

**UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
Before the Commission**

In the Matter of)	Docket No. 72-1050
Interim Storage Partners LLC)	
(Consolidated Interim Storage Facility))	September 17, 2019
)	

* * * * *

**NOTICE OF APPEAL OF LBP-19-07 BY PETITIONERS 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, SUSTAINABLE
ENERGY AND ECONOMIC DEVELOPMENT COALITION, AND LEONA MORGAN,
INDIVIDUALLY, AND BRIEF IN SUPPORT OF APPEAL**

Terry J. Lodge, Esq.
316 N. Michigan St., Ste. 520
Toledo, OH 43604-5627
(419) 205-7084
tjlodge50@yahoo.com
Counsel for Don't Waste Michigan, Citizens' Environmental
Coalition, Citizens for Alternatives to Chemical Contamination,
Nuclear Energy Information Service, Public Citizen, Inc., San
Luis Obispo Mothers for Peace, Sustainable Energy And Economic
Development Coalition and Leona Morgan, Individually,
Petitioners-Appellants

TABLE OF CONTENTS

Table of Authorities	ii
Notice of Appeal	
Brief in Support of Appeal	1
I. Introduction	1
II. Background	3
III. The ASLB Improperly Denied Legal Standing to the Joint Petitioners	4
IV. The ASLB Improperly Refused to Admit Joint Petitioners' Proffered Contentions for Adjudication	18
<u>Joint Petitioners' Contention 1: NEPA Analysis of Transportation of Spent Nuclear Fuel and GTCC Wastes Was Excluded from the Application and Comprises Unlawful Segmentation of the Project</u>	19
<u>Joint Petitioners' Contention 4: Low-Level Radioactive Waste Volumes and Repackaging Requirements Are Considerably Underestimated</u>	22
<u>Joint Petitioners' Contention 5: ISP Has Not Performed an Environmental Justice Investigation of Transportation Communities; the ISP CISF Will Cause Disparate Impacts From Routine and Non-Routine Transportation-Related Radiation Exposures Upon Minority and Low-Income Populations Along Hundreds of Miles of Transportation Corridors</u>	23
<u>Joint Petitioners' Contention 6: Inadequate Disclosure of Oil and Gas Drilling Activity Beneath the WCS CISF Site</u>	24
<u>Joint Petitioners' Contention 8: The Discussion of Alternatives to the Proposed Project Is Inadequate Under NEPA</u>	26
<u>Joint Petitioners' Contention 11: Having No Dry Transfer System And No Radioactive Emissions Mitigation Plan For ISP's CISF Are Impermissible Omissions Under the AEA And Must Be Addressed Under NEPA</u>	28
<u>Joint Petitioners' Contention 14: NEPA Requires Significant Security Risk Analyses for the Spent Nuclear Fuel and Greater-Than-Class-C Wastes Proposed for Interim Storage, And Associated Transportation Component, at ISP/WCS's Texas Facility</u>	29
V. Conclusion	30
Certificate of Service	31

TABLE OF AUTHORITIES

<u>Court Decisions</u>	<u>Page</u>
<i>520 S. Mich. Ave. Assocs., Ltd. v. Devine</i> , 433 F.3d 961 (7th Cir. 2006)	13
<i>Carolina Envtl. Study Grp. v. U.S.</i> , 510 F.2d 796 (D.C. Cir. 1975)	13
<i>Delaware Riverkeeper Network v. FERC</i> , 753 F.3d 1304 (D.C. Cir. 2014)	23
<i>DuBois v. U.S. Dept. of Agric.</i> , 102 F.3d 1273 (1st Cir. 1996), <i>cert. denied</i> , 117 S.Ct. 1567 (1997)	27
<i>Duke Power Co. v. Carolina Environmental Study Group</i> , 438 U.S. 59 (1978)	13
<i>Friends of the Earth, Inc. v. Laidlaw Envtl. Servs. (TOC), Inc.</i> , 528 U.S. 167, 190, 120 S.Ct. 693, 145 L.Ed.2d 610 (2000)	13
<i>Los Angeles v. Lyons</i> , 461 U.S. 95 (1983)	12
<i>Lujan v. Defenders of Wildlife</i> , 112 S.Ct. 2130, 504 U.S. 555, 119 L.Ed.2d 351 (1992)	12
<i>Nuclear Energy Inst., Inc. v. EPA</i> , 373 F.3d 1251 (D.C. Cir. 2004) (<i>per curiam</i>)	14
<i>Power Authority of the State of New York, et al.</i> (James FitzPatrick Nuclear Power Plant; Indian Point Nuclear Generating Unit 3), CLI-00-22, 52 NRC 266 (2000)	19
<i>Roosevelt Campobello Int’l Park Comm’n v. EPA</i> , 684 F.2d 1041 (1st Cir. 1982)	27
<i>San Luis Obispo Mothers for Peace v. NRC</i> , 449 F.3d 1016 (9th Cir. 2006)	30
<i>Scientists’ Inst. for Pub. Info., Inc. v. Atomic Energy Comm’n</i> , 481 F.2d 1079, 156 U.S. App. D.C. 395 (D.C. Cir. 1973)	21
<i>Sierra Club v. Morton</i> , 405 U.S. 727 (1972)	12
<i>Simon v. Eastern Kentucky Welfare Rights Org.</i> , 426 U.S. 26 (1976)	13
<i>Stewart Park & Reserve Coal., Inc. (SPARC) v. Slater</i> , 352 F.3d 545 (2d Cir. 2003)	20
<i>Thomas More Law Center v. Obama</i> , 651 F.3d 529 (6 th Cir. 2011)	13
<i>Thomas v. Peterson</i> , 753 F.2d 754 (9th Cir. 1985)	22

<i>Trout Unlimited v. Morton</i> , 509 F.2d 1276 (9th Cir. 1974)	22
<i>Van Abbema v. Fornell</i> , 807 F.2d 633	27
<i>Warth v. Seldin</i> , 422 U.S. 490 (1975)	12
<u>Administrative Decisions</u>	
<i>Connecticut Yankee Atomic Power Co.</i> (Haddam Neck Plant), LBP-01-21, 54 NRC 33 (2001)	29
<i>Dominion Nuclear Conn., Inc.</i> (Millstone Nuclear Power Station, Units 2 & 3), CLI-01-24, 54 NRC 349	19
<i>Dominion Nuclear Connecticut, Inc.</i> (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207 (2003)	14
<i>Duke Cogema Stone & Webster</i> (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403 (2001)	16
<i>EnergySolutions, LLC</i> (Radioactive Waste Import/Export Licenses), CLI-11-3, 73 NRC 613 (2011)	5, 15
<i>Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.</i> (Pilgrim Nuclear Power Station), CLI-07-2, 65 NRC 10 (2007)	3
<i>Exxon Nuclear Co.</i> (Nuclear Fuel Recovery and Recycling Center), LBP-77-59, 6 NRC 518 (1977)	17
<i>Gulf States Utilities Co.</i> , 40 N.R.C. 43 (1994)	29
<i>International Uranium (USA) Corporation</i> (White Mesa Uranium Mill), 54 NRC 27 (2001)	17, 18
<i>Louisiana Energy Services, L.P.</i> (Claiborne Enrichment Center), LBP-97-8, Docket No. 70-3070-ML, 45 NRC 367, 1997 WL 458771 (May 1, 1997)	24
<i>Louisiana Energy Services, L.P.</i> (National Enrichment Facility), CLI-04-35, 60 NRC 619 (2004)	29
<i>Mississippi Power & Light Co.</i> (Grand Gulf Nuclear Station, Units 1 & 2), ALAB-130, 6 AEC 423 (1973)	2

