will be returned to the originating power plant for dispositioning.*

Id., § 3.1.4.6, p. 179/581 of .pdf. (Emphasis added).

Moreover, in its Environmental Report, Holtec states:

The potential exposure pathways at the CIS Facility Site include: (1) direct exposure to radiation (neutrons and gamma rays) that is emitted from the storage casks, (2) exposure to radioactive material through ingestion of contaminated water or food, including plants and animals in the vicinity of the Site that may be used for subsistence, and (3) exposure to radioactive material through submersion or inhalation of airborne radionuclides. The evaluation of exposures from the first route requires consideration of the radiation source (*i.e.*, the canister contents).

Exposures from the second and third routes require that some radioactive material escape from the casks and the proposed CIS Facility. *Given the CIS Facility start clean/stay clean philosophy (i.e., CIS Facility plans to reject and return canisters that have unacceptable external contamination), as well as the fact that no canisters would be opened at the proposed CIS Facility, and considering the engineered features of the canister/cask, there appears to be no viable mechanism by which significant radioactive materials would migrate off-site, or even away from the casks. Thus, while the latter two exposure routes are possible, radioactive material is unlikely to be available for ingestion or inhalation via those pathways during normal conditions, and hence, there is no opportunity for impacts from these pathways (NRC 2001, page 4-46).*

Id. at p. 214/543.

Also, Holtec states that if the “maximum reasonably foreseeable accident associated with SNF transport to the CIS Facility” occurred - the scenario is not disclosed - that “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.

These admissions of the possibility of adverse effects logically apply as well to the transportation corridors and deliveries of SNF and GTCC waste to Holtec. The presence of external contamination on a rejected, damaged and/or leaking cask ordered and in transit back to its sender by directive of Holtec comprises an intentional act by Holtec and creates a “viable mechanism by which significant radioactive materials would migrate off-site.” Indeed, “return to sender” may violate the Atomic Energy Act.¹

**G. ‘Proximity Plus’ and the DOE Standard in Yucca Licensing Proceedings
Provide the Foundation for Petitioners’ Legal Standing to Challenge
Arrangements for the Transportation of Holtec SNF And GTCC**

Below, the organizations petitioning for intervenor status have produced sworn declarations from members, who are uniformly with one exception reside fewer than 10 miles from likely rail or highway routes for the transportation of SNF and GTCC waste to the Holtec CISF.

(1) Rail, Highway and Barge Route Assumptions

Petitioners went to unusual lengths to identify likely rail and highway routes to New Mexico. At p. 207/543 of the Holtec ER appears Figure 4.9.1, entitled “Transportation Routes for SNF.” It is the *only* depiction in the entire Holtec application package that shows any of the expected routes by which SNF and GTCC will be delivered to Holtec. Its legend states that

¹10 C.F.R. § 72.122(h)(5) states that “The high-level radioactive waste and reactor-related GTCC waste must be packaged in a manner that allows handling and retrievability without the release of radioactive materials to the environment or radiation exposures in excess of part 20 limits. The package must be designed to confine the high-level radioactive waste for the duration of the license.”

Figure 4.9.1 purports to show the routing for “Maine Yankee to CISF,” “San Onofre to CISF,” and “CISF to Yucca Mountain.” The transportation component from nuclear reactors to Holtec is expected to last 20 years and include at least 10,000 separate shipments, nearly all of which will be by rail. Without the required disclosures of expected water, highway and rail routes that the public has a right to see within the NEPA document, and no way to compel those disclosures in advance of formally intervening in this licensing proceeding, Petitioners have reviewed many transportation route maps disclosed in maps found in the record of the Yucca Mountain NRC proceeding which are cited in the margin,² and for purposes of pursuing intervention in the Holtec proceeding, presume that the same routes will be used for transports to Holtec.

(2) The DOE Region-of-Influence (ROI) Standard in Yucca Mountain Proceedings

In 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, Nevada, Volume I” (February 2002), the U.S. Department of Energy pronounced that the “region of influence for public health and safety along existing transportation routes is 800 meters (0.5 mile) from the centerline of the transportation rights-of-way and from the boundary of rail yards for incident-free (non-accident) conditions. The region of influence was extended to 80 kilometers (50 miles) to address potential human health and safety impacts from accident scenarios.” §§ 3.2.1, p. 3-119.

The spent nuclear fuel bound for the Holtec CISF is identical to the SNF planned for deep

²<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

repository burial, at Yucca or some other location. While Holtec, also, discusses a “region of influence” with a 50-mile radius outward from the New Mexico site, nowhere in its ER does Holtec define, diagram or mention a ROI for public health and safety as the U.S. DOE did in the Yucca licensing case.

(3) NRC Proximity-Plus and Other Precedent Support
A Finding of Legal Standing for Petitioners’ Members

As noted above, proximity to a large source of radioactive material may, in itself, be sufficient to establish the requisite interest for standing to intervene. Whether a petitioner’s stated concern is in fact justified must be left for consideration when the merits of the controversy are reached. *Armed Forces Radiobiology Research Institute* (Cobalt-60 Storage Facility), ALAB-682, 16 NRC 150, 152, 154 (1982) (petitioners lived three to five miles from water-shielded irradiation facility at National Naval Medical Center in Maryland holding 320,000 curies of radioactive cobalt-60 that allegedly were emitting gamma radiation; proximity to one of the U.S.’ largest radioactive cobalt inventories sufficed to establish petitioner's interest).

In *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), CLI-95-12, 42 NRC 111 (1995), the Commission left undisturbed the ASLB’s finding that it was “neither ‘extravagant’ nor ‘a stretch of the imagination’ to presume that some injury, ‘which wouldn’t have to be very great,’ could occur within ½ mile of the research reactor.” *Id.* at 117. See also *CFC Logistics, Inc.*, LBP-03-20, 58 NRC 311, 320 (2003) (petitioners residing from between one-third of a mile to three miles from a facility licensed to possess up to 1 million curies of cobalt-60 could rely on proximity presumption to establish their standing to intervene because of the quantity of radioactive material and its dangerousness).

Also, see *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-15, 59

NRC 256, 257 (2004) (groups with members living at 2.5- and 4.9-mile distances, respectively, from the proposed facility “live in [such] close proximity to the proposed LES facility” that they would have an obvious potential to be affected by the facility). And in an earlier *LES* proceeding involving the proposed Claiborne Enrichment Center, the Licensing Board remarked that the petitioner (which had several members residing within 1 mile, in “close proximity” to the proposed facility) could rely on a “presumption of injury” from an “accidental release of fission products.” See *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), Memorandum and Order (July 16, 1991) (unpublished) at 6.

Prior agency rulings regarding spent fuel pool expansion proceedings also supply some guidance. *Shearon Harris*, LBP-99-25, 50 NRC at 29-31 (petitioner seventeen miles from the facility at issue accorded standing); *Vermont Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), LBP-87-7, 25 NRC 116, 118-19 (1987); *id.*, LBP-87-17, 25 NRC 838, 842, *aff'd in part and reversed in part on other grounds*, ALAB-869, 26 NRC 13 (1987) (residence within ten miles of ISFSI found sufficient for standing); *Florida Power & Light Co.* (St. Lucie Nuclear Power Plant, Unit 1), LBP-88-10A, 27 NRC 452, 454-55 (1988), *aff'd*, ALAB-893, 27 NRC 627 (1988) (standing of individual living within 10 miles of ISFSI conceded by parties); *Millstone*, LBP-00-02, 51 NRC at 28 (standing granted individual with part-time residence located ten miles from ISFSI).

H. Conclusion: Petitioners Have Established Proximity-Plus Standing

The 800 meter/50 mile ROI for health and safety analysis invoked by the U.S. Department of Energy in the Yucca Mountain Final Environmental Impact Statement should be accorded decisive weight. DOE is the applicant and prospective manager-overseer of the SNF to

be delivered to Yucca, and DOE will occupy an analogous role in oversight and financial management of the Holtec CISO. The SNF projected for delivery to Holtec is the identical material that would later be shipped to a DOE deep repository from Holtec's CISO.

The NRC has not fashioned a bright-line geographic proximity rule for the transportation aspects of spent nuclear fuel and greater-than-Class-C wastes, but has recognized in non-reactor adjudications radii of ½ mile to 17 miles as the basis for legal standing for public intervenors. The instant Petitioners have produced members living and/or working easily within 17 miles of various Holtec shipping routes. Seventeen miles was a radius around an independent spent fuel storage installation.

“Although the Commission has encouraged licensing boards to apply contemporaneous concepts of standing, the ultimate test is not whether the NRC's test for standing conforms to that applied by federal courts, but whether the NRC's test represents a reasonable construction of section 189a³. . . As long as the petitioners reside within an area that could realistically be impacted if an accidental release occurs, it is reasonable and consistent with section 189a⁴ to find that they have standing to challenge Applicant's safety claims and its environmental analysis under NEPA.” *Calvert Cliffs 3 Nuclear Project, LLC and Unistar Nuclear Operating Services, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3) LBP-09-4, 69 NRC 170, 186 (2009).

The direct analogies between the Yucca and Holtec transportation campaigns are obvious. All of Petitioners have provided the requisite proofs from members to establish that they, and

³*Envirocare of Utah v. NRC*, 194 F.3d 72, 75-76 (D.C. Cir. 1999).

⁴Section 189a of the AEA provides for a hearing “upon the request of any person whose interest may be affected by the proceeding.” 42 U.S.C. § 2239(a)(1)(A).

consequently their sponsoring organizations, should be accorded proximity-plus standing.

I. Identification of Intervenors and Their Qualifications

1. Don't Waste Michigan

Petitioner Don't Waste Michigan (DWM) is a 30-year-old grassroots association with members in southern and central Michigan. DWM is located at 2213 Riverside Drive NE, Grand Rapids, Michigan 49505. DWM has opposed various incarnations of nuclear energy, from commercial nuclear power plants to policy and practical plans for disposal of radioactive waste, and engages in public education and legal and administrative advocacy in licensing proceedings. During the height of the opposition in the 1990's to initiation of a low level radioactive waste dump which targeted Michigan as a host state, Don't Waste Michigan turned out rallies of 3,000 to 5,000 persons on regular basis. Many of these persons identified themselves as Don't Waste Michigan members.

Presently, DWM has more than 60 members statewide, including many educators, and seeks to intervene on behalf of four of its members.

Michael J. Keegan resides in Monroe, Michigan. 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. He lives 8 miles from Fermi 2, has studied U.S. Department of Energy transportation maps compiled for the Yucca Mountain NRC licensing proceeding and notes that the railroad line likely to transport SNF and GTCC waste casks away from Fermi is 6 miles from his home. He has analyzed the Holtec plan and believes that several hundred casks are likely to be delivered from there to Holtec in New Mexico.

Hedi Kaufman resides in Monroe, Michigan. The water intake from which Mrs. Kaufman

receives her drinking water is 1/4 mile south of the Fermi 2 reactor and ISFSI. Mrs. Kaufman lives 2.5 miles from the railroad route most likely to deliver SNF and GTCC waste from Fermi to Holtec in New Mexico, and resides less than four miles from Fermi 2 reactor and the ISFSI.

Martin R. Kaufman resides in Monroe, Michigan. The water intake from which Mr. Kaufman receives his drinking water is 1/4 mile south of the Fermi 2 reactor and ISFSI. Mr. Kaufman lives 2.5 miles from the railroad route most likely to deliver SNF and GTCC waste from Fermi to Holtec in New Mexico, and resides less than four miles from Fermi 2 reactor and the ISFSI.

Maynard Kaufman resides at in Bangor, Michigan. He has examined U.S. Department of Energy transportation maps compiled for the Yucca Mountain licensing case and finds that he lives less than 1 mile from a major rail route near his property. Mr. Kaufman lives less than 10 miles from the Palisades nuclear power reactor and ISFSI. He believes that several hundred, or more, cargoes of SNF and GTCC waste will be transported on that rail line en route to Holtec in New Mexico.

JoAnne Beeman resides in Charlevoix, Michigan, less than 2 miles from Big Rock Point ISFSI. Mrs. Beeman frequently travels on U.S. highway 31 between Charlevoix and Petoskey, a designated Heavy Haul Trucking Route, on which she expects SNF and GTCC waste casks to be transported en route to New Mexico.

2. Citizens' Environmental Coalition

Citizens' Environmental Coalition was founded in 1970 around the time Love Canal in Western NY made headlines related to the irresponsible management of hazardous waste. Since that time CEC has been active in working to educate and mobilize New Yorkers around key

threats to public health and the environment, such as passage of hazardous waste legislation in New York and the cleanup of the West Valley nuclear waste site after the failed reprocessing experiment there. CEC has organized to close New York's aging nuclear reactors. The group also supports sound and sustainable energy alternatives such as efficiency and renewables, as well as the use of safer chemicals and green chemistry. CEC is concerned about the current careless planning to transport and store nuclear waste in conjunction with severe deficiencies in our national transportation infrastructure. The group works at the local, state and national levels, primarily with administrative agencies and other non-profit organizations, providing testimony and written comments and has approximately 5000 members. CEC is located at 422 Oakland Valley Rd., Cuddebackville, NY 12729. CEC has produced declarations from 6 of its members to establish standing in this licensing case.

CEC Member Thomas Ellis resides in Albany, NY, less than 10 miles from a major railroad route which he identified after studying U.S. Department of Energy maps for the Yucca Mountain licensing case. He believes hundreds of casks of SNF and GTCC waste will be delivered to Holtec in New Mexico.

CEC Member Linda DeStefano resides in Syracuse, NY, less than 10 miles a major rail route she believes will be used to transport SNF and GTCC waste to Holtec's CISF in New Mexico after studying U.S. Department of Energy maps for the Yucca Mountain licensing case. She believes hundreds of casks of SNF and GTCC waste will be delivered to Holtec in New Mexico. She works within 5 miles of that rail route. Frequently Ms. DeStefano and her husband travel via Amtrak on that rail route.

Peter Swords lives in Syracuse, NY. He has studied U.S. Department of Energy maps

for the Yucca Mountain licensing case 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.

Charley Bowman resides in Getzville, New York and after studying U.S. Department of Energy maps for the Yucca Mountain licensing case, finds 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.

Joanne Hameister resides in East Aurora, NY, 15 miles from the major rail line she identified after studying U.S. Department of Energy maps for the Yucca Mountain licensing case. She believes hundreds of casks of SNF and GTCC waste will be delivered to Holtec in New Mexico over that route.

