

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

In the Matter of)	Docket No. 72-1050
)	NRC-2016-0231
WCS Consolidated Interim Spent Fuel Storage Facility)	October 23, 2019
)	

* * * * *

**MOTION OF INTERVENOR SUSTAINABLE ENERGY AND
ECONOMIC DEVELOPMENT COALITION FOR LEAVE TO
FILE LATE-FILED CONTENTION, AND CONTENTION 17**

Now comes Sustainable Energy and Economic Development Coalition (“SEED Coalition”), by and through counsel, and moves the Atomic Safety and Licensing Board (ASLB) for leave to file a late-filed contention. SEED Coalition supports its motion below.

I. INTRODUCTION

Pursuant to 10 C.F.R. §§ 2.309(f)(1) and 2.309(f)(2), SEED Coalition (“Intervenor”) seeks leave to file a new Contention 17 which alleges unaddressed technical and integration issues that the U.S. Department of Energy (“DOE”) must resolve to ensure that spent nuclear fuel (“SNF”) can be transported to the Interim Storage Partners/Waste Control Specialists’ proposed (“ISP/WCS”) consolidated interim storage facility (“CISF”). These unresolved issues must be noticed, analyzed and disclosed in the Environmental Impact Statement (“EIS”) for the CISF, and the resolutions delineated and implemented within the Safety Analysis Report (“SAR”) for the CISF proposal.

SEED Coalition states that the new information which forms the basis for proposed Contention 17 is contained in a report published September 23, 2019 by the U.S. Nuclear Waste

Technical Review Board entitled, “Preparing for Nuclear Waste Transportation”¹ (“NWTRB Report”) (copy attached). The NWTRB was created by Congress in the 1987 Nuclear Waste Policy Amendments Act (Public Law 100-203) to evaluate the technical and scientific validity of activities undertaken by the Secretary of Energy to implement the Nuclear Waste Policy Act. In accordance with this mandate, the NWTRB has undertaken a review of the DOE’s research and analyses supporting the development of a nationwide program to transport commercial SNF and DOE-managed SNF and high-level radioactive waste (HLW), which appears in the NWTRB Report.

II. FACTUAL BACKGROUND

On November 13, 2018, Intervenor SEED was one of eight petitioners (originally consisting of seven organizations and one individual) that filed a Petition to Intervene.² The Petition, among other things, alleged two contentions which enumerated deficiencies in the ISP/WCS application to the NRC for a 40-year CISF construction and operation license. SEED Coalition and the others maintained that the ISP/WCS Environmental Report (“ER”) understated the volume of low-level radioactive waste (“LLRW”) that would be generated by activities including the repackaging of SNF in standardized DOE canisters for transportation, aging and disposal (“TAD canisters”), and the resulting waste stream caused by disposal of the transport canisters following delivery of the SNF to west Texas.

¹https://www.nwtrb.gov/docs/default-source/reports/nwtrb_nuclearwastetransport_508.pdf?sfvrsn=6 (copy attached).

²“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 an Adjudicatory Hearing” (ML18317A433), (November 13, 2018).

In their original Contention 4,³ SEED Coalition described a massive transportation campaign that would be necessary to bring an estimated 40,000 MTU of SNF to the ISP/WCS site over a 20-year period.⁴ The Petitioners sought inclusion within the calculation of LLRW volumes at the CISF to include volumes resulting from the mandatory repackaging of SNF and GTCC waste, at least some of which was expected to occur at the WCS site when SNF would be reloaded into DOE-required transportation, aging and disposal (“TAD”) canisters.

SEED’s then-expert, Robert Alvarez, detailed the DOE policy decision that would require reloading at some point of all existing SNF wastes from existing at-reactor dry storage and transport canisters into 80,000 smaller, standardized canisters for efficient disposal in a permanent repository. Petition to Intervene at 70. But the ISP/WCS application, then and now, neither mentions need for reloading nor discusses or analyzes the locus of reloading activities (*i.e.*, at reactor sites vs. at the ISP/WCS or Holtec CISF sites).

When it denied admission of Contention 4, the ASLB noted that ISP’s application is for a 40-year license, that the ER relies on the Continued Storage Rule and Continued Storage GEIS, and that for these reasons the application need not express any intent to repackage spent fuel nor

³Contention 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.” Petition to Intervene at 64.

⁴See Petition, *id.* at pp. 64-71.

analyze the costs of repackaging the fuel. “Memorandum and Order (Ruling on Petitions for Intervention and Requests for Hearing),” LBP-19-7 at 73. Because the Continued Storage Rule does not require a spent fuel storage facility applicant under Part 72 to include such an analysis beyond the license term, Contention 4 was ruled “outside the scope of this proceeding.” The ASLB added, “And, to the extent Joint Petitioners assert that ISP must discuss waste generated by repackaging fuel canisters into DOE transportation, aging and disposal casks, this claim is necessarily outside the scope of this proceeding as well.” *Id.*

As discussed below, the new information provided by the NWTRB significantly alters the nature of the scope of this proceeding and requires consideration of canister loading and installation of a dry transfer system (“DTS”) at reactor sites as well as at the west Texas CISF.