<i>Northern States Power Company</i> (Pathfinder Atomic Plant), 31 NRC 40 (1990)	16, 18
<i>Pacific Gas and Electric Company</i> (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), 56 NRC 413 (2002)	15
<i>Private Fuel Storage, L.L.C.</i> (Indep. Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125 (2004)	29
<i>Sequoyah Fuels Corp. and General Atomics</i> (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64 (1994)	13, 15, 18
<i>Shaw Areva MOX Services</i> , LBP-07-14 (2007)	13
<i>Tennessee Valley Authority</i> (Bellefonte Nuclear Power Plant, Units 3 & 4), LBP-08-16, 68 NRC 361 (2008)	18
<i>U.S. Army Installation Command</i> (Schofield Barracks, Oahu, Hawaii, and Pohakuloa Training Area, Island of Hawaii, Hawaii), CLI-10-20, 71 NRC 216, 218 (2010)	13
<i>USEC, Inc.</i> (American Centrifuge Plant), CLI-05-11, 61 NRC 309, 311 (2005)	13
<i>U.S. Department of Energy</i> (Plutonium Export License), CLI-04-17, 59 NRC 357 (2004)	5, 14
<i>U.S. Department of Energy</i> (High Level Waste Repository), LBP-09-06, 11 (2006)	18
<i>Yankee Atomic Electric Co.</i> (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 247-48 (1996)	16
<u>Regulations</u>	
10 C.F.R. § 2.311	2, 3
10 C.F.R. § 51.14	23
10 C.F.R. § 51.29	23
10 C.F.R. § 51.45	21
40 C.F.R. § 1502.4	23
40 C.F.R. § 1508.25	23

NOTICE OF APPEAL

Petitioners Don't Waste Michigan, Citizens' Energy Coalition, Citizens for Alternatives to Chemical Contamination, Nuclear Energy Information Service, Public Citizen, Inc., San Luis Obispo Mothers for Peace, Sustainable Energy and Economic Development ("SEED") Coalition, and Leona Morgan, individually (hereinafter "Joint Petitioners"), by and through counsel, pursuant to 10 C.F.R. § 2.311(c), hereby give notice of their appeal to the U.S. Nuclear Regulatory Commission ("Commission") from the Atomic Safety and Licensing Board's ("ASLB") August 23, 2019 ruling, LBP 19-07, "Memorandum and Order (Ruling on Petitions for Intervention and Requests for Hearing)" (ML19235A165) ("Memorandum and Order") in the Interim Storage Partners LLC Consolidated Interim Storage Facility proceeding ("ISP").

DWM *et al.* appeal the ASLB's denial of intervenor legal standing to all but the SEED Coalition, and all Joint Petitioners further seek reversal of the ASLB's sundry decisions denying admission of their proffered contentions for adjudication.

/s/ Terry J. Lodge

Terry J. Lodge, Esq.

316 N. Michigan St., Ste. 520

Toledo, OH 43604-5627

(419) 205-7084

tjlodge50@yahoo.com

Counsel for Don't Waste Michigan, Citizens' Environmental Coalition, Citizens for Alternatives to Chemical Contamination, Nuclear Energy Information Service, Public Citizen, Inc., San Luis Obispo Mothers for Peace, Sustainable Energy and Economic Development Coalition and Leona Morgan, Individually, Petitioners-Appellants

BRIEF IN SUPPORT OF APPEAL

I. INTRODUCTION

On August 29, 2018, after receiving a revised license application to construct and operate a Consolidated Interim Storage Facility (“CISF”) for Spent Nuclear Fuel (“SNF”) from Interim Storage Partners LLC, the Nuclear Regulatory Commission published a Federal Register notice that allowed the public to request a hearing and petition to intervene by October 29, 2018. The Secretary of the Commission later extended this deadline to November 13, 2018. On November 13, 2018, Joint Petitioners filed 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, Sustainable Energy and Economic Development Coalition and Leona Morgan, Individually to Intervene and Request for Adjudicatory Hearing” (ML18317A433) (“Petition to Intervene”). The assigned Atomic Safety and Licensing Board (“ASLB”) ruled on August 23, 2019 that only one of the Joint Petitioners possessed legal standing—the SEED Coalition—and that the remaining Petitioners lacked it. The ASLB further ruled that the Joint Petitioners had pleaded no admissible contention, and terminated the case as to them:

Among the eight Joint Petitioners, only Sustainable Energy and Economic Development Coalition (SEED) has demonstrated standing. SEED’s petition, however, must be denied for lack of an admissible contention.

As set forth above, Beyond Nuclear, Sierra Club, SEED (of Joint Petitioners), and Fasken have demonstrated standing in accordance with 10 C.F.R. § 2.309(d). Only Sierra Club has proffered an admissible contention meeting the requirements of 10 C.F.R. § 2.309(f)(1). Therefore, in accordance with 10 C.F.R. § 2.309(a), the Board denies Beyond Nuclear’s, Joint Petitioners’ and Fasken’s respective petitions, and grants the request for hearing and petition for leave to intervene by Sierra Club.

C. Joint Petitioners' petition is denied. Joint Petitioners' contentions are not admitted.

F. ISP's motion to strike a portion of Joint Petitioners' reply on Joint Petitioners Contention 9 is granted.

Memorandum and Order at 2, 105, 106. These are the rulings by the ASLB affecting Joint Petitioners that comprise the basis for this appeal.

The specific grounds for the appeal are:

(1) The ASLB erred in the below finding that all Joint Petitioners except SEED lacked legal standing:

They do not base their standing claims on their members' proximity to the proposed facility, but rather on their proximity to potential transportation routes by which spent nuclear fuel might travel to the proposed facility.

This is too remote and speculative an interest on which to establish standing. As the Commission has stated: "[M]ere geographical proximity to potential transportation routes is insufficient to confer standing."

Memorandum and Order at 17.

(2) The ASLB erred in rejecting Joint Petitioners' proffered Contentions 1, 4, 5, 6, 8, 11 and 14.

The portion of a prehearing conference order which grants or wholly denies a petition for leave to intervene is appealable under 10 C.F.R. § 2.311 (formerly § 2.714a). *Mississippi Power & Light Co.* (Grand Gulf Nuclear Station, Units 1 & 2), ALAB-130, 6 AEC 423, 424 (1973).

A petitioner may appeal an order under 10 C.F.R. § 2.311 if the effect thereof is to deny a petition to intervene in its entirety – *i.e.*, to refuse petitioner entry into the case, and only if the

Board rejects all of the intervenor's proposed contentions. *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-07-2, 65 NRC 10, 11 (2007). The ASLB denied Joint Petitioners, except for SEED Coalition, entry into the case and rejected all of their proffered contentions (including those raised by SEED) in the May 7, 2019 Memorandum and Order. Accordingly, the order is appealable to the full Commission as a matter of right under § 2.311.

II. BACKGROUND

ISP's proposed Consolidated Interim Storage Facility ("CISF") on the Texas-New Mexico border would be a large-volume storage project for commercial spent nuclear fuel ("SNF"). Some 40,000 MTU of SNF is planned for delivery to the ISP/WCS site over a 20-year period. In its first year of operations, ISP proposes to store up to 5,000 metric tons of uranium of commercial spent nuclear fuel ("SNF") and greater-than-Class-C radioactive waste ("GTCC") above-ground on specially-built pads. Over the initial 20 years of operation, ISP anticipates delivery of a total of 40,000 metric tons of SNF and GTCC waste. Estimates vary of how long the facility will operate, from 60 to more than 100 years, to "indefinitely."

The *sine qua non* of this vast radioactive waste storage effort is transportation of spent nuclear fuel across most of the lower 48 U.S. states, from more than 125 current and former commercial nuclear power reactor sites. Each of the estimated 3,000 SNF shipments will travel hundreds of miles by rail, heavy haul truck on highways and on barges over the Atlantic and Pacific Oceans, the Great Lakes and even American rivers. In all, SNF shipments will travel more than a million miles, of which 95% of the shipping miles will be rail miles.

Presently, SNF is cooled in engineered pools at reactor sites after being removed from the

reactor core, then placed indefinitely in either vertical or horizontal dry storage casks at the sites. The current generation of dry storage casks was intended for relatively short-term on-site storage at reactor sites, some of which cannot be shipped, and none used for permanent disposal in a repository. Of the 51 different NRC-licensed designs for dry cask storage, some are licensed for transport, but non for repository canisters. The waste bound for ISP may have to be repackaged into as many as 30,000 smaller canisters either at reactor sites or at the ISP's facility. Repackaging will be necessary to implement use of standard containers capable of handling that can be entombed in a permanent repository so as to withstand post-closure heat loads while containing radioactivity and fissile materials. Repackaging expenses will vary according to transportability of the canisters and on the compatibility of the canisters with heat loading requirements for disposal.¹

Six of the seven organizational Joint Petitioners are located hundreds of miles from the Texas site, and their members live, work and recreate proximate to highway, barge and railroad corridors highly likely to be used to deliver the thousands of SNF shipments to ISP. Joint Petitioners sought standing to intervene to protect the interests of their members based on both the expected routine radiation exposure resulting from the transport of thousands of SNF cargoes, and on the prospect that members will be subjected to heightened risks from radiation exposure from accident, sabotage, vandalism or terrorist acts that befall shipments.