Lynda Schneekloth resides in Buffalo, NY and lives 1.5 miles from a major rail route she identified, after studying U.S. DOE maps compiled of transportation routes in the Yucca Mountain NRC licensing case, as being 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.

3. San Luis Obispo Mothers for Peace

San Luis Obispo Mothers for Peace (SLOMFP)⁵ is a non-profit organization based in California that historically has exposed and opposed the dangers posed by Diablo Canyon and other nuclear power reactors, nuclear weapons, and radioactive waste. The organization also promotes peace, environmental and social justice, and renewable energy. SLOMFP came together in 1969 to oppose the Vietnam War and to advocate for Peace and in the early 1970's

⁵SLOMFP's website is <https://mothersforpeace.org/>

entered the AEC licensing proceeding to oppose Diablo Canyon nuclear power plant. Currently the organization has 1,400 supporters and about 50 formal voting members. MFP has litigated the NRC's failure to comply with federal laws governing nuclear power and radioactive waste management before the agency as well as in the Ninth and the First U.S. Circuit Courts; has raised various management issues at Diablo Canyon before the California Public Utilities Commission; and pursues educational outreach via social media, speaking events, rallies, mailings, letter-writing campaigns, letters to editors and opinion pieces in newspapers.

SLOMFP has produced declarations from two of its members. Jane Swanson, resident of San Luis Obispo, CA, has reviewed the Department of Energy transportation routing maps for her part of the state and finds that a major highway and major railroad line pass within 3 miles of her home. She is concerned that many SNF and GTCC waste cargoes may travel on those routes en route to Holtec.

Jill ZamEk is from Arroyo Grande, CA, has examined the DOE transportation maps and states that a major rail line passes within 5 miles of her home, and a major highway is within 2 miles, and that many cargoes of SNF and GTCC waste may travel on these routes en route to Holtec.

4. Public Citizen, Inc.

Public Citizen, Inc. is a nonprofit consumer advocacy organization that has championed the public interest in the halls of power since its founding in 1971. Public Citizen defends democracy, resists corporate power and works to ensure that government works for the people, and not for big corporations. The organization has 400,000 members and supporters throughout the country, does not participate in partisan political activities or endorse any candidates for

elected office, and takes no government or corporate money. Public Citizen mobilizes activists to grow democratic movements, watchdogs Congress, sues the government when it fails to do its job, petitions regulatory agencies to safeguard the public and engages in cutting-edge research that effects change. Public Citizen's headquarters is located at 1600 20th Street NW, Washington, D.C. 20009, and its Texas office is found at 309 East 11th St. Suite 2, Austin, Texas 78701.

Public Citizen represents two of its members. One is Petuuche Gilbert, who lives in the Pueblo of Acoma, New Mexico. After studying U.S. Department of Energy transport route maps for the Yucca proceeding, Mr. Gilbert learned that his home, his 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 in Lea County, New Mexico

The other member is Lon Burnam, an 18-year former legislator in the Texas House of Representatives, who resides in Fort Worth, Texas and after studying U.S. Department of Energy transport route maps for the Yucca proceeding, realized that he lives 2 miles from major rail and highway corridors over which he believes SNF and GTCC waste will be transported en route to Holtec in New Mexico.

5. Citizens for Alternatives to Chemical Contamination

Petitioner Citizens for Alternatives to Chemical Contamination (CACC) is a grassroots environmental education and advocacy organization headquartered in central Michigan at 8735 Maple Grove Rd., Lake, MI 48632. CACC is dedicated to the principles of social and environmental justice, pollution prevention, citizen empowerment, and protection of the Great

Lakes ecosystem. CACC seeks to intervene on behalf of several of its members.

Connie Beauvais resides in Bath, MI, about four miles from the interchange of Interstate 69 and U.S. Highway 127. After studying U.S. DOE transportation maps, she concluded that she 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 in New Mexico.

Chambre V. Beauvais resides in Bath, MI, about four miles from the interchange of Interstate 69 and U.S. Highway 127. After studying U.S. DOE transportation maps, he concluded 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 in New Mexico.

Nancy Ann Refior resides in East Lansing, Michigan. After studying U.S. DOE transportation maps, she concluded that she 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 Michigan nuclear power reactors to Holtec in New Mexico.

John T. Benetti resides in Dimondale, Michigan. After studying U.S. DOE transportation maps, he concluded 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 in New Mexico.

6. Nuclear Energy Information Service

Nuclear Energy Information Service is a non-profit organization committed to ending nuclear power in this country and worldwide. Located at 3411 W Diversey Avenue, #13

Chicago, IL 60647, with over 200 members, NEIS educates, activates and organizes the public on energy issues; builds and mobilizes grass roots power and nonviolent opposition nuclear power; and advocates sustainable and ecologically sound energy alternatives. Founded in 1981, NEIS has consistently opposed nuclear power because of cost; resistance to effective regulation; unacceptable and unnecessary safety and health risk; the tremendous disasters it could cause and has caused; the release of radionuclides into the environment by less than diligent regulators; the environmental damage caused by every step of the nuclear fuel chain; long-lived radioactive wastes; and risks of a terrorist incident at a nuclear plant or at radioactive waste storage sites, and along proposed transportation routes.

Two members of NEIS have provided declarations. One is Joyce Harant, of Peoria, Illinois, who has looked over Department of Energy maps of rail and highway transportation routes for the Yucca Mountain proposal and notes that a major likely highway transport route is within 1/10 of a mile from her home. Given Peoria's geographical location southwest of Chicago, Ms. Harant is concerned that the highway route may be used to transport several thousand, or more, cargoes of SNF and/or GTCC wastes to the Holtec facility.

The other NEIS declarant is Patricia L. Walter, of Glenview, Illinois, a Chicago suburb. She, too, reviewed Department of Energy maps of rail and highway transportation routes for the Yucca Mountain proposal and notes 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.

7. Nuclear Issues Study Group

Nuclear Issues Study Group (NISG) is a volunteer organization that works toward

Protecting New Mexico From All Things Nuclear, with specific foci on addressing and preventing adverse environmental and health issues created by uranium mining, existing and proposed nuclear waste facilities, and nuclear weapons production. Based in Albuquerque, New Mexico, NISG has a statewide reach. NISG's leadership and direction comes from a Core Group of 10 members, with over 700 individuals on our mailing list. NISG is a community organization that meets monthly and works to do public education and organizes events to create awareness about nuclear issues in our state and nationally. NISG engages in public participation and other public processes to voice community concerns about new nuclear developments and to address existing problems of radioactive contamination in our state. NISG was founded in June of 2016. NISG was created to have a space for young and new people, with a special focus on marginalized peoples, such as: people of color, indigenous people, queer people, youth, and women; who are interested in taking the lead to address social and environmental justice problems caused by every step of the nuclear fuel chain and related transport in New Mexico.

Leona Morgan is the member of NISG who has provided a declaration to establish the group's standing. She lives in Albuquerque, has studied U.S. Department of Energy transport maps prepared in the Yucca Mountain proceeding, and finds that she lives within one mile of a mainline 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.

III. OBJECTION: There Is No Federal Authorization for the Holtec CISF

According to the July 16, 2018 Federal Register notice of this proceeding, the license application procedure is to be governed by 10 C.F.R. Part 72 and must further comply with the

Nuclear Waste Policy Act, 42 U.S.C. §§ 10101 *et seq.* But neither Part 72 nor the NWPA authorize the Holtec CISF. The NWPA authorizes either an independent spent fuel storage installation (“ISFSI”) only at a reactor site, 42 U.S.C. § 10152, or a monitored retrievable storage facility (“MRS”) operated by the U.S. DOE, 42 U.S.C. § 10161.

The Holtec CISF does not fall under the 10 C.F.R. § 72.3 definition of an ISFSI, which must be designed and constructed for the interim storage of spent fuel, either at the reactor site or at the site of another facility. Nor is the CISF a MRS installation, defined by 10 C.F.R. § 72.3 as a complex designed, constructed and operated by DOE.

There is no provision within Nuclear Regulatory Commission regulations and the pertinent organic statute for a consolidated interim storage facility as described by Holtec. There is no basis in federal law for a facially disqualified applicant to seek a construction and operation license from the Nuclear Regulatory Commission. Petitioners object and move for the dismissal and termination of this licensing proceeding.

IV. CONTENTIONS

Pursuant to 10 C.F.R. § 2.309(f), a petitioner’s contentions must: (1) provide a specific statement of the issue of law or fact to be raised or controverted; (2) provide a brief explanation of the basis for the contention; (3) demonstrate that the issue raised in the contention is within the scope of the proceeding; (4) demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding; (5) provide a concise statement of the alleged facts or expert opinions which support the petitioner’s position on the issue and on which the petitioner intends to rely at hearing, together with reference to specific sources and documents on which the petitioner intends to rely; (6) provide sufficient

information to show that a genuine dispute exists with the licensee on a material issue of law or fact.

The burden on a petitioner in asserting contentions is not heavy. *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-01-24, 54 NRC 349, 359 (contention admissibility standards “insist upon some ‘reasonably specific factual and legal basis’ for the contention.” Petitioners are required only to “articulate at the outset the specific issues they wish to litigate.” *Id.* at 359).

The threshold admissibility requirements should not 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).

Contention No. 1: Improper Cultural Resources Redaction

The redaction of some 144 pages from Appendix C of the Holtec Environmental Report violates the National Environmental Policy Act and National Historic Preservation Act.

Basis for the Contention

Holtec has violated § 106 of the NHPA by redacting extensive details about two historic or cultural properties referenced elsewhere in the Environmental Report. Holtec admits that they could be directly affected by construction or operation of the CISF but the ER does not disclose details that would allow the public to ascertain whether the cultural resources are eligible for nomination to the National Register of Historic Places, to determine whether required consultations have occurred and whether there are mitigation measures available if the properties are destroyed.

In the ER, Holtec states that it has identified two historic properties, a “prehistoric artifact

scatter and a historical-period rail line segment”⁶ “that could be directly affected by this project,” yet does not explain where they are located, what they are, their significance, how they would be affected by the CISF, nor what measures are being considered to mitigate their destruction or alteration as a consequence of building the CISF.

Two significant and seemingly inconsistent statements appear in the ER. At p. 27/543 of the ER (Rev. 1), Holtec states, “A cultural resource survey of the Site was completed in December 2016 and no significant cultural resources were identified within the area surveyed (see Appendix C).” This statement, however, is contradicted elsewhere:

Subsequently, a cultural resource survey of the direct APE [Area of Prospective Effect] was conducted in December 2016 (see Appendix C). The survey resulted in the identification of 17 isolates, 1 previously recorded archaeological site, 1 newly discovered archaeological site, 1 previously recorded historical-period linear resource, and 1 newly discovered historical-period linear resource. All four cultural resources were evaluated for National Register of Historic Places (NRHP) eligibility. *Of these four cultural resources, two are historic properties that could be directly affected by this project.*

ER p. 192/543 (Emphasis added). Further, at ER p. 124/543, Holtec says:

The records search provide that 42 cultural resources have been previously identified within the APEs (Table 3.7.2), with two of them intersecting the APE [Area of Potential Effect] of direct impacts. These two sites are a prehistoric artifact scatter and a historical-period rail line segment; both have an undetermined NRHP [National Register of Historic Places] eligibility status.

Holtec refers the reader to the wholly-redacted Appendix C for details concerning the company’s explicit admission that two unidentified cultural properties could be affected by the Holtec CIS. The redaction of 144 pages of Appendix C as being security-related has precluded Holtec’s precise identification of the resources, and further has made public involvement in mitigation advocacy impossible. Without knowing where they are located or the type of project

⁶ER p. 124/543.

activity that would be affected, members of the public cannot meaningfully propose mitigation or avoidance of destruction of the two resources. The secrecy also prevents the public from understanding whether there might be other historic or cultural resources geographically proximate that might also be jeopardized by the facility's present construction location. Nor can the public assist in proposing changes in configuration of the parts of the CISF where construction might alternatively take place. Without knowing the details about and locations of the two resources, the public cannot undertake to protect other nearby cultural resources that may have gone overlooked or ignored by Holtec. Finally, the public also cannot tell if there is an obligation to comply with the Native American Graves Protection and Repatriation Act (NAGPRA), 25 U.S.C. § 3001 *et seq.*, which requires federal agencies and institutions that receive federal funding[1] to return Native American "cultural items" to lineal descendants and culturally affiliated Indian tribes, including human remains, funerary objects, sacred objects, and objects of cultural patrimony.

Holtec does not demonstrate in the ER whether it has pursued National Register eligibility of the resources it has located. Holtec is obligated by 10 C.F.R. § 72.34 to provide an ER which meets the requirements of 10 C.F.R. Part 51, Subpart A. And Subpart A, Appendix A(7)(d) of 10 C.F.R. Part 51, requires Holtec to provide a discussion which "will include any adverse environmental effects which cannot be avoided should the alternative be implemented," including "[m]eans to mitigate adverse environmental impacts." This has not been done here.

According to 10 C.F.R. § 51.45(b), the environmental report:

. . . shall contain a description of the proposed action, a statement of its purposes, a description of the environment affected, and discuss the following 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. . . .

The Applicant provides none of these details as to the two resources in the ER. All of “Appendix C: Cultural Resources Communications and Survey Results” (ER pp. 321-464) is redacted, and each redacted page is marked “Security-Related Information Withheld under 10 CFR 2.390.” The invocation of “security” makes no sense in the context of cultural resources. Appendix C appears to contain the missing information on the two cultural/historic resources, because it appears nowhere else in the Environmental Report.

NRC regulations at 10 C.F.R. § 51.45 reflect the NRC’s incorporation into agency regulations of the NEPA mandate to chronicle the proposed action and to discuss the impacts of the proposed action on the environment.

Section 106 of the NHPA (16 U.S.C. §§470-470t) requires the head of any Federal independent agency having authority to license any undertaking to take into account the effect of the undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register prior to the issuance of any license. The Holtec site is privately-owned, so the NRC’s NHPA § 106 authority is limited to ensuring that the licensure of the CISF does not adversely affect significant historic properties located on or near the Holtec site.