In their original Contention 11, the Joint Petitioners urged the NRC to require reloading capability at the CISF site, asserting:

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.

Ruling on Contention 11, the ASLB held that Joint Petitioners failed to raise a genuine dispute with ISP’s application and had merely “speculated” that damaged containers might arrive at the site of the proposed storage facility in violation of NRC regulations and, in the absence of repackaging capability, create various dangers. The Board determined that “[n]either the GEIS nor NRC regulations require ISP to construct a dry transfer system during the initial 40-year

license for its proposed facility.” Memorandum and Order, LBP-19-7 at 86-87.

As explained below, the Nuclear Waste Technical Review Board has identified core problems with the overall plan to load spent nuclear fuel at dozens of reactor sites into canisters and transport casks for delivery to the ISP/WCS CISF in Texas. The NWTRB findings vindicate and go beyond the problems raised in SEED Coalition’s earlier contentions.

III. CONTENTION 17

A. Statement of the Contention

The Environmental Report for the ISP/WCS CISF fails to satisfy NEPA in light of findings in a 2019 report published by the U.S. Nuclear Waste Technical Review Board. The NWTRB, as principal scientific and engineering governmental advisory panel for SNF disposition, has concluded that 50 to 80 years will be necessary for DOE to prepare for and accomplish the transportation of spent nuclear fuel to the ISP/WCS facility in west Texas. The NWTRB also found that the lead time needed for resolution for associated technical issues related to transport of the vast majority of the SNF is 10 years or more; that the NRC lacks data to establish a technical basis for the long-term storage of high-burnup SNF and reliability of its fuel cladding under high burnup conditions and will not have results of a DOE study presently under way for about 7 more years; and that there is inadequate data as yet to determine whether high burnup SNF can withstand the rigors of long-distance transportation. Mitigation plans and the discussion of alternatives to shipment of all SNF within a 20-year period consequently have not been sufficiently addressed and disclosed as required by NEPA.

B. The Contention Satisfies the NRC’s Admissibility Requirements

1. Basis for the Contention

ISP/WCS intends to transport spent nuclear fuel and high level radioactive waste, entirely by rail in the final leg, to its proposed consolidated interim storage facility in Andrews County, Texas. Revision 2 of the ER states that 40,000 MTU will be transported to and stored at the facility in the first 20 years after a license is issued. ISP/WCS states (Section 1.0, p. 1-1 of the ER) that “[t]he ISP Environmental Report (ER) evaluates the radiological and non-radiological impacts associated with the construction and operation of the CISF. . . in Andrews County,

Texas. . . . Therefore, this report analyzes the environmental impacts of possession and storage of 40,000 MTUs of SNF and related GTCC waste.” The applicant has limited the scope of its ER to the CISF, and has excluded investigation, analysis, and disclosure of environmental impacts of the transportation of SNF to the ISP/WCS site.

NRC’s NEPA regulations at 10 C.F.R. § 51.45(b)(1) require the ER to address impacts of the proposed action on the environment, “discussed in proportion to their significance.” The transportation impacts of the overall project are integral, and thus of high significance to completion of, the storage project. The delivery of SNF and GTCC waste to Texas is essential to if there is to be a consolidated interim storage facility there. Because preparation of SNF for transport, and the acts of transportation themselves are core aspects of the overall project, adverse environmental effects which cannot be avoided must be properly addressed as required by regulation. 10 C.F.R. § 51.45(b)(2).

2. Facts Upon Which Petitioner Intends to Rely In Support of Contention

Nowhere in the ER is there reference to, or discussion of, the DOE mandate of standardized transportation, aging and disposal (TAD) canisters. The discussion of highway and railroad infrastructure necessary for the project does not contemplate maintenance and construction beyond the 20-year shipment phase indicated in the application.

In 2006, DOE published a notice of intent to supplement in the Federal Register that said:

Since publication of the Yucca Mountain Final EIS, DOE has continued to develop the repository design and associated plans. *As now planned, the proposed surface and subsurface facilities would allow DOE to operate the repository following a primarily canistered approach in which most commercial spent nuclear fuel would be packaged at the commercial sites in multipurpose transport, aging and disposal canisters (TADs), and all DOE materials would be packaged in disposable canisters at the DOE sites. Waste*

packages would be arrayed in the repository underground to achieve what is referred to as a higher-thermal operating mode, and most spent nuclear fuel and high-level radioactive waste would arrive at the repository by rail.