III. THE ASLB IMPROPERLY DENIED LEGAL STANDING TO THE JOINT PETITIONERS

Joint Petitioners urged in their Petition to Intervene that their members, who live, work

¹Robert Alvarez, former senior advisor to DOE secretary, cited at DWM *et al.*'s Petition to Intervene at 69-70.

and recreate within a few miles of the water, highway and rail transportation corridors ISP/WCS is highly likely to use for transport of SNF, possess “proximity plus” legal standing by virtue of their geographical proximity to those corridors and because of the inherent and extraordinarily dangerous traits of spent nuclear fuel. The ASLB found their theory “too remote and speculative an interest on which to establish standing” because “mere geographical proximity to potential transportation routes is insufficient to confer standing.” Memorandum and Order at 17, citing *U.S. Dep’t of Energy* (Plutonium Export License), CLI-04-17, 59 NRC 357, 364 n.11 (2004) (quoting *Diablo Canyon ISFSI*, LBP-02-23, 56 NRC at 434); also, *EnergySolutions, LLC* (Radioactive Waste Import/Export Licenses), CLI-11-3, 73 NRC 613, 623 (2011).

The Joint Petitioners submit that the ASLB’s determination is based on a defective grasp of the facts about and scope of ISP’s present and projected customer base combined with a misunderstanding of standing principles and the unwarranted rejection of precedent conducive to a finding of Joint Petitioners’ standing, all of which are explained below.

A. Contrary to the ASLB Conclusion, ISP/WCS Has Identified Likely Customer Relationships Which Imply Extensive Transportation Arrangements For SNF

The ASLB mused that:

Joint Petitioners do not explain why, under NEPA, ISP is required to divulge all transportation routes of casks coming from customers, unknown at this time, for the 20-year transportation and loading campaign. As ISP points out, ISP cannot know these details at this time, and relevant case law does not require ISP to hypothesize about who will be sending what fuel at this time. Responsibility for transportation of spent nuclear fuel from commercial reactors to the proposed CISO lies with the title holders of the spent fuel, not with ISP.

Memorandum and Order at 68-69. The perception that ISP cannot possibly know the precise identities of customers it will have over the 20 years of SNF deliveries is belied by the fact that ISP intends to develop 40,000 MTU worth of customer relationships. Central to that effort, ISP is

lobbying heavily in Congress, right now, to change the Nuclear Waste Policy Act to make that “customer” the U.S. Department of Energy. ISP’s application documents repeatedly express the expectation that DOE will take title to the SNF and oversee its packaging and delivery to the ISP site.²

Moreover, the ASLB failed to treat ISP’s Environmental Report discussion of transportation infrastructure at a dozen decommissioned plants as suggestive of the diverse nature of the likely ISP customer base. ISP ER § 4.2.6.1, p. 4-13 (use of WebTRAGIS software to determine the route length and population density along each route segment from plants; Table 4.2-2 lists specific routing parameters used in the study). Also, ISP itself enumerated every major rail route in the lower 48 states as a possible transportation artery, see p. 2-71 of the ISP ER, which contains Figure 2.2-4, a map showing every major railroad line in the lower 48 states.

The ISP transportation analysis drew from an oft-updated U.S. Department of Energy (“DOE”) study, “Preliminary Evaluation of Removing Used Nuclear Fuel from Shutdown Sites,”³ which delineates infrastructure deficiencies and transport considerations for shipping SNF and high-level radioactive waste to the proposed Yucca Mountain repository. A dozen

²See ISP ER, Rev. 2 (“Phase 1 construction would begin after issuance of the license and after *ISP* successfully enters into a contract for storage with the U.S. Department of Energy (DOE) *or holders of the title to SNF at commercial nuclear power facilities (SNF Title Holder(s))*”). (Emphasis original). ER § 1.0, p. 1-2. Also, “The DOE *or the SNF Title Holder(s)* are is [sic] also responsible for the transportation of SNF from the shutdown and decommissioned reactors across the country.” (Emphasis original) ER § 3.2.1, p. 3-5. And “The DOE *or nuclear plant owner(s) holding title to the SNF* will be responsible for transporting SNF from existing nuclear power plants to *the CISF* by rail in transportation casks licensed by the NRC pursuant to 10 CFR 71.” (Emphasis original). ER § 4.2.4, p. 4-9. Further assertions of DOE taking title are found at ER § 7.3, p. 7-15; ER § 7.3.1, p. 7-16; ER § 7.3.2, p. 7-18; and ER § 7.3.3, p. 7-21.

³The Preliminary Evaluation, updated 3 times since initial publication, is found at <https://www.energy.gov/ne/downloads/preliminary-evaluation-removing-used-nuclear-fuel-shutdown-sites>

“stranded” sites are addressed in the DOE evaluation, *i.e.*, they have dismantled fuel pools and all SNF is presently stored onsite in dry storage casks. The SNF at these sites is first in line for transport to either Holtec or ISP, the only two planned CISFs. It is highly probable that ISP will receive deliveries of SNF from many of these sites, and the ASLB concluded, illogically, that because there are supposedly no firm customer contracts, there is no way to estimate and quantify use of the rail system, the exposures to multiple population-dense areas, and the fact that the most direct routes will likely be used. Some 95% of the planned 3,000 separate cargoes of SNF to ISP will travel main railroad arteries proximate to routes identified by the members of the Joint Petitioner groups, even if the absolute numbers of shipments over any particular route are not presently known.

C. The ASLB Omitted Consideration Of Analogous DOE Route Projections Of Yucca High-Level Radioactive Waste Transport

The members of the Joint Petitioner groups stated in declarations that they reviewed many official maps to identify likely rail and highway transport routes very likely to travel to the ISP facility. These included projected transportation route information found in the record of the Yucca Mountain NRC proceeding.⁴ Two sets of detailed DOE maps, one designating rail and truck routes for high-level radioactive waste (“HLRW”) through 20 U.S. metropolitan areas, and the other showing the rail and road routes through the lower 48 states, comprise DOE’s authoritative identification of the most likely main rail and heavy-haul highway trucking routes to

⁴<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. All citations appeared at DWM *et al.*’s Petition to Intervene at 12.

be used for delivery to Nevada. They suggest probable SNF shipment routes to west Texas.

Notably, the DOE in the Yucca Mountain case defined a 50-mile “region of influence” (“ROI”) referent in the Yucca Mountain application,⁵ which is consistent with the dangers of SNF. The Yucca ROI for public health and safety along DOE-predicted haul routes is 800 meters (0.5 mile) from the centerline of the transportation rights-of-way for incident-free (non-accident) conditions, and 80 kilometers (50 miles) in the event of potential human health and safety effects from accidents.⁶ So the DOE, if it were the sole “customer” of ISP, acknowledges a potential, even if remote, for a serious SNF accident. Yet nowhere in its ER has ISP mentioned a ROI for public health and safety. A major SNF truck, barge and/or rail cargo canister breach and spill event could cause serious problems for large populations miles downwind or downstream from the incident site.

Each of Joint Petitioners’ declarants attested under penalty of perjury to having read the ISP ER (see generally ¶¶ 5 and 6 of each declaration), which contains a one-page national map of railroad mainlines. *See* ER Figure 2.2-4 on p. 2-71. At least ten of the declarants expressly stated in their respective declarations that they perused this railroad line map. All declarants stated that following their respective investigations, they determined that they reside, work and/or recreate proximate to an SNF location or transport route.

Individual Petitioner Leona Morgan, of Albuquerque, New Mexico, said in her declaration as follows:

⁵“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), §§ 3.2.1, p. 3-119.

⁶Joint Petitioners asserted these principles beginning at p. 12 of their Petition to Intervene.

I also have learned that all or nearly all of the planned deliveries of SNF and GTCC waste to WCS are presently planned to be via railroad. Some may involve barge shipment and highway transport over earlier stages of shipment. I have studied Figure 2.2-4 on p. 2-71 of the WCS Environmental Report, which is a national map of rail transportation routes, and note that a main railroad line passes within 1 mile of my home and place of employment. That is a main route from California that passes through Arizona to Albuquerque and such route will likely be used to transport many cargoes of SNF and/or GTCC wastes to the WCS facility.