The ER is bereft of analysis concerning the cultural/historical properties “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.” 10 C.F.R. § 51.45 (c). An Environmental Impact Statement (“EIS”) under NEPA must discuss “reasonable alternatives” to the proposed action. 42 U.S.C. §

4332(2)(C)(iii); *Alaska Wilderness Recreation v. Morrison*, 67 F.3d 723, 729 (9th Cir.1995); see 40 C.F.R. § 1502.14 (consideration of alternatives “is the heart of the environmental impact statement.”). Mitigation activities are similarly of central importance, according to 10 C.F.R. § 51.45(c).

This undermines the purpose of the NEPA document in this licensing proceeding. NEPA requires the federal government to identify and assess in advance the likely environmental impact of its proposed actions, including its authorization or permitting of private actions. NEPA's mandate, which incorporates notice and comment procedures, serves the twin purposes of ensuring that (1) agency decisions include informed and careful consideration of environmental impact, and (2) agencies inform the public of that impact and enable interested persons to participate in deciding what projects agencies should approve and under what terms. *Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 756-57, 768, 159 L.Ed.2d 60 (2004). NEPA serves those purposes by requiring federal agencies to take a “hard look” at their proposed actions' environmental consequences in advance of deciding whether and how to proceed. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350-51, 104 L.Ed.2d 351 (1989).

Under § 470f of the NHPA, the NRC must evaluate the effect of issuing an ISFSI license authorizing construction and operation of a CISF that will affect cultural resources otherwise eligible for inclusion in the National Register. The NRC must also provide a comment opportunity to the Advisory Council on Historic Preservation (“ACHP”). To qualify for inclusion in the National Register, historical significance must be present in structures or objects that “possess integrity of location, design, setting, materials, workmanship, feeling, and association . . .”. 36 C.F.R. § 60.4. In consultation with the State Historic Preservation Officer (“SHPO”), the

NRC must “make a reasonable and good faith effort to identify historic properties that may be affected by the undertaking and gather sufficient information to evaluate the eligibility of these properties for the National Register.” 36 C.F.R. § 800.4(b). But again, the conclusion of these regulatory actions is not apparent from the ER.

The courts require strict, not substantial, compliance with § 106 consultation requirements. *Attakai v. United States*, 746 F. Supp. 1395, 1407 (D. Ariz. 1990); also, *Ferris v. Secretary of the United States Dep't of Transp.*, No. 89-C-779-C (W.D. Wis. 1990) (strict § 106 compliance a prerequisite to alteration of federal lighthouse); *National Trust for Historic Preservation v. United States Army Corps of Engineers*, 552 F. Supp. 784, 789-90 (S.D. Ohio 1982) (§ 106 consultation required if there is an adverse effect, however minimal).

Holtec, and ultimately the NRC, have an obligation respecting cultural and historic resources to “stop, look and listen,” *Narragansett Indian Tribe v. Warwick Sewer Auth.*, 334 F.3d 161, 166 (1st Cir. 2003). “[T]he language [of NHPA] is mandatory and the scope is broad.” *United States v. 162.20 Acres of Land, More or Less, Situated in Clay County, Miss.*, 639 F.2d 299, 302 (5th Cir. 1981). This means that good faith must inform the “identification” stage of the § 106 process. *See Pueblo of Sandia v. United States*, 50 F.3d 856, 860, 862-63 (10th Cir. 1995) (informed consultation between federal agency and SHPO is “integral part of the Section 106 process;” agency failure to forward affidavits of the existence of historic resources to the SHPO during consultation was tantamount to a lack of good faith).

Contention No. 2: Insufficient Assurances of Financing

Holtec cannot provide reasonable assurances that it can obtain the necessary funds to cover the costs of construction, operation maintenance and decommissioning of the CISF.

Basis for the Contention

Holtec cannot demonstrate, as required by 10 C.F.R. § 72.22, that it either possesses the necessary funds, or that it has reasonable assurance of obtaining the necessary funds, or that by a combination of the two, it will have the necessary funds available to cover the construction, operation and decommissioning of the CISF.

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. Holtec inconsistently states that it will solely finance the CISF from internal resources, but inconsistently states 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.

Holtec enumerates in the financial plan included as part of its license application an estimate of construction costs that Holtec says it will cover with a line of credit from an unidentified creditor. At p. 4/10 of the “Holtec International & Eddy Lea Energy Alliance (ELEA) Underground CISF - Financial Assurance & Project Life Cycle Cost Estimates” (“Financial Assurance Plan”), Holtec specifically says:

Additionally, as a matter of financial prudence, Holtec will require the necessary user agreements in place (from the USDOE and/or the nuclear plant owners) that will justify the required capital expenditures by the Company. However, if the NRC approves and the necessary contractual instruments are established insuring the minimum revenue stream needed to justify the facility, then Holtec will launch the construction using its own resources so as to bring the interim storage solution to the industry in the shortest possible time.

Holtec thus will not construct the CISF without financial guarantees from the U.S. Department of Energy. Under existing law, financial guarantees could be forthcoming from DOE only by means of DOE taking title to the spent nuclear fuel at the commercial nuclear reactor

site. There is no legal authority under the Nuclear Waste Policy Act of 1983, as amended for DOE to enter into any agreement, either with Holtec or any commercial nuclear reactor utility, to pay for such centralized interim storage facility construction, operations, maintenance, decommissioning, etc. The need for an arrangement which is not lawful in the current circumstances is repeated later in the Financial Assurance Plan, at p. 6/10:

2.1 Annual Operating Costs

Anticipated operating costs for the HI-STORE facility are \$10 million annually. All financial commitments related to annual operations will be tied to the sponsoring party's agreement with Holtec (*viz.*, DOE settlement agreement).

Holtec considers DOE to be the "sponsoring party" of the CISF, and the term "DOE settlement agreements" apparently refers to agreements whereby DOE takes title to the spent nuclear fuel at reactor sites.

As part of the license application, Holtec submitted to the NRC a draft "License for Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste."⁷ Paragraph 17 of the draft license states as follows:

17. 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.

This formal license application document reiterates Holtec's insistence that it must have "a definitive agreement with the prospective user/payer for storing the used fuel," defined as "USDOE and/or a nuclear plant owner."

Holtec officers have repeatedly spoken of the company's requirement for federal

⁷<https://www.nrc.gov/docs/ML1731/ML17310A223.pdf>

subsidies to pursue the CISF. In July 2015, contemporaneously to the time that Holtec sent a letter of intent to the NRC to undertake the project, Holtec International Vice-President Oneid was quoted in the newsletter Spent Fuel that "Holtec's vision is that DOE would sign a contract with Holtec to be the customer, and thus DOE would take title to the fuel at the reactor site and be responsible for transporting it to the storage facility, just as it would if DOE were sending the spent fuel to a permanent repository."⁸

In a July 2015 World Nuclear News article about the Holtec letter of intent about to be sent to the NRC, Holtec's Vice-President Oneid stated that "We will surely soon have official talks with them on a contract whereby the DOE will hold the title to the fuel."⁹

And in a January 2016 slide show, another Holtec International Vice-President, Joy Russell, gave a presentation including a slide stating that Holtec "Requires federal funding to construct & operate CISF."¹⁰

Holtec has asserted that it will have the assets to construct, operate and decommission the CISF. Under 10 C.F.R. § 72.22(e), Holtec must possess the necessary funds, have reasonable assurance of obtaining the necessary funds, or by a combination of the two, have the funds to undertake the CISF as a 20-year storage-construction program, and to operate it securely for 100 years total. Holtec stresses its inability to finance the construction from internal company resources beyond the first of 20 annual phases. Holtec then hedges on even this limited pledge by

⁸www.uxc.com/p/products/pdf/SF1071.pdf

⁹<http://www.world-nuclear-news.org/WR-Holtec-to-start-regulatory-process-for-New-Mexico-used-fuel-store-soon-30071501.html>

¹⁰https://www.inmm.org/INMM/media/Documents/Presenations/Spent%20Fuel%20Seminar/2016%20Spent%20Fuel%20Seminar/W6-Russell_HI-STORE_INMM_JAN_2016_R2.pdf at slide #38.

insisting that it must have guarantees--presumably arrangements wherein the DOE has taken title to the spent nuclear fuel--before it will construct the CISF at all. There is insufficient evidence that Holtec can comply with 10 C.F.R. § 72.22(e) without having financing, having reasonable assurance of obtaining financing, or some combination of the two.

Worse, Holtec cannot show that current law authorizes the proposed method of financing enumerated in its Financial Assurance Plan. The Nuclear Waste Policy Act of 1983, as amended, provides zero financial support to private away-from-reactor storage schemes unless there is an operating repository. And the NWPA does not contemplate a financial arrangement whereby DOE takes title to spent nuclear fuel for purposes of interim storage of a facility not owned by the U.S. Department of Energy.

In sum, Holtec cannot provide the requisite “reasonable assurance.” Its financing plan is dependent upon an arrangement that is not disclosed within Holtec’s narrative explanation and which does not appear to be authorized by the NWPA. If the ambiguous statement that Holtec requires a contract with DOE before it will undertake the CISF means that DOE must take title and assume liability for the waste, there is no currently lawful means in the NWPA that authorizes such an arrangement.

NRC regulations at 10 CFR § 72.22(e) require Holtec to disclose in its application for the license:

(e) . . . [I]nformation sufficient to demonstrate to the Commission the financial qualifications of the applicant to carry out, in accordance with the regulations in this chapter, the activities for which the license is sought. . . . The information must show that the applicant either possesses the necessary funds, or that the applicant has reasonable assurance of obtaining the necessary funds; or that by a combination of the two, the applicant will have the necessary funds available to cover the following:

- (1) Estimated construction costs;
- (2) Estimated operating costs over the planned life of the ISFSI; and

(3) Estimated decommissioning costs, and the necessary financial arrangements to provide reasonable assurance before licensing, that decommissioning will be carried out after the removal of spent fuel, high-level radioactive waste, and/or reactor-related GTCC waste from storage.

This is a content requirement for the application, so this contention is indisputably within the scope of this proceeding. Since the truthful and accurate provision of the financing information may persuade the NRC to grant the requested license, this issue is material to the findings the NRC must make. Under Section 186(a) of the Atomic Energy Act, 42 U.S.C. § 2236(a),¹¹ the test for materiality is whether the information is capable of influencing the decisionmaker, not whether the decisionmaker would, in fact, have relied on it. Determinations of materiality require careful, common sense judgments of the context in which information appears and the stage of the licensing process involved. *Consumers Power Co.* (Midland Plant, Units 1 & 2), ALAB-691, 16 NRC 897, 910 (1982), citing *Virginia Elec. & Power Co.* (North Anna Power Station, Units 1 & 2), CLI-76-22, 4 NRC 480 (1976), *aff'd sub nom. Virginia Elec. & Power Co. v. NRC*, 571 F.2d 1289 (4th Cir. 1978).

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 CISO. Besides providing a distorted view of the waste management obligations the project will create, the financial burdens arising from creation, oversight and disposition of millions of additional tons of LLRW causes a seriously inaccurate picture of the

¹¹“Any license may be revoked for any material false statement in the application or any statement of fact required under section 182, or because of conditions revealed by such application or statement of fact or any report, record, or inspection or other means which would warrant the Commission to refuse to grant a license on an original application, or for failure to construct or operate a facility in accordance with the terms of the construction permit or license or the technical specifications in the application, or for violation of, or failure to observe any of the terms and provisions of this Act or of any regulation of the Commission.”

true costs of constructing, operating and decommissioning the Holtec CISF.

Basis for the Contention

Holtec predicts in the ER that the CISF will generate “small quantities of hazardous and non-hazardous waste. . . includ[ing] low-level radioactive waste, radioactive mixed waste, hazardous waste, solid (sanitary) waste, and industrial waste.” ER at p. 159/541 of .pdf. Further, Holtec alleges, “A small amount of low-level radioactive waste (“LLRW”) may be generated at the CIS Facility during operations, consisting of contamination survey rags, anti-contamination garments, and other health physics materials. This solid LLRW would be packaged and temporarily stored at the Cask Transfer Building until transported off-site to a licensed disposal facility, as discussed in Section 4.11.3.” ER at pp. 210-211/543.

But Holtec omits to mention that millions of tons of concrete will be mixed and poured onsite to provide barriers between the subterranean environment and the SNF casks. This concrete will have been transformed into a large quantity of radioactively activated waste at the conclusion of the useful life of the CISF by virtue of constant bombardment by neutrons from the SNF at close quarters. The “small quantities” assertion is factually inaccurate. Even if cask replacement is undertaken at only one interval in order to prepare the stored SNF for removal to a repository, with waste storage activity restricted to only one century, a considerable volume of low-level radioactive waste (“LLRW”) will be generated. Since Holtec does not describe what the one-time cask replacement will entail, it must be presumed that the first and (supposedly) only cask changeover will produce at least 10,000 used, radioactively activated and otherwise radioactively contaminated, metal canisters, all of which will have to be classified and disposed of as LLRW. Missing from Holtec’s discussion is a projection of the waste volumes that will be

created in the event of delivery of defective, malfunctioning casks or leaking casks or otherwise contaminated casks with SNF impairments, which is a another potential source of LLRW. Degradation of containers to the point of failure, and breach, and release of radioactive contents, is another pathway to significant LLRW generation on-site at the CISF itself, over the course of years, decades, and even centuries.

Holtec neglected to include mention of disposal of radioactively activated and radioactively contaminated concrete and canisters in quantifying the expected LLRW to be generated. Relying on statistics in the ER, Petitioners maintain that millions of tons more LLRW will be produced by operations of the CISF than is disclosed. At p. 182/543 of the ER, Holtec estimates the use of “four hundred thousand tons of cement . . . per year (AP42 2006, Section 13.2.4)” for storage-related purposes but does not explain that the cement will become radioactively activated, or otherwise radioactively contaminated, and thus, LLRW. Using 400,000 tons/year as the base, the Holtec CISF’s ongoing encasement of canisters for some 20 years for the shallow burial of at least 10,000 canisters, propels the conclusion that an estimated 8,000,000 total tons of concrete will needed. Much of it will surround the casks and undergo bombardment by neutron beta radiation for a century. Holtec itself admits that “[t]he subterranean stored contents emit a very small direct radiation dose to the facility workers and surrounding environment.” ER p.18/543. It is likely that most or all of the 8,000,000 tons of concrete and other subgrade fill materials used for waste containment will become LLRW from a century or more of radioactive activation and contamination, and will require management and disposal as LLRW at such time as the SNF casks are withdrawn from their burial pits to be transported elsewhere.