Declaration of Leona Morgan, ¶ 4.

Cemelli de Aztlan, resident of El Paso, Texas, and member of Joint Petitioner group

Public Citizen, Inc., explained in her declaration that:

I also have learned that all or nearly all of the planned deliveries of SNF and GTCC waste to WCS are presently planned to be via railroad. Some may involve barge shipment and highway transport over earlier stages of shipment. I have studied the Rail Lines Map that appears at p. 2-71 of Revision 2 of the WCS Environmental Report, and Department of Energy maps of rail and highway transportation routes identified for the Yucca Mountain geological repository case, and note that one or more rail trackage/ highway transport routes are within one (1) block of my (home/place of work/place of recreation) and believe it is likely that such route will likely be used to transport many cargoes of SNF and/or GTCC wastes to the WCS facility.

Declaration of Cemelli de Aztlan, ¶ 4.

Rev. James L. Caldwell, Public Citizen member in Houston, Texas, alleged in his declaration:

I have studied the Rail Lines Map that appears at p. 2-71 of Revision 2 of the WCS Environmental Report, and Department of Energy maps of rail and highway transportation routes identified for the Yucca Mountain geological repository case, and note that one or more rail trackage/ highway transport routes are within one (1) mile of my (home/place of work/place of recreation) and believe it is likely that such route will likely be used to transport many cargoes of SNF and/or GTCC wastes to the WCS facility.

Declaration of Rev. James L. Caldwell, ¶ 4.

Also, Petuuche Gilbert, of the Acoma Pueblo in New Mexico, declared that:

I have studied the Rail Lines Map that appears at p. 2-71 of Revision 2 of the

WCS Environmental Report, and Department of Energy maps of rail and highway transportation routes identified for the Yucca Mountain geological repository case, and note that one or more rail trackage/ highway transport routes are within one (1) mile of my (home/place of work/place of recreation) and believe it is likely that such route will likely be used to transport many cargoes of SNF and/or GTCC wastes to the WCS facility.

Declaration of Petuuche Gilbert, ¶ 4.

Other declarants provided significant evidence of standing in other locales. Three of the Don't Waste Michigan declarants reside 2.5 to 6 miles from the only existing rail line for transporting SNF from the Fermi 2 nuclear plant, identified by the DOE⁷ near Monroe, Michigan. The route proceeds northward from the Monroe area, through interior Detroit, northwesterly to Lansing, before going through southwestern Michigan,⁸ and then west toward Chicago.

Hedi Kaufman of Monroe, Michigan claimed this in her declaration:

. . . I note that the rail route spur into and out of Fermi 2 nuclear plant is within 2.5 miles of my home and where I recreate. The rail spur going into and out of Fermi 2 nuclear plant is to meet rail line shared by Norfolk Southern Railway, Canadian National Railway and CSX Transportation before heading north through Detroit then west toward Plymouth. This route will be used to transport many cargoes of SNF and/or GTCC wastes to the WCS facility. The Fermi 2 nuclear plant is 4 miles from my home. In addition to the threat from Fermi 2 nuclear reactor, the Fermi 2 has on site ISFSI SNF. My sole source of drinking water for family draws from Water Intakes pipes 1/4 mile and 1/2 mile from the Fermi 2 site. An accident with ISFSI SNF while loading could be catastrophic, and impact the entire Great Lake Erie and region.

Declaration of Hedi Kaufman, ¶ 4. Hedi's husband, Martin, included an identical paragraph in his declaration. Michael Keegan, DWM member also of Monroe, Michigan, averred:

. . . I note that the rail route spur into and out of Fermi 2 nuclear plant is within 6

⁷See p. 6/20 of maps identified at http://www.state.nv.us/nucwaste/news2017/pdf/Cities_Affected.pdf

⁸See p. 20/45 of state maps cited by DWM *et al.*'s Petition to Intervene at 12, <http://www.state.nv.us/nucwaste/news2017/State%20Maps.pdf>

miles of my home and where I recreate. The rail spur going into and out of Fermi 2 nuclear plant is to meet a rail line shared by Norfolk Southern Railway, Canadian National Railway and CSX Transportation before heading north through Detroit then west toward Plymouth. This route will be used to transport many cargoes of SNF and/or GTCC wastes to the WCS facility. The Fermi 2 nuclear plant is 4 miles from my home. In addition to the threat from Fermi 2 nuclear reactor, the Fermi 2 has on site ISFSI SNF. My sole source of drinking water for family draws from Water Intakes pipes 1/4 mile and 1/2 mile from the Fermi 2 site. An accident with ISFSI SNF while loading could be catastrophic, and impact the entire Great Lake Erie and region.

Declaration of Michael J. Keegan, ¶ 4.

In the Chicago area, Glenview, Illinois appears on p. 3 of the DOE urban maps.⁹

Petitioner Nuclear Energy Information Service's member, Patricia L. Walter, declared that a rail trunk line likely to be used for the transport of SNF is located two miles from her home there.

Glenview is due south of the Port of Milwaukee, identified by DOE as the likely point of delivery of HLRW via barges on Lake Michigan from Point Beach and Kewaunee nuclear plants (453 projected shipments in all).¹⁰ The rail line running south through Glenview, therefore, will see considerable SNF transport.

The sole means of shipping HLRW or SNF from the Diablo Canyon nuclear plant, northwest of Los Angeles, is via railroad according to map 9/20 of the maps reviewed by the Joint Petitioners.¹¹ Thus the declarations proffered by San Luis Obispo Mothers for Peace ("SLOMPF") members living 3 and 5 miles from the rail line serving Diablo Canyon refer to the only route over which several hundred SNF shipments will pass. Jill ZamEk attested as follows:

The [Diablo Canyon nuclear] plant is approximately 12 miles from my home. If

⁹See p. 3/20 of maps identified in fn. 7, *supra*.

¹⁰See <https://www.nirs.org/wp-content/uploads/factsheets/mibargefactsheet92804.pdf>

¹¹See map 9/20 of maps identified in fn. 7, *supra*.

transport of SNF/GTCC is by rail, the only rail line for at least 10 miles in any direction from Diablo Canyon passes within 4 to 5 miles of my home. The major U.S. highway nearest the plant, on which truck transports of SNF/GTCC, passes within 2 miles of my home. If the SNF/GTCC is loaded on a barge to be sent elsewhere by water, the barge loading area for Diablo Canyon is 10 miles from my home.

ZamEk Declaration, ¶ 4. Fellow SLOMPF member Lucy Jane Swanson rendered similar observations about proximity of her residence to Diablo Canyon:

. . . [O]ne or more rail transport routes are within 12 miles of my (home/place of work/place of recreation) and that such route will likely be used to transport many cargoes of SNF and/or GTCC wastes to the WCS facility. But it will be necessary to transport those wastes by truck from the Diablo plant to the railroad, and the intersection of the only road leading away from the Diablo Canyon plant to the Highway 101 freeway or its frontage roads is within three miles of my home, as verified by the map posted on the website of the San Luis Obispo County Office of Emergency Services at <http://www.slocounty.ca.gov/Departments/Office-of-Emergency-Services.aspx>

Swanson Declaration, ¶ 4.

These declarations established the three elements comprising the “irreducible constitutional minimum of standing” in *Lujan v. Defenders of Wildlife*, 112 S.Ct. 2130, 504 U.S. 555, 561, 119 L.Ed.2d 351 (1992). First, they depicted sufferance of an “injury in fact” which is concrete and particularized, “actual or imminent, not ‘conjectural’ or ‘hypothetical.’” *Warth v. Seldin*, 422 U.S. 490, 508 (1975); *Sierra Club v. Morton*, 405 U.S. 727, 740-741, n. 16 (1972); *Los Angeles v. Lyons*, 461 U.S. 95, 102 (1983). Second, they demonstrated a causal connection between the injury and the conduct complained of -- the “injury has to be fairly . . . trace[able] to challenged action of the defendant, and not . . . th[e] result [of] the independent action of some third party not before the court.” *Simon v. Eastern Kentucky Welfare Rights Org.*, 426 U.S. 26, 41-42 (1976). Third, they explained that it is “likely,” as opposed to merely “speculative,” that the injury will be “redressed by a favorable decision.” *Id.* at 38, 43. The Joint Petitioner declarants’ imminent injury “is certainly impending.” *Friends of the Earth, Inc. v. Laidlaw Envtl.*

Servs. (TOC), Inc., 528 U.S. 167, 190, 120 S.Ct. 693, 145 L.Ed.2d 610 (2000). Imminence is a function of probability. See *520 S. Mich. Ave. Assocs., Ltd. v. Devine*, 433 F.3d 961, 962 (7th Cir. 2006) (“Standing depends on the probability of harm, not its temporal proximity.”); *Thomas More Law Center v. Obama*, 651 F.3d 529, 536 (6th Cir. 2011).

The declarants fulfilled the elements of the Commission’s “proximity-plus” test by showing 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). See, also, *Shaw Areva MOX Services*, LBP-07-14 (2007) (petitioners living 20 to 32 miles from mixed oxide fuel fabrication facility have standing because NRC Staff included residents as far away as 50 miles from the facility in its calculation of potential population doses). Once a declarant shows proximity to a source of dangerously radioactive materials, she does not have the burden of articulating a plausible means through which those materials could cause harm to her; the inherent dangers of the radioactive materials comprise the obvious potential for offsite consequences. *U.S. Army Installation Command* (Schofield Barracks, Oahu, Hawaii, and Pohakuloa Training Area, Island of Hawaii, Hawaii), CLI-10-20, 71 NRC 216, 218 (2010), citing *USEC, Inc.* (American Centrifuge Plant), CLI-05-11, 61 NRC 309, 311 (2005). “[T]he emission of non-natural radiation into appellees’ environment would also seem a direct and present injury, given our generalized concern about exposure to radiation and the apprehension flowing from the uncertainty about the health and genetic consequences of even small emissions like those concededly emitted by nuclear power plants.” *Duke Power Co. v. Carolina Environmental Study Group*, 438 U.S. 59, 74 (1978). “A threatened unwanted exposure to radiation, even a minor one,

is sufficient to establish an injury.” *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 216 (2003). Movement of SNF in transit is incontestably a “significant source of radioactivity producing an obvious potential for offsite consequences. . . . 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*).

ISP’s proposed “return to sender” policy will increase the transport mileage when SNF is delivered and then returned to the originating site if contamination or defects are identified. ISP proposes no means of dealing with leaky, cracked or externally contaminated casks or canisters at its facility except for “return to sender.” The return of such canisters or casks to their point of origin means more, and possibly more dangerous, shipments passing near declarants’ homes.

G. The ASLB Basis to Deny Standing Is Anomalous

The ASLB’s conclusion that “Mere geographical proximity to potential transportation routes is insufficient to confer standing,” cited at Memorandum and Order at 17, fn. 93, relies on precedent that’s distinguishable from the facts before the Commission in this matter.

The case of *U.S. Department of Energy* (Plutonium Export License), CLI-04-17, 59 NRC 357 (2004) involved a one-time shipment of weapons-grade plutonium. The plutonium in that shipment posed a minimal safety threat compared to SNF, which constantly emits potentially lethal levels of gamma and alpha radiation for many hundreds or thousands of years to come. ISP proposes 3,000 shipments, which if repackaged at reactor sites could be 30,000. Transporting SNF more than a million miles is an inherently dangerous activity considerably different from the Plutonium Export case.

Similarly, in *Energy Solutions, LLC* (Radioactive Waste Import/Export Licenses), CLI-11-03, 73 NRC 613, 623 (2011), the ASLB decided that transport of low-level radioactive waste did not involve “a significant source of radioactivity producing an obvious potential for offsite consequences.” *Id.* at 622. SNF, by contrast to LLRW, is a very “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 ASLB’s reliance on *Pacific Gas and Electric Company* (Diablo Canyon Power Plant Independent Spent Fuel Storage Installation), 56 NRC 413 (2002) provides little support for its conclusion. There, the petitioners were denied standing based solely on “mere proximity” to rail and highway routes likely to be used for transport of SNF. *Id.* at 434. Here, Petitioners have alleged detailed routine and non-routine radiological damage as their justifications for standing. Each declarant mentioned the threat of harm from routine radiological exposures such as encounters with rail-borne canister derailments or prolonged delays on rail sidings; exposure while driving on highways parallel to rail lines or truck-hauled SNF; or coming close to a spent fuel canister at a rail crossing, resulting in exposure.¹²

¹²The declarations each contain these paragraphs:

7) I note that in the ER, ISP/WCS states that it will strictly follow a “return to sender” policy, where if a cask is delivered to their Texas facility with a radiation leakage problem, it will be returned to the point of origin. Thus actively-leaking casks will travel close to my home, place of employment and/or places where I seek recreation. I believe that the risks of a radiation accident will be increased during such shipments. The ISP/WCS practice seems to me to be in violation of federal regulations and possibly even amounts to a criminal act and an adverse risk that neither my family nor I should have to bear. I note that the Environmental Report contains no analysis of the potential scenarios involving a breached cask and that there is no analysis in the ER that addresses the potential contamination of land, water and property resources or the threat to public health and the environment from such a practice.

8) I understand the casks, once set on rail cars, will be extremely heavy and concentrated loads on the tracks, and similarly will be unusually heavy loads on the specially-built truck trailers used to transport them on highways. I am concerned that scenarios not contemplated by ISP/WCS in its ER could occur, such as a radioactive cask being so overweight that it derails and sits for days or longer in an

Consistent with the ASLB decision of *Duke Cogema Stone & Webster*, Joint Petitioners demonstrated standing based on distinct claims of potential radiological exposure injury arising from transportation of spent fuel to the ISP CISF.¹³ In *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403, 417 (2001), the ASLB accorded standing to grassroots organizations whose members stated an injury-in-fact by asserting threatened harm to health from unwanted ionizing radiation doses incurred on the highways. The ASLB noted that even a minor exposure during incident-free shipping of plutonium, within regulatory limits, stated an injury-in-fact. *Id.*, citing *Yankee Atomic Electric Co.* (Yankee Nuclear Power Station), CLI-96-7, 43 NRC 235, 247-48 (1996). Further, injury to the health and safety of Petitioners' members from ionizing radiation was "clearly encompassed by the health and safety interests protected by the Atomic Energy Act." *Id.*, 54 NRC at 417.

In *Northern States Power Company* (Pathfinder Atomic Plant), 31 NRC 40 (1990), the ASLB held that geographical proximity to LLRW shipments transit did not confer standing. The Pathfinder petitioner lived a mile south of the planned route for transport of LLRW west to Washington. The lesser threat and lack of an accident scenario doomed the standing request.

The recitation here by the Board of *Exxon Nuclear Co.* (Nuclear Fuel Recovery and Recycling Center), LBP-77-59, 6 NRC 518 (1977) is distinguishable because petitioning

area in which I live/work/recreate; or a truck trailer load bearing failure that requires transfer of the transport cask onto another trailer near me or others in my household.

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

¹³*Duke Cogema Stone & Webster* is cited in the Petition to Intervene at 4.

declarants demonstrated potential radiological harm from possibly thousands of routine exposures of SNF during transit.

Finally, the ASLB's reference to *International Uranium (USA) Corporation* (White Mesa Uranium Mill), 54 NRC 27 (2001) is malapropos. That case involved an increase in the existing volume of transport of LLRW on a highway one block from the petitioner's residence and place of work. It was deemed to pose no different or greater danger than previously caused by shipments to the same mill. *Id.* at 29. The ASLB held that "the radiological emissions from the material were minute and that any potential exposure, even in the case of an accident, would be negligible." *Id.* This is absurd reasoning; the more shipments, the greater the risk of accident.