The fact that millions of tons of concrete and other subgrade fill materials will become radioactively activated and radioactively contaminated LLRW as a specific and intended consequence of CISF operations directly contradicts Holtec's statement that there will be "small quantities of . . . low-level radioactive waste. . .". Holtec must account for this huge quantity of radioactively contaminated, and neutron radiation radioactively activated rubble, along with means of its identification and a clear disposal plan for it.

In addition, Holtec equivocates about the inevitably radioactive nature of the thousands of steel canisters in which SNF will have been delivered to New Mexico, and which will be discarded after a century as low-level radioactive waste :

Following the removal of the canisters containing SNF, the empty storage system would be surveyed to determine their levels of residual radioactivity. *If the contamination levels were found to be below the applicable NRC limits for unrestricted release, then the empty storage casks would be disposed of as non-controlled material. Any contaminated storage casks would be decontaminated to levels below applicable NRC limits for unrestricted use.* The fate of these items would be identified as part of the Final Decommissioning Plan.

While some radiological wastes would be generated during D&D that would require transport to an off-site licensed disposal facility, the NRC has previously determined that these wastes would be small and would have a small impact (NRC 2014b, Section 4.15). Consequently, the transportation impacts of these wastes are expected to be small.

ER p. 203/543 of pdf (Emphasis added).

Holtec demonstrates a scientifically-unsupported confidence that few of the used canisters will even be radioactive and that the ostensibly small number of which are can easily be decontaminated and essentially all canisters disposed of as "uncontrolled" waste. Holtec does not explain how the metallic canisters, after being continuously radioactively activated, and also radioactively contaminated for a century or more, will be "decontaminated to levels below applicable NRC limits for unrestricted use." Decontamination must be explained and thoroughly

analyzed; as a process, the steps involved in decontamination contribute to the radioactive waste stream.

Holtec resorts to the conclusion of the “Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel,” (NUREG-2157) (2014)-- the continued waste storage GEIS (“GEIS”)--to minimize the quantum of LLRW :

While some radiological wastes would be generated during D&D that would require transport to an off-site licensed disposal facility, the NRC has previously determined that these wastes would be small and would have a small impact (NRC 2014b, Section 4.15). Consequently, the transportation impacts of these wastes are expected to be small.

ER p. 203/543. But the site-specific realities of the Holtec CISF design are given no account in the ER. The GEIS does not contemplate a storage facility that uses 8,000,000 tons of concrete as a means of buffering and structurally containing SNF canisters. There will also be a need to treat soil surrounding the casks as LLRW along with the concrete: “Steel, *concrete*, and the *subgrade* are the principal shielding materials in the HI-STORM UMAX. The steel and *concrete shielding materials* in the closure lid provide additional gamma and neutron attenuation to reduce dose rates.” ER p. 34/543. There is no quantification of the amount of contaminated soil and other subgrade materials that will be produced by the CISF, nor discussion of the disposal method to be used. What is clear is that some soil and other subgrade material at the Holtec site--perhaps additional hundreds or thousands or even millions of tons, given the scope of the overall scheme--is neither properly identified nor addressed in the environmental document as LLRW.

The waste storage GEIS discusses LLRW solely in the context of having an at-reactor spent fuel pool and use of at-reactor ISFSI storage, saying nothing about a consolidated interim facility meant to entomb 10,000 casks containing 173,600 metric tons of irradiated nuclear fuel

and GTCC in 8,000,000 tons of concrete and an unspecified but very large amount of soil/artificial subgrade materials over a 20 year period and requiring repackaging at least once a century. All provisions of the GEIS that address LLRW-- §§ 4.15.1 and 4.15.3.1--are reproduced in their entirety in the margin.¹² The GEIS obviously neither contemplates nor accounts for the vast volumes of concrete that would be turned into LLRW by usage at Holtec and the disposal costs those volumes would entail.

The GEIS further does not account for the large, and escalating cost item of repackaging spent fuel to be moved from reactor sites to a consolidated storage facility, and thence ultimately to a geological repository. Robert Alvarez, a senior scholar at the Institute for Policy Studies and

¹²4.15.1.1 Low-Level Radioactive Waste

The continued operation of a spent fuel pool would generate minimal amounts of LLW such as wet wastes from processing and recycling contaminated liquids. In the License Renewal GEIS, the environmental impacts associated with the management, onsite storage, and disposal of LLW for an additional 20 years of operation were determined to be SMALL during normal reactor operation (NRC 2013a). The NRC concluded impacts from LLW would be SMALL because of the regulatory controls in place, low public dose being achieved, and reasonable assurance that sufficient LLW disposal capacity will be made available when needed for facilities to be decommissioned. The amount of LLW generated from the operation and maintenance of an at-reactor ISFSI during short-term storage is expected to be minimal. For example, in the Calvert Cliffs ISFSI renewal EA (NRC 2012a), the NRC determined that the impacts from waste management would be SMALL, mainly because of the small quantities of LLW being generated and the fact that those wastes would be handled and disposed of according to regulatory requirements. Comprehensive regulatory controls, facilities, and procedures are in place at operating reactors to ensure that the LLW is properly handled and stored and that doses and exposure to the public and the environment are negligible at all plants (NRC 2013a). These same regulatory controls are expected to remain in effect during short-term continued storage of spent fuel. Because short-term continued storage of spent fuel would generate much less LLW than an operating reactor and licensees would continue to implement Federal and State regulations and requirements for proper management and disposal of LLW, the NRC concludes that the environmental impact from the management and disposal of LLW would be SMALL for all waste-management facilities.” NUREG-2157, p. 4-59.

“4.15.3.1 Low-Level Radioactive Waste

The activities associated with the management and disposal of LLW from indefinite at-reactor storage of spent fuel would be similar to those described for long-term storage. As stated in Section 1.8.3, it is expected that sufficient LLW disposal capacity will be made available when needed. Similar to long-term storage, the NRC concludes the management and disposal of LLW could result in SMALL environmental impacts during indefinite storage of spent fuel.” NUREG-2157, p. 4-65.

former Senior Policy Advisor to the Secretary and Deputy Assistant Secretary of Energy for National Security and the Environment, documents that

The current generation of dry casks being used at power plants was intended for short-term on-site storage, not for direct disposal in a geological repository. NRC has licensed 51 different designs for dry cask storage, 13 which are for storage only. None of the dry casks storing spent nuclear fuel are licensed for disposal. 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.

Repackaging for disposal may require approximately 80,000 “small” canisters. Existing large canisters can place a major burden on a geological repository—such as: handling, emplacement and post-closure of cumbersome packages with higher heat loads, radioactivity and fissile materials. Repackaging expenses rely on the transportability of the canisters, but more importantly on the compatibility of the canister with heat loading requirement for disposal.¹³

Mr. Alvarez also projects large and growing costs of repackaging at a centralized storage site. Using the Columbia Generating Station as a representative example of a nuclear power plant that one day will need to transport its spent nuclear fuel to a consolidation site, he estimates the expense of moving SNF into canisters to be moved “could involve cutting open 120 dry casks and repacking approximately 8,160 spent fuel assemblies into casks suitable for disposal” at additional costs of from \$ 272 million to \$915 million¹⁴ for only a single reactor in the U.S. fleet. The present lack of decision as to the type of geologic repository will determine the size of the repackaged canisters. *Id.*

Notably, repackaging SNF means that the discarded canisters instantly become LLRW. It is not clear that in describing the obligatory step of repackaging SNF at Holtec is performed, the casks have been recognized as LLRW and inventoried as a major contributor to increased volume

¹³<http://www.beyondnuclear.org/storage/kk-links/Alvarez%20SNF%20at%20closed%20reactors%20rev%202.pdf>

¹⁴https://www.eesi.org/files/071618_Nuclear_Plant_Decommissioning_Briefing_Slides.pdf

of such waste, nor whether they have been expensed as part of the waste disposal scheme. Holtec states in the SAR that “Principal operations at the HI-STORE CIS facility involve activities pertaining to handling, transfer and placement of canisters in the facility’s VVMs. Future removal of canisters for offsite shipment will involve the reverse of the loading operations.”¹⁵

Later in the SAR, Holtec provides additional detail:

3.1.4.8 Transfer of Canisters from HI-STORE Offsite

The HI-STORE CIS facility is an interim storage facility. At some point in the future, canisters may be required to be moved offsite. When such a day arrives, a 10CFR71 licensed transportation cask will transport the canisters offsite to another facility. Transfer operations will utilize the CTB to transfer the canisters from HI-TRAC CS to the transportation casks. Once loaded in a transportation cask, the spent fuel canister will be shipped to the designated facility. To accomplish this, the steps for installing the canister in the VVM are basically reversed, resulting in a loaded transportation cask ready for transport.¹⁶

Holtec does not appear to recognize that cask transfer activity, itself, will create LLRW out of the discarded casks. Indeed, scratching and gouging of the walls of the casks, as happened in an August 2018 cask movement activity at the San Onofre nuclear plant adds to the pathways for accelerating the corrosion of the canisters.

By 10 C.F.R. § 72.34, Holtec is required to provide an Environmental Report in accordance with 10 C.F.R. § 51.45, subsection (b) of which requires the report to address:

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

¹⁵<https://www.nrc.gov/docs/ML1731/ML17310A222.pdf>, p. 3/409 of .pdf.

¹⁶<https://www.nrc.gov/docs/ML1731/ML17310A222.pdf>, p. 8/409 of .pdf.

Further, 10 C.F.R. § 51.45(c) requires 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” and 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.” Section 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 undisclosed accumulation of an estimated 8,000,000 tons or more of radioactively activated and contaminated concrete fill material and discarded storage casks during the first century or more of operation and decommissioning of the CISF are dramatic environmental impacts and are adverse information, the disclosure of which is required.

At p. 159/543 of the ER, Holtec agrees that the waste management aspects of the CISF are a consideration under NEPA, but minimizes the waste that will be generated, stating: “[b]ased on the available information, several facilities are available to handle the small quantities of hazardous and non-hazardous waste that would be expected from the proposed CIS Facility. This includes low-level radioactive waste, radioactive mixed waste, hazardous waste, solid (sanitary) waste, and industrial waste.”

A detailed discussion of the radioactive wastes that will be generated by the operations and decommission phases at the Holtec site, and the comparative costs of management and disposal of them, is obligatory under NEPA. As noted, 10 C.F.R. § 51.45(c) requires 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.” 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.

In sum, there is qualitative as well as quantitative information related to the massive LLRW waste component of the Holtec plan that must be included within the NEPA document. NEPA mandates that an agency consider the environmental impacts of the proposed action and inform the public that it has taken those impacts into account in making its decision. That is, an agency must take a “hard look” at the environmental consequences of a proposed action before taking that action. *Nuclear Fuel Servs., Inc.*, LBP-05-8, 61 NRC 202, 207 (2005) (citing *Vermont Yankee Nuclear Power Corp. v. Natural Res. Def. Council*, 435 U.S. 519, 558 (1978) and quoting *Balt. Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 97 (1983)). The “hard look” requires the federal agency to make a “good faith” effort to predict reasonably foreseeable environmental impacts, and for the agency to apply a “rule of reason” after taking that “hard look” at potential environmental impacts. *Public Service Co. of Oklahoma* (Black Fox Station, Units 1 & 2), LBP-78-26, 8 NRC 102, 141 (1978).

Holtec has ineffectually identified and predicted the environmental impacts that are

reasonably foreseeable from generating millions of tons of low-level radioactive waste as a planned outcome of a century or more of operations at the Holtec CISF. The requisite “good faith” required for a meaningful “hard look” is not apparent at this juncture.

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

Holtec has defined a site-specific spent nuclear fuel storage facility that does not qualify for the exclusions from NEPA scrutiny conferred by the Waste Storage GEIS. Consequently, 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.

Basis for the Contention

The “Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel: Final Report, Volume 1”¹⁷ (“Continued Storage GEIS”) allows an applicant to bypass NEPA analysis of certain aspects of a nuclear waste storage proposal. Here, it is unlikely that severe accident mitigation can be treated as a generic issue within Holtec’s transportation plan, or in facility operations at the Holtec site in New Mexico, because the Holtec proposal departs significantly from the Continued Storage GEIS parameters and consequently is site-specific.

1. The CISF Is Not Legally Authorized

First, while there is no admission of the fact within the ER, neither 10 C.F.R. Part 72 nor the NWPA legally authorize the Holtec CISF. The NWPA authorizes either an independent spent fuel storage installation (“ISFSI”) only at a reactor site, 42 U.S.C. § 10152, or a monitored retrievable storage facility (“MRS”) operated by the U.S. DOE, 42 U.S.C. § 10161. The Holtec

¹⁷Located at <https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr2157/v1/>

CISF is neither, and for that reason alone, is not covered by the Continued Storage GEIS.¹⁸

2. The Holtec CISF Departs from Assumptions in the GEIS

Without waiving the above objection, Petitioners urge that Holtec proposes no means of dealing with the arrival of a leaky, cracked or externally contaminated cask at its facility except to rely on a policy of “return to sender,” viz., to return leaking, damaged or contaminated casks to their points of origin.¹⁹ This policy does not appear in the Continued Storage GEIS and contradicts the GEIS assumption that the facility will have as a component a dry transfer system (“DTS”) as a technologically protective means of addressing cask problems from the beginning stages of facility operation.²⁰ The Continued Storage GEIS finds that there is no DTS capability anywhere in the United States, including at all of the nuclear plant sites from which spent nuclear fuel shipments to Holtec will originate.²¹ The Chief Executive Officer of Holtec, Dr. Kris Singh, has admitted that “It is my personal belief, it is not practical to repair a canister if it were damaged.”²² Thus there will be leaking and damaged and externally contaminated casks being

¹⁸CEQ regulations require the Draft Environmental Impact Statement to “list all Federal permits, licenses, and other entitlements which must be obtained in implementing the proposal. If it is uncertain whether a Federal permit, license, or other entitlement is necessary, the draft environmental impact statement shall so indicate.” 40 C.F.R. § 1502.25(b).

¹⁹“In order to uphold the HI-STORE philosophy of “Start Clean/Stay Clean” HP [health physics] personnel ensure that contamination levels on the canisters of incoming shipments meet site requirements. *Canisters exceeding the limits will be returned to the originating power plant for disposition.*” HI-STORE CIS Safety Analysis Report, Revision 0A (October 6, 2017), § 3.1.4.6, p. 179/581 of .pdf. (Emphasis added).