2. Non-Routine Threats Of Harm

ISP concedes the potential for non-routine radiological harm from transportation accidents. It's found in the Texas Council on Environmental Quality's "Assessment of High Level Radioactive Waste Storage Options," that is reproduced fully in ISP's ER (ER Attachment 1-2). It references the Final Environmental Impact Statement for Yucca Mountain as authority for the DOE calculations that the accident probability for a SNF shipment by rail is 1 in 10,000 and by truck is 1 in 1,000. Over the 24 years of shipping SNF to the [Yucca] repository, the number of expected accidents is one if shipments are mostly by rail (10,700 rail shipments) or 53 if shipments are predominately by truck (53,000 truck shipments).¹⁴

¹⁴“According to DOE calculations, the accident probability for a SNF shipment by rail is 1 in 10,000 and by truck is 1 in 1,000. Over the 24 years of shipping SNF to the repository, the number of expected accidents is one if shipments are mostly by rail (10,700 rail shipments) or 53 if shipments are predominately by truck (53,000 truck shipments). Further, the probability that an accident would result in even a small release of radioactive material or that the radiation shielding is damaged resulting in a low radiation exposure to the public in the nearby vicinity is 0.0001 (0.01%, 1 in 10,000). Therefore, the probability of the public being exposed to radiation in an accident over 24 years is 0.01% for the mostly rail shipment scenario and 0.53% for the mostly truck shipment scenario.

Legally, the ASLB was required to construe the petition allegations for intervention most favorably to the Petitioners. *U.S. Department of Energy* (High Level Waste Repository), LBP-09-06, 11 (2006); *Tennessee Valley Authority* (Bellefonte Nuclear Power Plant, Units 3 & 4), LBP-08-16, 68 NRC 361 (2008). Joint Petitioners exceeded the thresholds set in *Diablo Canyon ISFSI*, *Pathfinder*, *Exxon Nuclear Co.* and *White Mesa Uranium Mill*; they showed more than mere geographical proximity along with explications of possible radiation exposures. The members of the organizational Joint Petitioners showed actual or threatened, concrete and particularized injury-in-fact falling within the zone of interests protected by the relevant statutes, that those possible injuries are fairly traceable to the challenged licensing action and are likely to be redressed by a favorable decision. *White Mesa*, 54 NRC at 30; *Duke Cogema Stone & Webster*, 54 NRC at 413. Because their claimed actual or threatened injuries could be cured or ameliorated by action of the Commission either to deny the license to ISP, or to impose conditions on it, Joint Petitioners have established redressability. *Sequoyah Fuels Corp.* (Gore, Oklahoma, Site Decommissioning), CLI-01-2, 53 NRC 2, 14 (2001).

IV. THE ASLB IMPROPERLY REFUSED TO ADMIT JOINT PETITIONERS' PROFFERED CONTENTIONS FOR ADJUDICATION

The ASLB improperly and unlawfully rejected all of Joint Petitioners' proffered contentions, contradicting the principle that the burden of asserting contention admissibility is

"The 'maximum reasonably foreseeable accident scenario' for truck transport in which radioactive material is released in a urbanized area results in a 0.15% increase in the probability of getting cancer for the maximum exposed individual and has a probability of occurring of 0.000023% (occurs once every 4.3 million years). For transport by rail, the "maximum reasonably foreseeable accident scenario" results in an increase cancer risk of 1.5% to the maximum exposed individual and has a probability of 0.000028% (occurs once every 3.6 million years)."

From "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,:" U.S. Department of Energy, February 2002, DOE/EIS-0250.

not heavy. *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-01-24, 54 NRC 349, 359 (petitioners required only to “articulate at the outset the specific issues they wish to litigate.”). The ASLB turned the admissibility requirements into “a fortress to deny intervention” to the Joint Petitioners, prohibited by *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).

Joint Petitioners’ Contention 1: NEPA Analysis of Transportation of Spent Nuclear Fuel and GTCC Wastes Was Excluded from the Application and Comprises Unlawful Segmentation of the Project

Joint Petitioners’ Contention 1 states:

ISP states in the Application that “Transportation of the spent nuclear fuel shipping casks from the originating commercial nuclear reactor to the CISF. . . is not part of this License Application.” The exclusion from the ER—and by implication, from the EIS--of details and environmental impacts of a planned 20-year shipping campaign involving at least 3,000 deliveries of SNF and GTCC waste to ISP violates NEPA requirements that the transportation and storage aspects of the ISP plan be evaluated as a single, integrated project.¹⁵

Joint Petitioners maintain that NEPA is violated by the explicit exclusion¹⁶ from the ER of details and environmental impacts of a planned 20-year shipping campaign involving at least 3,000 deliveries of spent nuclear fuel (“SNF”) and greater-than-Class-C (“GTCC”) waste to ISP. Joint Petitioners claim that the severance of the environmental impacts caused by spent fuel transportation from impacts of the storage activity amounts to unlawful segmentation of the project. Notably, ISP included a map known as Figure 2.2-4 on p. 2-71 of the ER, which identifies all expected mainline rail routes located in the lower 48 states. ISP suggests that the

¹⁵Joint Petitioners’ Petition at 41.

¹⁶See ISP License Application at 1-2 to -3; see id. at 3-1.

scope of the EIS here includes transportation as well as activities at the CISF. The final leg of 100% of the SNF arriving at ISP is planned to take place by rail; two dozen reactors lack direct rail access to ISP, indicating barge or heavy haul truck transport for early legs.

Separating transportation analysis from storage results in an unintegrated project which cannot be logically understood. Segmentation “circumvent[s] NEPA by breaking up one project into smaller projects and not studying the overall impacts of the single overall project.” *Stewart Park & Reserve Coal., Inc. (SPARC) v. Slater*, 352 F.3d 545, 559 (2d Cir. 2003).

The ASLB held it to be impossible to know what customers ISP might expect and that shipping routes, therefore, could not be known for the 20-year transport campaign. The Board said that responsibility for transportation of spent nuclear fuel from commercial reactors to the proposed CISF belonged to the SNF title holders, not with ISP. Memorandum and Order at 69. The ASLB also ruled that Joint Petitioners supposedly challenged the NRC’s Part 72 and NEPA regulations under Part 51.

To the contrary, ISP’s segmentation denies the public the “hard look” required by NEPA. The planned 20-year shipping campaign involves at least 3,000 deliveries of SNF and GTCC waste to the CISF. The likely transportation routes, especially by rail, are easily discernible. But the ASLB wrongfully denied NEPA consideration of environmental effects along hundreds of miles of transportation corridors containing some 200,000,000 people within 50 miles of the routes. The “affected environment” “includes all rural, suburban, and urban populations living along the transportation routes within range of exposure to radiation emitted from the packaged material during normal transportation activities or that could be exposed in the unlikely event of a severe accident involving a release of radioactive material. The affected environment also

includes people in vehicles on the same transportation route, as well as people at truck stops and workers who are involved with the transportation activities.” “Continued Storage GEIS,” NUREG-2157, § 3.15, p. 3-38. The transportation impacts of the overall ISP project are of high significance to completion of the storage project and must be addressed pursuant to 10 C.F.R. § 51.45(b)(1). They include routine exposures to ionizing radiation, such as gamma and neutron radiation, of populations along the transport corridors; and sabotage, terrorism and accident scenarios which might result in serious and large-scale hazardous radioactive releases, such as those accompanied by fire, submersion and external leakage into air and water.

The total number of cargoes to be transported remains unknown (1) because of uncertainties around the mandatory DOE policy of repackaging into smaller capsules at either reactor sites or CISFs, and (2) considerations that might multiply the necessary numbers of high burnup fuel shipments because of heat load. Tens of thousands of shipments to ISP may occur if repackaging is required at reactor sites. Also, stranded SNF may be left behind at reactor sites if ISP’s screening proposal prevents contaminated shipments from leaving the reactors.

Environmental Justice concerns of differential threat and effect from shipping along some transit corridor routes are not addressed in the ER. Civil disaster planning and response needs remain unaddressed because of segmentation of transportation from CISF operations.

Under NEPA an “agency need not foresee the unforeseeable, . . . [r]easonable forecasting and speculation is . . . implicit in NEPA. . . .” *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). But an agency must fulfill NEPA investigation and disclosure duties to “the fullest extent possible.” *Id.*

Here, there will be no CISF without transportation of SNF to it. These are connected

actions, and the ASLB should be reversed. The subject of the EIS must include all “connected actions.” 40 C.F.R. § 1508.25(a)(1). Projects lack independent utility when it would be irrational, or at least unwise, to build one without the other. *Trout Unlimited v. Morton*, 509 F.2d 1276 (9th Cir. 1974). “Connected actions” have to be addressed in a single EIS. *Thomas v. Peterson*, 753 F.2d 754, 758 (9th Cir. 1985) (“the timber sales cannot proceed without the road, and the road would not be built but for the contemplated timber sales”).