²⁰From “Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel,” NUREG-2157 (“Continued Storage GEIS”) p. 1-16: “A DTS will be built at each ISFSI location during the long-term storage time frame to facilitate spent fuel transfer and handling.”

²¹*Id.* at p. 2-20.

²²<https://youtu.be/euaFZt0YPi4>

returned to sender.

The size of the Holtec CISF SNF volume up to four times the anticipated volume discussed in the Continued Storage GEIS. The Continued Storage GEIS “assumes that the nuclear power industry could develop an away-from-reactor ISFSI that would store up to 40,000 MTU of spent fuel from various nuclear power plant sites using existing technologies.” *Id.* at p. 2-18. The Holtec CISF projects storage of 173,600 metric tons. ER at p. 13/543 of .pdf. The risks of serious accident are accordingly expanded.

3. Holtec Agrees That Its Project Is Site-Specific

Holtec admits in the Environmental Report as follows:

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.

The Holtec proposal is admitted by Holtec to be site-specific. The transportation procedures for the project exclude access to or availability of a dry transfer system in the event of SNF cask damage, fuel damage or leakage, or external contamination. Holtec intends to implement a “return to sender” policy in the event a leaky, damaged or externally contaminated cask arrives at the CISF. These represent serious departures from presumed operational practices that are the foundation of the GEIS, especially considering the possibility that known leaky, damaged or externally contaminated casks will be returned to their points of origin, potentially inviting or causing serious accident scenarios or other health impacts or environmental contamination.

4. The Holtec CISF Falls Outside of NRC Regulations Extending the GEIS Exemption

By 10 C.F.R. § 51.23(a), “the Commission has generically determined that the environmental impacts of continued storage of spent nuclear fuel beyond the licensed life for operation of a reactor are those impacts identified in NUREG–2157,” and by § 51.23(b), “[t]he environmental reports described in . . . § 51.61 are not required to discuss the environmental impacts of spent nuclear fuel storage in a reactor facility storage pool or an ISFSI for the period following the term of the reactor operating license, reactor combined license, or ISFSI license.” Because the Holtec CISF does not qualify under NRC regulations as an ISFSI, Holtec may be required to discuss the environmental impacts far more fully than it has done in the Environmental Report.

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

Horizontal hydraulic fracturing (“fracking”) is certain to occur underneath the Holtec site. Holtec has acquired mineral rights to a depth of 5,000 feet to part of its site from Intrepid, a potash mining firm. However, within the boundaries of the Holtec site there are mineral leases held by at least half a dozen oil and gas drilling firms and Mosaic Potash, a mining firm. There is no indication in the Environmental Report of any control over present or potential potash mining or oil and gas drilling. And the very area where the concrete bunkers containing SNF casks will be located, fracking activity can be carried on below 5,000 feet. Typical oil and gas wells in the Permian Basin region in which Holtec is located are 8,000 or more feet deep. The mineral interests are inadequately disclosed, and the realistic prospects for mineral development immediately surrounding and underneath the Holtec site, and their implications for inducing or expediting geological problems and groundwater movement beneath the site, are inadequately disclosed in the ER.

Basis for the Contention

At p. 54/543 of the Environmental Report, Holtec states that, “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).”

These are misleading or suspect conclusions and they reflect a pervasive attitude on the part of Holtec and Tetra Tech as its ER contractor, to not take a comprehensive look at the various physical troubles at the Holtec site, many of them human-induced. As the maps in the accompanying “Eddy Lea Alliance Site Mineral Conflict Analysis 9-16-15” reveal, Holtec does not, according to its representations in the Environmental Report, control mineral rights to any but Intrepid Potash mining lands within the Holtec boundaries. Within the boundaries of the Holtec site there are mineral leases held by at least the following firms as of 2015: Yates Petroleum Corporation, Abo Petroleum Corporation, Fasken Land & Minerals Ltd., Devon Energy Production Company, LP, Manzano Energy Partners II LLC, COG Operating LLC and Mosaic Potash, a mining firm. There is no indication in the Environmental Report that Holtec controls these mineral holdings nor can exert any control over present or potential mining or oil and gas drilling.

Horizontal hydraulic gas and oil fracturing, or “fracking,” employs lateral drilling through productive underground shale seams for up to several miles in the Permian Basin region of west Texas and southeastern New Mexico. A fracked well can be drilled vertically offsite miles away or only a few yards from Holtec’s land, but the drilling could proceed below the 5,000 foot depth

directly underneath Holtec.²³²⁴²⁵ At the fracturing stage which gives fracking its name, subterranean high explosives are detonated, deliberately set to create underground caverns into which industrial chemistry cocktails are injected to draw out oil and gas.

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. There are at least 12 abandoned hydrocarbon wells at Holtec, many on that part of the site where the concrete bunkers are to be built; 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.²⁶ There is routine fracking activity below 5000' in the immediate region of the Holtec facility.

The ER does not faithfully report the true story of land ownership and mineral rights interests nor admit the high likelihood that throughout the occupation of the site by Holtec

²³“The wells typically cost \$2 million to drill with an average depth of 11,800 feet.” “Horizontal Drilling Accelerates in Permian Basin,” <https://www.aogr.com/magazine/editors-choice/horizontal-drilling-accelerates-in-permian-basin>

²⁴Graph showing average well depths in west Texas counties adjoining southeastern New Mexico at 8,000 to nearly 12,000 feet, “Permian Oil and Gas Takeaway Capacity Improvements on Horizon,” <https://info.drillinginfo.com/category/permian-basin/>

²⁵Scoping comment letter in Holtec proceeding, Fasken Oil and Ranch, Ltd., July 30, 2018 (submitted with Petition). Fasken, a land owner and gas and oil driller with interests “adjacent” to the Holtec site, stated: “Currently, drilling techniques used to extract minerals in the Permian Basin involve drilling horizontally into deep underground formations up to two miles beneath the earth’s surface.”

²⁶“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>

International for purposes of interim SNF storage, fracking and mining will take place, adjacent to and beneath the occupied parts of the Holtec property.

The ER also fails to connect the considerable history of oil and gas brine disposal at the Holtec site, and its possible relationship to poor quality and corrosive groundwater, especially within 40' of the surface. There are to be 10,000 or more steel or alloy canisters nosed into concrete bunkers down to about 23 feet of depth, for a century or more. There is no investigation in the ER into the chemical status of water and soils and their possibly corrosive effects on steel casks, as well as their corrosive effect on the concrete bunkers, and other artificial substrate materials. This also includes wind-blown dust containing such corrosive chemistry in area soils, as at Laguna Gatuna, due to the dumping of millions of gallons of brine wastewater from oil and gas industries, between the late 1960s and early 1990s, as documented in Holtec's ER.

The ER states:

Much of the shallow groundwater near the Site has been directly or indirectly influenced by brine discharges from potash refining or oil and gas production. Potash mines have discharged thousands of acre-feet of near-saturated refinery process brine to Laguna Plata and to Laguna Toston for many years. But discharges ceased in Laguna Plata in the mid-1980s and in Laguna Toston by 2001. Laguna Gatuna was the site of multiple facilities for collection and discharge of brines that were co-produced from oil and gas wells in the entire area; facility permits authorized discharged of almost one million barrels of oilfield brine per month between 1969 and 1992. As a result saturations of shallow groundwater brine have been created in a number of areas associated with the playa lakes (ELEA 2007, Section 2.4.2.1).

ER pp. 91-92/543 of .pdf. On Table 2, entitled "Soil Features" at p. 480/543 of .pdf., for hundreds of feet of depth into the crust, there is a "high" risk of corrosion to uncoated steel. Yet other than a faith-based insistence that corrosive groundwater and chemically aggressive wind-blown dust will never come into contact with the thousands of casks to be stored at Holtec, protruding two dozen feet underground and open to dust contamination via the at-surface

ventilation caps on the VVMs, the effects of natural and/or human-added corrosives in the soil are not incorporated into any plan for mitigating or halting otherwise inevitable corrosion to the casks themselves, and the engineered support structures surrounding the casks, which will accelerate and heighten the need to have a dry transfer system, wet pool or dry hot cell system handy to safely undertake the dangerous work of repackaging SNF and GTCC waste, or otherwise remediating a radioactive leak situation. 10 C.F.R. § 72.120(d) requires that:

The ISFSI or MRS must be designed, made of materials, and constructed to ensure that there will be no significant chemical, galvanic, or other reactions between or among the storage system components, spent fuel, reactor-related GTCC waste, and/or high level waste including possible reaction with water during wet loading and unloading operations or during storage in a water-pool type ISFSI or MRS. The behavior of materials under irradiation and thermal conditions must be taken into account.

Holtec has ignored and failed to integrate evidence of prolonged pollution of groundwater at the Holtec site (264,000,000 gallons of drilling wastes over a quarter century); soil analysis revealing “high” risk of corrosion of exposed steel; the potential for induced geological faults that may enable groundwater movement and circulation in and around the cask bunkers; the fact that corrosives such as hydrochloric acid are commonly used in early stages of well development;²⁷ and the reality that fracking will continue indefinitely underneath and alongside the land where the casks will be embedded in cement. Serious soil chemistry analysis is required for an informed conclusion about the suitability of the Holtec site to not accelerate corrosion.

By not acknowledging the comprehensive sharing of the 900-acre Holtec site that will take place between interim SNF and GTCC waste storage with contemporaneous mining and drilling in the immediate proximity, Holtec’s ER does not provide adequate assurance of

²⁷“Hydrochloric acid (HCl) is the single largest liquid component used in a fracturing fluid aside from water.” <https://geology.com/energy/hydraulic-fracturing-fluids/>

compliance with many NRC environmental regulations. Located in an area of seismicity east of the Rocky Mountains, the site must be evaluated by the techniques contained in 10 C.F.R. §

72.103(f), which mandates that geological, seismological, and engineering characteristics

must be investigated in sufficient scope and detail to permit an adequate evaluation of the proposed site, to provide sufficient information to support evaluations performed to arrive at estimates of the DE, and to permit adequate engineering solutions to actual or potential geologic and seismic effects at the proposed site. . . . Data on the vibratory ground motion, tectonic surface deformation, nontectonic deformation, earthquake recurrence rates, fault geometry and slip rates, site foundation material, and seismically induced floods and water waves must be obtained by reviewing pertinent literature and carrying out field investigations. However, each applicant shall investigate all geologic and seismic factors (for example, volcanic activity) that may affect the design and operation of the proposed ISFSI or MRS facility irrespective of whether these factors are explicitly included in this section.

This investigation appears not to have been undertaken with respect to the geological and seismic implications of mining and fracking in the immediate vicinity of the Holtec site, *inside* the site boundaries. Section 72.103 (e) cautions that sites “which require a minimum of engineered provisions to correct site deficiencies are preferred,” and “Sites with unstable geologic characteristics should be avoided.” Additionally, § 72.103(f)(2)(iv) directs that “Each applicant shall evaluate all siting factors and potential causes of failure, such as, the physical properties of the materials underlying the site, ground disruption, and the effects of vibratory ground motion that may affect the design and operation of the proposed ISFSI or MRS.” This seems not to have been undertaken in cognizance of the proximate nature of mineral extraction activities within the site boundaries.

Petitioners assert that the ER also appears in noncompliance with other regulations. By 10 C.F.R. § 72.90:

(a) Site characteristics that may directly affect the safety or environmental impact of the ISFSI or MRS must be investigated and assessed.

(b) Proposed sites for the ISFSI or MRS must be examined with respect to the frequency and the severity of external natural and man-induced events that could affect the safe operation of the ISFSI or MRS.

No such investigations are described in the ER.

Also, these inquiries imposed by 10 C.F.R. § 72.94 also are missing from the ER:

(a) The region must be examined for both past and present man-made facilities and activities that might endanger the proposed ISFSI or MRS. The important potential man-induced events that affect the ISFSI or MRS design must be identified.

(b) Information concerning the potential occurrence and severity of such events must be collected and evaluated for reliability, accuracy, and completeness.

Petitioners have postulated many conflicts with and contradictions of the CISF plan, necessitating a hearing on this contention.

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 large plan to aggregate SNF in southeastern New Mexico for purposes of reprocessing. A radioactively “dirty” industrial activity, reprocessing has been omitted from analysis and disclosure of cumulative environmental impacts.

Basis for the Contention

In a 2015 slide show given by a Holtec representative to the New Mexico State Legislature,²⁸ Holtec represented that the CISF “Provides the most flexibility for recycling, research, and disposal” and “Dispels Arguments There Are No Solutions For SNF.” On another slide in that show, Holtec included as “waste solutions” the act of “reprocessing SNF.”

On July 2, 2017, the Los Angeles Times featured an article, “1,800 tons of radioactive

²⁸www.nmlegis.gov/handouts/RHMC_080216_Item_5

waste has an ocean view and nowhere to go,”²⁹ that discussed “stranded,” irradiated nuclear fuel at power plants, the Yucca repository controversy, the Holtec and Waste Control Specialists (Texas) proposed interim storage facilities—and reprocessing. Hobbs, New Mexico mayor Sam Cobb, a voting member of the Eddy-Lea Energy Alliance LLC (“ELEA”) board, is quoted in the article as saying, hopefully, “We believe if we have an interim storage site, we will be the center for future nuclear fuel reprocessing.”

Reprocessing and ELEA, which sold Holtec the 900-acre CISF site, are well-acquainted. In 2008 the U.S. Department of Energy published a “Draft Global Nuclear Energy Partnership Programmatic Environmental Impact Statement” (“GNEP PEIS,” DOE/EIS-0396),³⁰ 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.

Reprocessing is controversial and infamous because it risks nuclear weapons proliferation (by separating out weapons-usable plutonium); it is environmentally ruinous; and it is astronomically expensive. The atmospheric and surface water releases of radioactivity are very large scale. The French and U.K. reprocessing facilities, taken together, after 70 years of routine operation (with no accidents, leaks, spills, etc.), would equal the Chernobyl catastrophe in scale

²⁹<http://www.latimes.com/local/california/la-me-stranded-nuclear-waste-20170702-htmlstory.html>

³⁰ Available at https://www.energy.gov/sites/prod/files/nepapub/nepa_documents/RedDo nt/EIS-0396-DEIS-2008.pdf

of environmental releases.

Reprocessing, whereby the aim is to reclaim fissile uranium and plutonium from spent fuel, is a controversial process. It involves uses of acidic chemicals to separate heavy metals, and in the process extremely radioactive spent nuclear fuel is turned into a liquid, increased in volume and all of the residues are high-level radioactive wastes. Slideshow, “Spent Nuclear Fuel Reprocessing,” Dr. Terry Todd, Idaho National Laboratory (2008), slides 2, 9-11, 13.³¹ In the glossary of the Environmental Report, Holtec defines “high-level waste” to include “the highly radioactive liquid and solid materials resulting from the reprocessing of spent fuel, which contain fission products in concentration (this includes some reprocessed HLW from defense activities and a small quantity of reprocessed commercial HLW).”

Since reprocessing of SNF has been identified by Holtec as an activity associated with the aggregation of SNF in southeastern New Mexico, ELEA’s governmental members continue to advocate for it, and there are industrial resources in the region of the Holtec site which could be harnessed for reprocessing, reprocessing as an associated activity to the CISF should be investigated and discussed as a cumulative impact of the Holtec CISF development. Holtec does not mention reprocessing in the application documents, but it is undeniably on the agenda if the CISF goes forward.

Under NEPA, an EIS “must analyze not only the direct impacts of a proposed action, but also the indirect and cumulative impacts of ‘past, present, and reasonably foreseeable future

³¹https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=2ahUKEwjri9nS_7jdAhWFw4MKHRKDALEQFjAAegQIBBAC&url=http%3A%2F%2Fwww.state.nv.us%2Fnucwaste%2Flibrary%2Freprocessing%2Fnrcseminarreprocessing_terry_todd.pdf&usg=AOvVaw2V3dovet8vXdUz7VzNZo-Y

actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.”” *Colorado Envtl. Coalition v. Dombeck*, 185 F.3d 1162, 1176 (10th Cir.1999) (quoting 40 C.F.R. § 1508.7³²); see also 40 C.F.R. § 1508.25(c) (stating that the “scope” of an EIS includes consideration of “cumulative” impacts).

The types of impacts that must be considered include “ecological (such as the effects on natural resources and on the components, structures, and functioning of affected ecosystems), aesthetic, historic, cultural, economic, social, or health [effects].” 40 C.F.R. § 1508.8. And “[a]gencies . . . have a duty to discuss in the FEIS impacts that are reasonably foreseeable.” *Utahns for Better Transp. v. U.S. Dept. of Transportation*, 305 F.3d 1152 (10th Cir. 2002) (citing *Sierra Club v. Marsh*, 976 F.2d 763, 767 (1st Cir.1992)).

The scope of an agency's NEPA inquiry must include both “connected actions” and “similar actions.” 40 C.F.R. § 1508.25(a)(1), (3). Actions are “connected”” if they trigger other actions, cannot proceed without previous or simultaneous actions, or are “interdependent parts of a larger action and depend on the larger action for their justification.” 40 C.F.R. § 1508.25(a)(1). And actions are “similar” if, “when viewed with other reasonably foreseeable or proposed agency actions, [they] have similarities that provide a basis for evaluating their environmental consequences together, such as common timing or geography.” 40 C.F.R. § 1508.25(a)(3).

NEPA is “essentially procedural,” designed to ensure “fully informed and well-considered decision[s]” by federal agencies. *Vt. Yankee Nuclear Power Corp. v. NRDC*, 435 U.S.

³²40 C.F.R. § 1508.7 of the CEQ Regulations define “cumulative impact,” in full, as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.”

519, 558 (1978). ““NEPA itself does not mandate particular results’ in order to accomplish [its] ends. Rather, NEPA imposes only procedural requirements on federal agencies with a particular focus on requiring agencies to undertake analyses of the environmental impact of their proposals and actions.” *Dep’t of Transp. v. Pub. Citizen*, 541 U.S. 752, 756-57 (2004) (quoting *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989)). In preparing an EIS, an “agency need not foresee the unforeseeable, but . . . [r]easonable forecasting and speculation is . . . implicit in NEPA, and 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.’” *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). While the statute does not demand forecasting that is “not meaningfully possible,” an agency must fulfill its duties to “the fullest extent possible.” *Id.*

A reprocessing facility associated with, and dependent on the existence of Holtec as a source of supply of spent nuclear fuel, falls within the realm of “cumulative actions” delineated in the CEQ regulations. See 40 C.F.R. § 1508.7.³³ Actions must be analyzed together in the same assessment if they “[a]utomatically trigger other actions which may require environmental impact statements,” “[c]annot or will not proceed unless other actions are taken previously or simultaneously,” or if they are “interdependent parts of a larger action and depend on the larger action for their justification.” 40 C.F.R. § 1508.25(a)(1).

The cumulative action regulation directs agencies to consider the cumulative impact of

³³A cumulative impact “is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” 40 C.F.R. § 1508.7.

action by an “agency (Federal or non-Federal) or person.” 40 C.F.R. § 1508.7. Private actions, even those which are not dependent of Federal assistance or a Federal permit, are thus encompassed in the cumulative action analysis, because “cumulative actions” are assessed together for their “cumulatively significant impacts.” 40 C.F.R. § 1508.25(a)(2). A cumulative impact “results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” *Id.* § 1508.7.

“NEPA requires that where ‘several actions have a cumulative ... environmental effect, this consequence must be considered in an EIS.’” *Neighbors of Cuddy Mountain v. U.S. Forest Serv.*, 137 F.3d 1372, 1378 (9th Cir.1998) (quoting *City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1312 (9th Cir.1990)); 40 C.F.R. § 1508.25(c)(3).

In a cumulative impacts analysis, the lead NEPA agency must take a “hard look” at all actions. “General statements about ‘possible effects’ and ‘some risk’ do not constitute a ‘hard look’ absent a justification regarding why more definitive information could not be provided.” *Neighbors of Cuddy Mountain*, 137 F.3d at 1380. “[S]ome quantified or detailed information is required. Without such information, neither the courts nor the public ... can be assured that the [agency] provided the hard look that it is required to provide.” *Id.* at 1379.

The burden that a plaintiff must bear to demonstrate that an agency should have analyzed the cumulative impacts of a proposed project along with other projects is not an onerous one. In *City of Carmel-By-The-Sea v. U.S. Department of Transportation*, 123 F.3d 1142 (9th Cir.1997), plaintiffs met their burden in raising a cumulative impacts claim under NEPA despite failing to specify a particular project that would cumulatively impact the environment along with the

proposed project. *Id.* at 1161. This was because “the [Defendants] failed first; they did not properly describe other area projects or detail the cumulative impacts of these projects.” *Id.*

Under *City of Carmel*, it is not necessary for the Petitioners to demonstrate what cumulative effects would occur. It falls to the lead agency, not the public, to ascertain the cumulative effects of a proposed action. Such a requirement would thwart one of the “twin aims” of NEPA: to “ensure[] that the agency will inform the public that it has indeed considered environmental concerns in its decision making process.” *Balt. Gas & Elec. Co. v. Natural Res. Def. Council, Inc.*, 462 U.S. 87, 97, 103 S.Ct. 2246 (1983) (emphasis added).

**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 illegal under NRC regulations and the Atomic Energy Act. It is unlawful to knowingly ship containers with radiation on exposed or external surfaces. Once delivered to the site, leaky and/or contaminated canisters must remain at Holtec—but Holtec expressly intends to return such canisters to their points of origin. Leaking or otherwise compromised shipping containers would likewise present an immediate danger to the corridor communities through which they would travel back to their nuclear power plant site of origin, likely violating numerous additional NRC and DOT regulations

Basis for the Contention

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 CISO or returned to the point of origin.

At the CISO, Holtec intends to implement a policy of rejecting and returning canisters that have unacceptable external radioactive contamination or structural damage. The proposed

practice will create potential exposure routes that pose radioactive contamination threats to the public, nuclear workers, and the environment.

Holtec's "return to sender" policy is embodied in FSAR § 3.1.4.6: "In order to uphold the HI-STORE philosophy of "Start Clean/Stay Clean" HP personnel ensure that contamination levels on the canisters of incoming shipments meet site requirements. Canisters exceeding the limits will be returned to the originating power plant for dispositioning."

Holtec's policy creates the preconditions for offsite radiation accidents and environmental contamination incidents, threatening public health and safety:

The potential exposure pathways at the CIS Facility Site include: (1) direct exposure to radiation (neutrons and gamma rays) that is emitted from the storage casks, (2) exposure to radioactive material through ingestion of contaminated water or food, including plants and animals in the vicinity of the Site that may be used for subsistence, and (3) exposure to radioactive material through submersion or inhalation of airborne radionuclides. The evaluation of exposures from the first route requires consideration of the radiation source (*i.e.*, the canister contents).

Exposures from the second and third routes require that some radioactive material escape from the casks and the proposed CIS Facility. *Given the CIS Facility start clean/stay clean philosophy (i.e., CIS Facility plans to reject and return canisters that have unacceptable external contamination), as well as the fact that no canisters would be opened at the proposed CIS Facility, and considering the engineered features of the canister/cask, there appears to be no viable mechanism by which significant radioactive materials would migrate off-site, or even away from the casks.* Thus, while the latter two exposure routes are possible, radioactive material is unlikely to be available for ingestion or inhalation via those pathways during normal conditions, and hence, there is no opportunity for impacts from these pathways (NRC 2001, page 4-46).

ER p. 214/543. (Emphasis added).

By not having dry transfer system capability at the Holtec CISF to ameliorate damaged SNF or GTCC casks, and maintaining, instead, a policy of shipping such casks back to the point of origin, Holtec's policy creates a "viable mechanism by which significant radioactive materials would migrate off-site....".

An agency conducting a NEPA process must examine both the probability of a given

harm occurring and the consequences of that harm if it does occur. “Only if the harm in question is so “remote and speculative” as to reduce the effective probability of its occurrence to zero may the agency dispense with the consequences portion of the analysis.” *State of New York v. Nuclear Regulatory Com'n*, 681 F.3d 471, 482 (D.C.Cir. 2012).

“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).

Moreover, 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.

The ER lacks analysis of the potential regional impacts on population or environment given the distinct prospect of the occasional arrival of damaged, externally contaminated or leaking SNF casks and their return shipment, unrepaired and continuing to leak or show the potential for

deterioration and radiological accident and above permissible dose rates to workers and passersby or nearby residents while en route to their points of origin. The “special characteristic” of the Holtec CISF that may influence consequences of a release of radioactive material is that there will be no means of technologically 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.

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

In several places in the ER, Holtec states that “Table 4.9.1” provides data tending to show minimal radiation dangers from transporting the casks of spent nuclear fuel. The data is not narratively reproduced in the ER. The missing table undermines Holtec’s basis for claiming minimal effects from transporting SNF and GTCC waste.

Basis for the Contention

At three places in the ER, there is reference to Table 4.9.1:

- “Results of the incident-free analysis of transporting 500 canisters of SNF annually are presented in Table 4.9.1. As shown, the annual doses to the public along the transportation route would be much small. *[sic]*.” ER p. 200/543.

- “In assessing the Yucca Mountain repository, DOE also evaluated the national impacts of transporting SNF from commercial reactors across the U.S. to the repository. DOE determined that transporting up to 70,000 metric tons of SNF would result in a total dose of 1,100-1,200 person-rem to the population along the transportation routes (DOE 2008, Table 6-4). Those results correlate well with the results presented Table 4.9.1 of this ER, when the results in that table (which represent the impacts of transporting 5,000 MTUs) are integrated to account for a similar overall quantity of SNF transport.” ER p. 203/543.

- “Prior to D&D activities, all canisters of SNF would be removed and transported to a permanent repository. For purposes of this ER, it is assumed that the repository would be at Yucca Mountain in Nye County, Nevada. The impacts associated with transporting the SNF from the CIS Facility to Yucca Mountain are presented in Table 4.9.1. Those impacts represent the annual impacts of transporting 5,000 MTUs. The impacts of transporting the full inventory of the CIS Facility (100,000 MTUs) would be 20 times the impacts presented in Table 4.9.1.” ER p. 203/543.

The omission of the referenced table from the ER document renders each of these conclusions suspect, and deprives the public of the basis for understanding or critiquing them.

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).

Accordingly, this contention should be admitted as one of omission.

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

There is only one map published in the Environmental Report that shows any of the routes which will be taken for delivery of SNF and GTCC waste to Holtec, and it only mentions transport of radioactive material from two reactors. The information provided comes nowhere near disclosure of a 20-year transport campaign of an estimated 10,000 cask deliveries.

Basis for the Contention

At p. 207/543 of the Holtec ER appears Figure 4.9.1, entitled “Transportation Routes for SNF.” It is the *only* depiction in the entire Holtec application package that shows any of the expected routes by which SNF and GTCC will be delivered to Holtec. Its legend states that Figure 4.9.1 purports to show the routing for “Maine Yankee to CISO,” “San Onofre to CISO,” and “CISO to Yucca Mountain.” The transportation component from nuclear reactors to Holtec is expected to last 20 years and include at least 10,000 separate shipments, nearly all of which will be by rail. Petitioners have reviewed many transportation route maps disclosed in maps found in the record of the Yucca Mountain NRC proceeding which are cited in the margin,³⁴ and for

³⁴<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

purposes of pursuing intervention in the Holtec proceeding, presume that the same routes will be used for transports to Holtec. However, they have no way of confirming their presumptions.

In order for Petitioners to meaningfully participate in the NEPA process, and in order for the public and emergency response officials to even begin to understand the scope of the Holtec project's transportation side, there must be unconditional disclosure of probably transportation routes, whether by barge, highway or rail.

This is a contention of omission. 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).

According to 10 C.F.R. § 51.45(b)(1), the Environmental Report must address impacts of the proposed action on the environment, and they “shall be discussed in proportion to their significance.” The transportation aspects of Holtec are of high significance to completion of the project. Adverse environmental effects which cannot be avoided must also be addressed. *Id.* at (b)(2). Alternatives must be discussed. *Id.* at (b)(3). Also, any irreversible and irretrievable

commitments of resources which would be involved in the proposed action, should it be implemented, must be disclosed. *Id.* at (b)(5).

Additionally, 10 C.F.R. § 72.108 requires that “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. To accomplish this, the anticipated routes must be made known to the public.