Joint Petitioners’ Contention 4: Low-Level Radioactive Waste Volumes and Repackaging Requirements Are Considerably Underestimated

Joint Petitioners’ Contention 4 states:

The ISP Environmental Report significantly underestimates the volume of low-level radioactive waste (“LLRW”) that will be generated by the interim storage project. ISP fails to count irradiated concrete and other materials toward the gross total volumes of LLRW. ISP further fails to acknowledge and properly quantify LLRW volumes resulting from mandatory repackaging of [spent nuclear fuel] and GTCC waste, at least some of which will occur at the WCS site to meet likely DOE requirements for transportation, aging and disposal (“TAD”) canisters to be delivered to the final geological repository. ISP provides an incomplete perspective of the waste management obligations at the CISF as well as the financial burdens arising from creation, oversight and disposition of thousands of additional tons of LLRW. This truncated perspective in turn has caused a seriously inaccurate picture of the true costs of constructing, operating and decommissioning the WCS CISF.

Joint Petitioners advanced three claims: (1) repackaging of SNF poses “unconsidered management difficulties, increased waste generation, and unforeseen and undisclosed costs;” (2) that ISP grossly underestimated the concrete LLRW volume that would be generated; and 3) ISP failed to conduct an acceptable life-cycle estimate of LLRW volumes and associated expenses.¹⁷

The ASLB ruled that because the repackaging of spent fuel falls outside ISP’s initial, 40-year license, and its ER relies on the Continued Storage Rule and Continued Storage GEIS,

¹⁷Petition to Intervene at 66–76; also, Declaration of their expert, Robert Alvarez (Oct. 23, 2018).

and the Rule does not require such an analysis beyond the license term, that Contention 4 fell outside the scope of the proceeding. Memorandum and Order at 73-74. In reaching that conclusion, the ASLB ignored ISP's own description of the project's scope at p. 1-1 of the ER: "this report analyzes the environmental impacts of possession and storage of 40,000 MTUs of SNF and related GTCC waste." "Scope" considerations cannot be used to exclude the latter 80 years of anticipated operations or decommissioning from NEPA consideration.

"Proposals or parts of proposals which are related to each other closely enough to be, in effect, a single course of action shall be evaluated in a single impact statement." 40 C.F.R. § 1502.4, applicable to the NRC via 10 C.F.R. § 51.29(a)(1). The proposed subject of the EIS must include all "connected actions." 40 C.F.R. § 1508.25(a)(1), made applicable to the NRC via 10 C.F.R. § 51.14(b). Separate actions are "connected" if they "[c]annot or will not proceed unless other actions are taken previously or simultaneously," or they "[a]re interdependent parts of a larger action and depend on the larger action for their justification." *Id.*

The ASLB arbitrarily segmented what should have been a single, unified project review, leaving two sub-projects insulated from the impacts of one another. This "fails to address the true scope and impact of the activities that should be under consideration" and therefore runs afoul of NEPA. *Delaware Riverkeeper Network v. FERC*, 753 F.3d 1304, 1313 (D.C. Cir. 2014). The ASLB determination must be reversed.

Joint Petitioners' Contention 5: ISP Has Not Performed an Environmental Justice Investigation of Transportation Communities; the ISP CISF Will Cause Disparate Impacts From Routine and Non-Routine Transportation-Related Radiation Exposures Upon Minority and Low-Income Populations Along Hundreds of Miles of Transportation Corridors

Joint Petitioners' Contention 5 states:

ISP states in its License Application (ML 18206A483) that “Transportation of the spent nuclear fuel shipping casks from the originating commercial nuclear reactor to the CISF will be performed in accordance with 10 CFR 71, and the originating reactor licenses and is not part of this License Application.” Id. § 1.1, p. 1–3 (Emphasis added). With that, WCS severed—and “segmented”—the transportation part of the CISF proposal from the storage component. Segmentation is impermissible for legal as well as practical reasons. One consequence of the segmentation is that Environmental Justice (“EJ”) compliance in the form of identification and analysis of potentially affected populations along the anticipated rail, truck and barge routes will be improperly excluded from disclosure in the NEPA document.¹⁸

The Joint Petitioners maintain that ISP’s ER improperly excludes Environmental Justice analysis on behalf of millions of potentially affected people who live within 50 miles of likely spent fuel and GTCC waste transportation routes to the ISP CISF. Joint Petitioners cited *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), LBP-97-8, Docket No. 70-3070-ML, 45 NRC 367, 1997 WL 458771 (May 1, 1997) (“*Louisiana Energy 45*”), Executive Order 12898, CEQ guidance, and U.S. EPA guidance. The ASLB wrongfully segmented transportation from CISF operations and thereby limited the “area for assessment of environmental justice impacts” to “the location of the proposed facility itself, not proximity to possible transportation routes.” That caused dismissal of the contention for want of a material issue. Memorandum and Order at 76.

The ASLB’s reasoning on this contention was identical to its reasoning on Contention 1. Joint Petitioners oppose and incorporate their response appearing on pp. 20-22 of this Brief as their argument for reversal of the Licensing Board ruling on Contention 5.

Joint Petitioners’ Contention 6: Inadequate Disclosure of Oil and Gas Drilling Activity Beneath the WCS CISF Site

Joint Petitioners’ Contention 6 states:

¹⁸Petition to Intervene at 76.

Horizontal hydraulic fracturing (“fracking”) activity is taking place in close proximity to the ISP/WCS site. It is technologically and legally possible that fracking will be undertaken directly beneath the waste storage areas of the site. Fracking has seismic, groundwater flow and water consumption implications, which become cumulative if extraction wells and/or waste injection disposal wells are developed near and/or underneath WCS. There is no indication in the Environmental Report or Safety Analysis Report of legal controls over present or potential oil and gas drilling directly beneath the site. The presence, overall, of mineral interests beneath or proximate to the waste storage portion of the ISP site is inadequately disclosed. Consequently, the realistic prospects for mineral development immediately surrounding and underneath the WCS site, and the implications for inducing or expediting geological problems including seismicity and groundwater movement, are unknown.¹⁹

ISP’s application lacks analyses of ISP’s claimed property and soil and gas rights and the CISF area’s seismology and hydrology/ The ER and Safety Analysis Report are deficient because they do not show ISP’s “land ownership and legal control of the mineral rights interests of the site where the waste storage will occur” and they “fail to connect the considerable history of oil and gas development” in the CISF area.²⁰

The ASLB completely missed Joint Petitioners’ point that “The omission of information about legal title to subsurface mineral rights at WCS means there is no certainty that fracking and possibly waste well injection disposal activities will be prohibited underneath the WCS site. Fracking and waste well activity can cumulatively contribute to the potential for induced seismicity.”²¹ There is evidence in the ER that hydrofracturing for oil and gas extraction is taking place proximate to the storage site proposed for WCS’ land. Joint Petitioners doubled down on this point in reply, stating that

¹⁹Petition to Intervene at 97.

²⁰Petition to Intervene at 99.

²¹*Id.*

The operating assumption, unsupported by any predictive evidence (in the most prolific shale field on the continent and in the midst of a huge and rapidly-expanding oil and gas boom) appears to be that there will not be ongoing expansion of drilling activity, but at the same time, there is no prediction of reduced drilling activity. Given that it may be 5 to 10 or more years before SNF is delivered to WCS, there must be an accounting of prospective drilling trends and density in the immediate region of the CISF.²²

The ASLB avoided this point and dismissed the contention by accusing Petitioners of not reading the available information in the ER and other documents. Memorandum and Order at 78. But the ASLB ignored the reality that site control is needed to protect the SNF stored for a century or more at ISP's facility. The failure to investigate, project and disclose prospective geological changes at so busy a site—including oil and gas extraction that will occur up to, and through the century of expected CISF operations—is dereliction, and the ASLB ruling should be reversed.

Joint Petitioners' Contention 8: The Discussion of Alternatives to the Proposed Project Is Inadequate Under NEPA

Joint Petitioners' Contention 8 states:

The no-action alternative in the [ISP Environmental Report] is incomplete because it does not acknowledge safer storage methods at reactor sites, such as hardened on-site storage ("HOSS"), nor does it acknowledge the NRC's Continued Storage Rule that concludes that waste can be safely stored at reactor sites indefinitely. There are at least four alternatives to the proposed CISF project which are neither recognized nor addressed in the Environmental Report, contrary to NEPA requirements.²³

Petitioners claim the "no-action alternative" discussion in the ER is deficient because it does not discuss potential alternatives to the proposed project, such as HOSS, and conflicts with the NRC's Continued Storage Rule. They identify five separate unconsidered alternatives, including (1) establishment of a dry transfer system; (2) modification of ISP's emergency

²²Combined Reply of Joint Petitioners (ML18351A640) at 38.