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

Holtec plans to provide long-term SNF storage for up to 120 years,³⁵ or for however much time beyond 120 years it may take to develop a deep geological repository elsewhere.³⁶ Holtec itself has recommended to the U.S. Department of Energy that a CIS facility “should have a minimum service life of 300 years.”³⁷

Basis for the Contention

These inconsistent references to the probable operational life of Holtec raise legitimate questions as to whether Holtec might become a *de facto* permanent repository, and whether its fitness and suitability for storing high-level spent nuclear fuel in the New Mexico desert for hundreds or even thousands, of years should be considered under NEPA.

³⁵ER Rev. 1, p. 13/543 of .pdf.

³⁶According to the Holtec ER Rev. 1, p. 19/543 of .pdf: “Holtec anticipates the SNF could be stored at the CIS Facility for up to 120 years, *or until a permanent geologic repository is opened consistent with the NRC’s Continued Storage Rule.*” (Emphasis added).

³⁷Letter, Joy Russell, Holtec Vice-President, to DOE, “Response to RFI on Private Initiatives to Develop Consolidated SNF Storage Facilities,” 1/27/2017, <https://www.energy.gov/sites/prod/files/2017/02/f34/Jan%2027%2C%202017%20-%20Joy%20Russell%20-%20Response%20to%20the%20RFI%20on%20Private%20Initiatives.pdf>

The United States, a century on from now, will be dramatically different, and possibly much poorer and less capable of sustaining the enormous ongoing expense of managing the radioactive wastes at Holtec. Political and economic considerations are hard to predict a century out, but Holtec, itself, has opened the door on the question of the ultimate operating life of the facility. Even if the Continued Storage GEIS shields Holtec from having to justify or explain its spent fuel management practices for the first 100 years of “interim storage” operations, the prospect that Holtec may continue in business beyond 100 years, indefinitely, or permanently, must be analyzed within the Environmental Impact Statement. The design expectations of the CISF differ greatly from the design expectations of a permanent geological repository, as do the geological and hydrological requirements. And while the purpose of the Holtec might evolve to an “indefinite” or “permanent” storage facility, the mere change of name does not mean that NEPA analysis of Holtec’s extended and changed purpose is precluded by the Continued Storage GEIS. In the event of post-100 year operation, which appear likely, the Holtec CISF must undergo site-specific consideration for that purpose under NEPA, the Atomic Energy Act and the Nuclear Waste Policy Act, as amended.

Extended operation of the Holtec CISF beyond the 100-year benchmark is a cumulative action and must be analyzed as such under NEPA.³⁸ Actions must be analyzed together in the same assessment if they “[a]utomatically trigger other actions which may require environmental impact statements,” “[c]annot or will not proceed unless other actions are taken previously or

³⁸A cumulative impact “is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.” 40 C.F.R. § 1508.7..

simultaneously,” or if they are “interdependent parts of a larger action and depend on the larger action for their justification.” 40 C.F.R. § 1508.25(a)(1).

The cumulative action regulation directs agencies to consider the cumulative impact of action by an “agency (Federal or non-Federal) or person.” 40 C.F.R. § 1508.7. Private actions, even those which are not dependent of Federal assistance or a Federal permit, are thus encompassed in the cumulative action analysis, because “cumulative actions” are assessed together for their “cumulatively significant impacts.” 40 C.F.R. § 1508.25(a)(2). A cumulative impact “results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” *Id.* § 1508.7.

“NEPA requires that where ‘several actions have a cumulative ... environmental effect, this consequence must be considered in an EIS.’” *Neighbors of Cuddy Mountain v. U.S. Forest Serv.*, 137 F.3d 1372, 1378 (9th Cir.1998) (quoting *City of Tenakee Springs v. Clough*, 915 F.2d 1308, 1312 (9th Cir.1990)); 40 C.F.R. § 1508.25(c)(3).

Accordingly, the scope of the EIS should include investigation and analysis of the Holtec site as a potential permanent repository.

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. Basis for the Contention

Regulators should reconsider the risks, impacts and safety/security for the Holtec CISF radiological waste transportation effort given the long historical record, and experience derived from research and litigation over the proposed Yucca Mountain geologic facility. There is a

constantly-changing threat environment that radiological shipments to waste storage facilities such as Holtec and a consequent need to plan for an evolving variety of design-basis threats (DBTs) and beyond-design-basis-events (BDBE). In-transit risks are a central part of the equation and need to be addressed. To “stock” the Holtec CISO with SNF and GTCC wastes the materials must be transported there, and the lack of details on waste conveyance in the Holtec Environmental Report belies the centrality of transportation to the implementation of the project.

Petitioners bring to the notice of the NRC the report of their expert, Dr. James David Ballard, contemporaneously filed with this Petition to Intervene. As reflected in his *curriculum vitae*, also filed in this proceeding, Dr. Ballard holds a Ph.D. in sociology and has taught university-grade courses for more than 21 years, since 2002 at California State University-Northridge, most recently in the CSUN Department of Criminology and Justice Studies. His doctoral dissertation addressed terrorism and political policy. He has extensively researched and published, and his specialization areas include, among other topics, energy security, nuclear waste security and terrorism. Dr. Ballard has authored many essays on the subject of contemporary terrorism and sabotage in the wake of 9/11, as depicted in his CV. He has consulted extensively with the State of Nevada to assist Nevada in its legal case against the siting of Yucca Mountain as a geological repository for high-level nuclear waste. He has consulted in the drafting of formal comments to the NRC on the “Waste Confidence Generic Environmental Impact Statement Draft Report for Comment (NUREG-2157), September 2013,” for the States of Vermont and Connecticut. He testified before the U.S. Senate on “Terrorism Risk and the Transportation of Spent Nuclear Fuel and High Level Radioactive Waste” in 2008. He testified before the National Academies of Science in 2002 on “Nuclear Waste

Transportation: Lessons from 9/11/2001 Applicable to Nuclear Waste Transportation Program Planning, Security, and Emergency Response.” He also testified before the United States Senate, Committee on Energy and Natural Resources, 107th Congress regarding S. J. Res.34 Approving the Site at Yucca Mountain, Nevada, for the Development of a Repository for the Disposal of High-level Radioactive Waste and Spent Nuclear Fuel, Pursuant to the Nuclear Waste Policy Act of 1982. Dr. Ballard is eminently qualified to offer his observations on security and risk management associated with the transportation, storage and disposition of our most dangerous radioactive wastes.

In his report, Dr. Ballard notes that the wastes bound for Holtec will generally need wet storage at first (SNF being the bulk of wastes), potentially dry storage at the power plants and ultimately, be transported to the centralized interim storage facilities, as at Holtec in New Mexico. Such shipments will be subject, if not vulnerable, to human-induced event risks over the lifespan of the transport campaign. It is necessary to define, understand and communicate design basis events so that communities along the transportation routes and at the initiation and destination points are risk-informed.

He opines that Holtec’s application does not address the complexity or risks of the massive supply infrastructure despite their growing vertical integration as a substantial contractor in the radioactive waste management industry with operations at all phases of the shipment infrastructure. Dr. Ballard criticizes Holtec’s lack of the ability, exemplified by the short and uninformed discussion in the Environmental Report, to grasp systemic risk complexity for the CISF storage facility, and that this in fact leads to Holtec underestimating the impacts of a serious radiological event, whether accidental or caused intentionally by others. He recommends

that there be a programmatic Environmental Impact Statement (PEIS) initiated that addresses the entirety of the shipment infrastructure that will deliver SNF and GTCC to New Mexico for interim storage. The lack of a programmatic EIS on transportation prior to the proposal storage phase, which involves a separate EIS, has in Dr. Ballard's opinion, left Holtec vulnerable to problems in the event of a radiological emergency at the New Mexico facility while wastes are in-transit. Dr. Ballard observes that "The Holtec proposal is currently insufficient to address the transportation issue for waste movements to the proposed CISF on any level." His finding is based on what he calls Holtec's "single variable based risk profile" that can be overwhelmed by under-prediction of design basis events and design basis threats in various ways, as by under-predicting the possibilities for disaster, failing to consider compounding and cascading events, and exacerbation by human error. Dr. Ballard warns of the "atrophy of vigilance as years, even decades, of everyday experience with minor operational issues lead to a loss of attention to safety and security."

Dr. Ballard considers the shipment of SNF and GTCC wastes to New Mexico to pose prime targets for human-induced events because of a possible attraction to international groups, domestic groups, and "lone wolf" attacks, because there is considerable symbolic value to such targets. He cautions that "Highly radioactive wastes like SNF and GTCC are not normal commodities; they represent a different type of risk depending on which waste is being analyzed and should be recognized as such."

Dr. Ballard points out that on several levels, Holtec International may be causing itself problems. The company has rapidly become a multinational, vertically-integrated organization with market leadership in all phases of end of the fuel cycle management for SNF, such as the

packaging, transportation and storage of SNF/GTCC wastes. Holtec has interests in decommissioning nuclear power plants, provides wet and dry storage at various plants, designs dry storage facilities, manufactures transportation casks, has developed transfer technology and now wishes to conduct interim storage. Holtec also is working on small modular reactor design. Because Holtec has made itself the “go to” provider for outsourcing end of fuel cycle operations, it has some unique liability in case of a human induced event or a design base event.

According to Dr. Ballard, Holtec has unique engineering based knowledge and a history of work in the area of waste management. Holtec also claims to have leveraged the funding for the project and that it will be able to accomplish the construction, operation and long term management of the wastes that are stored in the New Mexico proposed facility. But on the negative side, Holtec has had some questionable dealings in the past and present, has some incentive to downplay risks of the facility to gain the contract for operation of the CISF and expects the proposal to receive “expedited scrutiny that may gloss over the real questions that arise.” The Holtec proposal, Dr. Ballard states, neglects any real analysis of the efforts that must be accomplished for the loading from existing facilities, transport to the CISF, changing modes of transport along the transportation routes and finally the emplacement of the wastes in their proprietary storage system at the CISF.

In particular, Dr. Ballard criticizes the “start clean/stay clean” policy “as a means to limit the need for facility infrastructure that may be potentially problematic.” According to Dr. Ballard, the return-to-sender rule of this policy will increase not only numbers of shipments, but significantly increase shipment risks, as casks are rejected. Because the shipments are returned because they may be excessively contaminated or otherwise or compromised, as due to a

defective or damaged shipping container, Holtec “offloads the potential contamination and thus endangers those transportation corridor communities all the way back to the origination point. The morality of this philosophy and the liability of such actions are highly suspect.”

Dr. Ballard raises concerns that the Holtec licensing proposal does not address the potential that a permanent repository may never open, and if it does open in the future, when that is expected and how wastes will be shipped to that repository. He suggests that there are major questions of liability given Holtec’s unique position in the end of fuel cycle operations, questions about waste title, and that unanswered questions in the license application are left unanswered because of the paucity of analysis of the programmatic implications of the proposed CISF. “The proposal offers few specifics, hides behind copyright, LLC status and other legal protections to give the NRC what they wish to hear. To him, Holtec does not offer a “cold-eyed assessment of the issues communities will need to be apprised of to understand the issues, let alone give consent for the facility to be sited.” With respect to HIE on shipments and the proposed CISF, he concludes, “the details are completely lacking in the proposal. Obscuring the risks of transport and operation concerns like sabotage by attempting to use generic analysis and presenting a Pollyannaish version of reality to gain a contract is not effective business; it is rent seeking behavior of the most dangerous type.”

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.”

B. Legal Support for Risk Analysis Under NEPA

Dr. Ballard's report and assessments clearly involve more than simply the prospect of terrorist attack and they further 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).

Further, 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.

In ruling on an attempt by intervenors in an NRC licensing case to have terrorism and security measures investigated and analyzed under NEPA, the Ninth Circuit reversed the NRC, holding that the possibility of terrorist attack is not so “remote and highly speculative” as to be beyond NEPA's requirements. *San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016, 1032 (9th Cir. 2006). The Ninth Circuit further noted that “[t]he numeric probability of a specific attack is not required in order to assess likely modes of attack, weapons, and vulnerabilities of a facility, and the possible impact of each of these on the physical environment, including the assessment of various release scenarios. . . . It is therefore possible to conduct a low probability/high consequence analysis without quantifying the precise probability of risk. The NRC itself has recognized that consideration of uncertain risks may take a form other than quantitative ‘probabilistic’ assessment.” See “Proposed Policy Statement on Severe Accidents and Related Views on Nuclear Reactor Regulation,” 48 Fed. Reg. 16,014, 16,020 (1983) (In addressing potential accident initiators (including earthquakes, sabotage, and multiple human errors) where empirical data are limited and residual uncertainty is large, the use of conceptual modeling and scenario assumptions in Safety Analysis Reports will be helpful when based on the best qualified judgments of experts, either in the form of subjective numerical probability estimates or qualitative assessments of initiating events and causal linkages in accident

sequences.).

No provision of NEPA, or any other authority cited by the Commission, allows the NRC to eliminate a possible environmental consequence from analysis by labeling the risk as “unquantifiable.” *See Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719, 754 (3rd Cir. 1989) (J. Scirica, dissenting) (finding no “statutory provision, no NRC regulation or policy statement, and no case law that permits the NRC to ignore any risk found to be unquantifiable”). An agency conducting a NEPA process must examine both the probability of a given harm occurring and the consequences of that harm if it does occur. “Only if the harm in question is so “remote and speculative” as to reduce the effective probability of its occurrence to zero may the agency dispense with the consequences portion of the analysis.” *State of New York v. Nuclear Regulatory Com'n*, 681 F.3d 471, 482 (D.C.Cir. 2012).

The upshot is, if the risk of a terrorist attack is not insignificant, then NEPA obligates the NRC to take a “hard look” at the environmental consequences of that risk. Precise quantification is therefore beside the point. “[P]recise quantification of a risk is not necessary to trigger NEPA's requirements.” *San Luis Obispo* at 1032.

Current NEPA regulations require an agency to deal with uncertainties by including within the EIS “a summary of existing credible scientific evidence which is relevant to evaluating the reasonable foreseeable significant adverse impacts on the human environment, and . . . the agency’s evaluation of such impacts based upon theoretical approaches or research methods generally accepted in the scientific community.” 40 C.F.R. §§ 1502.22(b)(3), (4). This requirement applies to those events with potentially catastrophic consequences “even if their probability of occurrence is low, provided that the analysis of impacts is supported by credible

scientific evidence, is not based on pure conjecture, and is within the rule of reason.” 40 C.F.R. § 1502.22 (b)(4). *San Luis Obispo* at 1033.