²³Petition to Intervene at 107.

response plan to include preparations for emissions mitigation; (3) CISF design modification to prevent “malevolent” acts; (4) Federal Government control of the ISP facility; and (5) implementation of hardened onsite storage (HOSS) at reactor sites, also a meaningful alternative that goes unexamined in ISP’s license application.

The ASLB strayed from the law when it opined, “Joint Petitioners do not explain why these five alternatives must be evaluated by ISP in its Environmental Report.” Memorandum and Order at 80. Petitioners do not have to explain; the existence of reasonable but unexamined alternatives renders an EIS inadequate. *DuBois v. U.S. Dept. of Agric.*, 102 F.3d 1273, 1287 (1st Cir. 1996), *cert. denied*, 117 S.Ct. 1567 (1997). “[E]valuation of ‘alternatives’ mandated by NEPA is to be an evaluation of alternative means to accomplish the general goal of an action; it is not an evaluation of the alternative means by which a particular applicant can reach his goals.” *Van Abbema v. Fornell*, 807 F.2d 633, 638. The ER does not discuss the alternative of a CISF with a dry transfer system (DTS) available from the inception, nor an alternative facility with an Emergency Response Plan to include preparations for radioactive emissions mitigation. Petitioners suggest an alternative ISFSI design where SNF storage arrangements are more resistant to attack, accident, sabotage, degradation and leakage. The alternative of a CISF under Federal ownership, design, and control, which might differ considerably from ISP’s proposal, is unaddressed even though considered legislatively. HOSS at reactor sites is also a meaningful alternative.

NEPA requires the agency to “study all alternatives that appear reasonable and appropriate for study at the time of drafting the EIS, as well as ‘significant alternatives’ suggested by other agencies or the public during the comment period.” *Roosevelt Campobello*

Int'l Park Comm'n v. EPA, 684 F.2d 1041, 1047 (1st Cir. 1982). An alternative “meaningfully compatible with the time-frame of the needs to which the underlying proposal is addressed” is logically a “reasonable alternative.” *Carolina Envtl. Study Grp. v. U.S.*, 510 F.2d 796, 801 (D.C. Cir. 1975). The ASLB decision on this contention should be reversed.

Joint Petitioners’ Contention 11: Having No Dry Transfer System And No Radioactive Emissions Mitigation Plan For ISP’s CISF Are Impermissible Omissions Under the AEA And Must Be Addressed Under NEPA

Joint Petitioners’ Contention 11 states:

ISP’s plan to not have a dry transfer system (“DTS”) or other technological means of handling problems with damaged, leaking or externally contaminated [spent nuclear fuel] canisters or damaged fuel in the canisters at the WCS site, from the date of commencement of operations, contradicts the expectations of the Continued Storage GEIS, and the unanalyzed risks, and increased possibilities of minor to severe radiological accidents must be addressed in the Environmental Impact Statement. There is no plan for radiation emissions mitigation or radioactive releases at the CISF site. These refusals to contingently prepare for radiological problems at the site are a byproduct of ISP’s “start clean/stay clean” policy, are unrealistic and must be addressed in the EIS as well as in licensing conditions.²⁴

Petitioners claim that the lack of a dry transfer facility at the CISF presents a public health and safety risk under the AEA and is inadequately addressed in the ER. Arriving canisters could become damaged in transit, there could be damage to cladding during long-term storage of high burnup fuel, gradual degradation of fuel assemblies and canisters in storage, canister accidents, or attack. Also, there is no plan for radiation emissions mitigation or radioactive releases at the CISF site.²⁵ The ASLB rejected Contention 11 because Petitioners “failed to raise a plausible scenario,” did not question ISP’s safety analyses, aging management plans, or quality assurance

²⁴Joint Petition at 118.

²⁵Joint Petition at 120-125.

programs, and cited *Private Fuel Storage, L.L.C.* (Indep. Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125 (2004). Memorandum and Order at 85-86.

But the current posture of the DOE's canister repackaging policy, where TAD canisters are not yet designed or built is a *fact*. The dozen closed reactor sites examined by ISP in the ER have no capability of repackaging, a *fact* that will require a DTS. *No* current storage or transport canisters have ever been reopened once loaded. The lack of complete information on the high-burnup fuel and want of better understanding of the related physics are *facts* that should militate in favor of requiring DTS capability from the very start of CISF operations.

Joint Petitioners need not prove the contention at this stage, but must only allege some credible foundation for it. *Connecticut Yankee Atomic Power Co.* (Haddam Neck Plant), LBP-01-21, 54 NRC 33, 47-48 (2001). They need merely to provide sufficient alleged factual or legal bases to support the contention now. *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-04-35, 60 NRC 619, 623 (2004). The AEA requires only "a minimal showing that material facts are in dispute, thereby demonstrating that an 'inquiry in depth' is appropriate." *Gulf States Utilities Co.*, 40 N.R.C. 43, 51 (1994). Joint Petitioners met these requirements, and Contention 11 must be reinstated.

Joint Petitioners' Contention 14: NEPA Requires Significant Security Risk Analyses for the Spent Nuclear Fuel and Greater-Than-Class-C Wastes Proposed for Interim Storage, And Associated Transportation Component, at ISP/WCS's Texas Facility

Joint Petitioners' Contention 14 states:

The NRC should, under NEPA, consider the risks, impacts and safety/security arrangements for the ISP/WCS CISF [spent nuclear fuel] 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 ISP/WCS 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 ISP CISF with [spent nuclear fuel] and GTCC wastes, the materials must be transported there, and the lack of details on waste conveyance in the WCS Environmental Report belies the centrality of transportation to the implementation of the project.²⁶

Petitioners claim that the ER should contain an analysis for terrorist attacks, consistent with *San Luis Obispo Mothers for Peace v. NRC*, 449 F.3d 1016, 1032 (9th Cir. 2006), where the Ninth Circuit ruled “that it was unreasonable for the NRC to categorically dismiss the possibility of terrorist attack on the Storage Installation . . . as too remote and highly speculative to warrant consideration under NEPA.” But ISP will build the CISF in Texas (within the U.S. Fifth Circuit), so the ASLB wrongfully refused to apply *Mothers for Peace* and dismissed the contention. The ASLB’s ruling rests on the unlawful segmenting of the CISF from the transportation component. Were transportation properly included within the scope of the project, the hundreds of SNF cargoes coming from states within the geographical Ninth Circuit, as part of the project, would have to be analyzed under *Mothers for Peace*. Joint Petitioners invoke their previous arguments against segmentation articulated at pp. 20-22 *supra* in support admission of Contention 14.

V. CONCLUSION

Petitioners-Appellants pray that the Commission extend legal standing to Don’t Waste Michigan, Citizens’ Environmental Coalition, Public Citizen, Inc., Citizens for Alternatives to Chemical Contamination, Nuclear Energy Information Service, San Luis Obispo Mothers for Peace, and Leona Morgan, individually, as well as the SEED Coalition. Further, they request admission of Contentions 1, 4, 5, 6, 8, 11 and 14 for adjudication.

²⁶Petition to Intervene at 142.

Respectfully,

/s/ Terry J. Lodge

Terry J. Lodge, Esq.

316 N. Michigan St., Ste. 520

Toledo, OH 43604-5627

(419) 205-7084

tjlodge50@yahoo.com

Counsel for Don't Waste Michigan, Citizens'
Environmental Coalition, Citizens for Alternatives
to Chemical Contamination, Nuclear Energy
Information Service, Public Citizen, Inc., San Luis
Obispo Mothers for Peace, Sustainable Energy And
Economic Development Coalition and Leona
Morgan, Individually, Petitioners-Appellants

CERTIFICATE OF SERVICE

Pursuant to 10 C.F.R. § 2.305, I hereby certify that on this 17th day of September 2019, the foregoing "Notice of Appeal Pursuant to 10 C.F.R. § 2.311 and Brief in Support of Appeal" was deposited by me in 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-Appellants