Here the Petitioners seek an analysis of the range of environmental impacts likely to result in the event of a terrorist attack on both the Holtec CISF and upon in-transit deliveries of SNF and GTCC waste. NEPA establishes a “national policy [to] encourage productive and enjoyable harmony between man and his environment,” and was intended to reduce or eliminate environmental damage and to promote “the understanding of the ecological systems and natural resources important to” the United States. *Dept. of Transp. v. Pub. Citizen*, 541 U.S. 752, 756, 124 S.Ct. 2204, 159 L.Ed.2d 60 (2004) (quoting 42 U.S.C. § 4321). The Supreme Court has identified NEPA's “twin aims” as “plac[ing] upon an agency the obligation to consider every significant aspect of the environmental impact of a proposed action[, and] ensur[ing] that the agency will inform the public that it has indeed considered environmental concerns in its decisionmaking process.” *Baltimore Gas & Elec. Co. v. Natural Res. Def. Council, Inc.*, 462 U.S. 87, 97, 103 S.Ct. 2246, 76 L.Ed.2d 437 (1983). Those aims are far from fulfilled by Holtec’s treatment of transportation and security risks at origination and destination points, as well as shipments of SNF and GTCC waste during the transit periods. Accordingly, Petitioners’ presentation through Dr. Ballard validly articulates both inadequate coverage, and occasionally rank omissions of factual and analytical responsibility by Holtec in the Environmental Report.

C. Petitioners’ Detailed Sub-Contentions

Petitioners advance here as detailed sub-contentions the bulk of the recommendations advanced by Dr. Ballard in his report:

1. The Holtec proposal should be required to conduct a site specific and programmatic

EIS process since the company has so many of the supply and transportation elements from the end of the fuel cycle. NRC must recognize the vertical monopoly this company has within the energy industry and that a singular proposal is insufficient to address all of the aspects of Holtec's operational concerns in the end of the nuclear fuel cycle.

2. The cursory discussion of transportation in the ER has no substance because core data is absent. Such things as the exact number of anticipated shipments and overall volume (noting 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.

3. NRC/Holtec should first define DBE's and DBT's for the whole duration of the transportation campaign. Such data will assist communities along the many potential routes understand what they may realistically be expected to face over the lifespan of the program. Additionally, as part of this process, NRC should publicly define a range of scenarios for both HIE and natural hazards, including release fractions that reasonably approximate the full range of consequences, *viz.*, no release, moderate releases and catastrophic releases. Also, there needs to be 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.

4. NRC/Holtec should define with precision which nuclear power plants, DOE facilities and other origination sites will ship to the proposed facility and how (*e.g.*, heavy haul truck for some of the journey; rail for whole journey; barge for part of the journey and then rail, etc.).

Such an inventory of origination sites and transportation modalities will help communities to better understand the shipment numbers going through their communities by rail, truck and barge. There is an additional question of whether Legal Weight Truck-sized casks will be shipped to Holtec's CISF, in addition to the much larger rail-sized casks (by barge, heavy haul truck, and rail) mentioned above. Holtec states in its ER that it can accommodate any NRC-certified container at its CISF. This would thus include LWT-casks, certified by the NRC, which can and do travel on roadways and interstate highways.

5. NRC/Holtec should define exactly which routes the shipments will take to the CISF if it is licensed and when it becomes operational. As part of this analysis, and considering the length of shipment campaign, alternative routes and transport methodologies (contingencies) must be articulated.

6. NRC policies that address operational details such as use of dedicated trains and specific security procedures for waste shipments should be created, to provide guidance to communities along the routes in understanding their share of risk in the campaign to stock the CISF with inventory.

7. NRC/Holtec must define the wastes to be shipped to this facility – exact details on burnup history; years out of reactor for each shipment or part thereof; procedures regarding oldest fuel being shipped first; and percentages of cargoes/shipments for SNF/GTCC. These should reflect other lessons learned from the proposed Yucca Mountain Project over the course of decades of research, including by Dr. Ballard himself as a primary, internationally recognized expert on this subject.

8. Given the variety of “inventory” that the CISF may accommodate, NRC/Holtec

should specifically define fuel types and how far each will travel for each inventory level. For example at ____ inventory level (number of tonnes of SNF/GTCC) the NRC would expect that rail miles would total ____, truck miles total ____ and barge miles _____. Of these shipments, SNF would be expected to be ____%, HLW ____% (if anticipated) and GTCC ____%. This level of detail would allow the construction of accident rates for each transport mode and relative to each waste type.

9. The NRC/Holtec should define shipments and radiological cargo (specify the anticipated inventory of radionuclides). Among other things, such an inventory may assist emergency responders to know what they face when asked to respond to a radiological incident and how best to mitigate the risk in the event of an incident.

10. Given the need to train, provide equipment and provide the necessary protocols to first responders, the NRC/Holtec should be specific as to the *longitudinal* funding (life expectancy for the interim facility) for such efforts for those communities along the transportation corridor and at the end point CISF. Additionally, the exact training procedures for initial shipments, return-to-sender shipments to a permanent repository must be developed well in advance. DOE does administer the Section 180c funding for this purpose, but if DOE is excluded from a role on the CISF as suggested in Blue Ribbon Commission on America's Nuclear Future and National Academies of Science reports, the funding stream for emergency response equipment, training and other related expenses must be identified.

11. NRC/Holtec must define the routine radiation exposures the public will face per shipment and over the lifespan of the operational life of the CISF, including but not limited to workers involved in the shipment process, workers aligned to shipments/operations, the public

who live within 800 meters of each side of any transportation route; and vulnerable populations of elderly, children/in-utero children/expectant mothers within that 800 meter zone on each side of the routes.

12. NRC/Holtec must define 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. These contaminated shipments will increase exposures and the regulations for such are different than routine exposures. Impacted populations must include workers involved in the shipment process, workers aligned to shipments/operations, the public who live within 50 miles of any transportation route; and vulnerable populations of elderly, children/in-utero children/expectant mothers within that 50 mile zone.

13. NRC/Holtec must provide details on secure in place locations for shipments in the event of a radiological incident involving rail, truck or barge, or other unanticipated challenge, such as extreme weather events during the course of a shipment.

14. NRC/Holtec must define the exact organizational structure responsible for the shipment and storage facility. If as the Blue Ribbon Commission advises, the DOE is not to be involved, who and what will replace this entity?

15. NRC/Holtec must define the title to the wastes and implications of that determination in light of the unique role of Holtec as owner of nuclear power plants and as contractor for CISF services.

16. The NRC/Holtec must define the role reprocessing may play at this or a nearby geolocation. Reprocessing is currently not allowed but if that was to change and Holtec was to engage in that activity, the whole question of retrieval, shipment, storage and reprocessing of

wastes should be pre-determined. A similar programmatic and site specific NEPA process should be required.

17. NRC/Holtec must define the consequences for a range of human induced and design basis events and have in place plans if there are radiological incidents. At a minimum, this would include assessment protocols for radiological, social, economic, political and legal impacts.

18. The NRC/Holtec should specifically report on the differential impacts on tribal communities/populations and generalized environmental justice concerns for the CISF.

19. NRC should define, with regulations, specific penalties to be imposed on Holtec for lack of vigilance in any aspect of shipment or management of the CISF throughout the operational lifespan of the CISF.

20. NRC needs to specify the exact procedures and financing mechanism that communities will have to deal with to recover damages associated with any design basis or human induced events, and to receive compensation for mishaps with CISF transportation and operation.

21. NRC/Holtec should be required to provide corridor communities regular communications, perhaps on a quarterly basis, on numbers of shipments to stock the CISF, showing the percentage of the CISF filled to date, the types of wastes shipped/stored, accidents/incidents involving shipments to and operations at CISF, and details on any remediation efforts for risks instituted during the time frame discussed. Past experience and contemporary problems like a near accident that just happened at the San Onofre Nuclear Power Plant (a near drop of a loaded irradiated nuclear fuel Holtec container, revealed to the public by a

whistleblower) signal the need for Holtec to submit emergency reports to the NRC within 48 hours of an incident/accident for all of their operations.

22. The NRC should specifically incorporate the Blue Ribbon Commission (BRC) and National Academy of Sciences (NAS) report recommendations on consent-based siting, waste transport and storage. The BRC in 2012 reported to regulators, agencies and the public that *any* future repository for SNF and HLW should be sited based on the consent of the affected state, tribal, and local communities. In 2013, DOE adopted this recommendation for “consent-based siting” and in January 2017, DOE published a “Draft Consent-Based Siting Process for Consolidated Storage and Disposal Facilities for Spent Fuel and High-Level Radioactive Waste.” The policy for consent-based siting has not been incorporated into any current legislation or rule, but, rather, remains merely a non-binding recommendation of the BRC and DOE. Yet transportation of nuclear waste poses risks to any community in a shipping corridor. SNF and GTCC waste transportation subjects local populations to routine radiation exposures, the risk of radioactivity releases due to accidents or attacks, and in the case of return-to-sender shipments, extraordinary and unknown radiation exposures and risks.

23. The Holtec Environment Report (USNRC Docket # 72-1051, Holtec Project # 5025, Holtec Report # HI-2167521, Dec. 2017) focuses on SNF and GTCC wastes from power plant operations. The Yucca Mountain Project included high-level wastes (HLW) not listed by Holtec in Section 1 of the ER. High-level wastes were not specifically listed by Holtec despite noting that 10 CFR, Section 72 focuses on “Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater Than Class C Waste.” Holtec’s proposal does identify/define HLW in Chapter 11 (Glossary). Notably, this definition

lists reprocessing, defense related materials, commercial HLW and other NRC designated materials in addition to the commercial reactor SNF and GTCC wastes. Such ambiguity in identifying the materials that will be transported and stored at the CISF is problematic since safety and security considerations might be different for dissimilar types of wastes. The presentation herein assumes the totality of materials that would have been transported and stored at Yucca Mountain is logically going to be stored at the CISF.

24. Specific accident scenarios relative to the CISF proposal are beyond design basis events and could be exacerbated by human interference. An exemplar event was the Baltimore Tunnel Fire (July 2001). This tunnel fire was analyzed by a Nevada contractor. A Holtec shipping container was the hypothetical shipping container involved in the fire, resulting in cask breach, large-scale releases of hazardous radioactivity, and a large number of injurious exposures, and even latent cancer fatalities. See: <http://www.state.nv.us/nucwaste/news2001/nn11459.pdf> . The NRC/Holtec should demonstrate situational awareness of these events and demonstrate specific plans to mitigate said risks.

25. The massive transportation implicated by Holtec's proposal must be addressed in the NEPA document. Holtec does discuss CISF on-site transportation accidents in their Emergency Response Plan document (Holtec Report No: 2177535), but this discussion does not address the totality of transportation needed to stock the CISF, and rather focuses on emergency planning for the facility and its very limited internal transportation risks. This is inconsistent with prior statements by Holtec, such as statements in the Federal Register Notice, v. 83 no. 62, dated (March 30, 2018): "The following resource areas have been tentatively identified for analysis in the EIS: Land use, transportation . . ." After noting that tribal members questioned the company

on transport issues during public hearings, Holtec commented “Transport . . . was not discussed during the meetings because nuclear fuel transport (governed by 10 CFR Part 71) is not a part of the ongoing HI-STORE CISF application (governed by 10 CFR Part 72).” See:

<https://holtecinternational.com/2018/05/07/usnrconducts-extensive-public-consultation-concerning-holtecs-environmental-report-on-hi-store-cisf-americas-sole-consolidated-interim-storage-facility-underregulatory-review/>

26. Details on the complexity of the potential different waste streams (from power plants, decommissioning, defense operations, commercial operations), from the many potential origination sites, and for all forms of potential wastes (SNF, HLW, GTCC/liquid/solid/assemblies, etc.) is important to specify. That level of differential analysis is not found within the Holtec CISF proposal and NRC should undertake this categorization prior to the EA/EIS process so as to allow the bidders for interim storage facilities to plan for the full range of wastes that could be stored at the proposed CISF. Likewise, this analysis should be part of the NRC EIS process so that stakeholders can fully comprehend the scope of activities necessary to stock the proposed facility, and the full spectrum of associated risks..

27. Identification of affected communities is difficult since transportation planning for the proposed CISF was not done. NRC/Holtec should identify the primary and secondary transport/storage communities prior to any proposal so that mitigation of adverse effects could be planned for and implemented from the onset of transportation to and from a storage facility.

28. NRC/Holtec should recognize that disasters, human initiated or natural, do not easily fit economic impact analysis (EIA) protocols. Due to social obligations and the lack of good data, a reasonable cost-benefit analysis (CBA) is likewise not easy to accomplish. The

planners for any effort at the transportation of nuclear waste need to move beyond EIA and CBA to invent new economic models to assess the impacts of a radiological disaster. Perhaps they could build off of existing platforms like Transportation Economic Development Impact System (TREDIS) and the various agencies' specific assessment tools for impacts from transportation development.

Contention No. 12: Troubling Geological Formations and Conditions Beneath Holtec Site.

Because of the geologic formations and conditions beneath the Holtec site, there are risks inherent in siting and operating the CIS facility as proposed by Holtec. The ER and SAR in this case do not adequately discuss and evaluate the risks created by these geologic conditions.

Basis for the Contention

10 C.F.R. § 51.45 requires that an environmental report must contain a discussion of the environment affected by the proposed project and the environmental impacts of the project. 10 C.F.R. § 72.90 requires that the SAR must investigate and assess site characteristics that related to safety and environmental impact. This would include the geology of the area.

The facts supporting this contention are contained in the attached report of Steven Schafersman, Ph.D., a geologist with extensive experience and knowledge regarding Permian Basin geology.

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

Pursuant to 10 C.F.R. § 2.309(f)(3), 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.

Basis for the Contention

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. Petitioners agree that the Sierra Club shall act as the primary representative with respect to its contentions, and they reserve the matter of requesting co-sponsorship or joint designation for a later time. Petitioners further give notice of their intentions of offering evidence and argument in support of the Sierra Club's contentions.

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 Petitioners' request, should they be granted standing in this matter, and they so move. ,

Sincerely,

/s/ Terry J. Lodge

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CERTIFICATE OF SERVICE

Pursuant to 10 C.F.R. § 2.305, I hereby certify that, on this copies of the "Petition 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 Request for Adjudicatory Hearing" and accompanying declarations and attachments were served upon the Electronic Information

Exchange (the NRC's E-Filing System) in the above captioned proceeding for automated distribution to all registered counsel and parties.

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