(Emphasis added). 71 Federal Register 60490 (October 13, 2006).⁵ In the resulting “Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada, Vol. I⁶ (2008)” (“Yucca SEIS”), the DOE stated:

As now proposed, DOE would use a primarily canistered approach to operate the repository; under this approach, *most commercial spent nuclear fuel would be packaged at the reactor sites in TAD canisters*. DOE would repackage commercial spent nuclear fuel that arrived in packages other than TAD canisters into these canisters in newly designed surface facilities at the repository. The Department would package essentially all DOE material in disposable canisters at the DOE sites. Most spent nuclear fuel and high-level radioactive waste would arrive at the repository by rail. Some shipments would arrive by truck. At the repository, DOE would place the TAD and other disposable canisters in waste packages that were manufactured from corrosion resistant materials. DOE would array the waste packages in the subsurface facility in tunnels (emplacement drifts).

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

The NWTRB’s September 23, 2019 report, *Preparing for Nuclear Waste Transportation* (“NWTRB Report”), identifies 18 technical issues regarding transportation of nuclear waste that are not addressed or discussed in the ISP/WCS ER. The critical determination from that report is as follows:

DOE has examined the trend in SNF dry storage at nuclear power plant sites (Williams 2013). On average, during 2004-2013, the nuclear utilities discharged SNF that has higher burnups (approximately 45 Gwd/MTU) than previously discharged SNF and, therefore, is thermally hotter and more radioactive. In addition, the nuclear utilities are loading SNF into larger dry-storage casks and canisters to improve operational efficiency

⁵<https://www.nrc.gov/docs/ML0927/ML092710174.pdf>

⁶<https://www.energy.gov/sites/prod/files/EIS-0250-S1-FEIS-01-2008.pdf>

and reduce cost. The largest of these canisters now holds as many as 37 PWR assemblies or 89 BWR assemblies. As a result, these larger casks and canisters are hotter than earlier dry-storage casks and canisters; therefore, they will take longer to cool sufficiently to meet transportation requirements.

DOE estimated that if SNF was repackaged from large casks and canisters to smaller standardized canisters (and using standard assumptions about the operating lifetime of the U.S. fleet of nuclear reactors), DOE could remove SNF from all nuclear power plant sites by approximately 2070. However, if no repackaging occurs, some of the largest SNF canisters storing the hottest SNF would not be cool enough to meet the transportation requirements until approximately 2100 (Williams 2013).

NWTRB Report, p. 77. Hence if an NRC license were issued to ISP/WCS in 2021, as the company expects, there is no scenario under which the waste destined for west Texas could be transported to the facility in the 20-year time frame proposed by ISP/WCS, or possibly even within the initial 40-year licensing period. These facts are not identified or discussed in the ISP/WCS ER.

3. Expert Opinion Supporting the Contention

SEED Coalition's expert on SNF management is Robert Alvarez, who is a former senior policy adviser to the Secretary of Energy and deputy assistant secretary for national security and the environment from 1993 to 1999, and presently is a senior scholar at the Institute for Policy Studies. In 2003 he co-authored an extensive report on reducing the storage hazards of spent power reactor fuel in the United States which has largely been corroborated in subsequent reviews by the National Research Council. A declaration from Mr. Alvarez has been filed in support of this Motion along with his *Curriculum Vitae*.

Mr. Alvarez begins with these conclusions:

- With about a third of the world's spent power reactor fuel (SNF), the magnitude of proposed long-distance transport of spent nuclear fuel and high-level radioactive waste in the

United States is unprecedented.

- Concerns surrounding the integrity of high-burnup spent nuclear fuel in dry storage are not resolved and may result in prolonged at-reactor storage for several decades.

- There is a substantial lack of data regarding potential damage of SNF during transport.

- Repackaging SNF for transport and disposal is an important missing element that has a major impact on the timing and implementation of a national SNF transportation program.

With respect to Mr. Alvarez's first conclusion, the NWTRB Report, at p. 37, notes that although DOE has some historical experience transporting small quantities of nuclear waste for long distances, the agency has no experience with transporting large quantities (thousands of metric tons) of waste. The NWTRB opined that "transporting large quantities of SNF and HLW has not been done and will require significant planning and coordination." NWTRB Report, p. xxii. There is no assurance that transportation of the large quantities of SNF contemplated by ISP/WCS could be done safely within the 20-year schedule proposed by ISP/WCS. Mr. Alvarez points out in his declaration that new transportation casks will have to be developed for licensing, a process that would take at least 10 years, and that inspection equipment and procedures will have to be developed to inspect the containers presently holding SNF in dry storage. The ISP/WCS ER does not address either of these issues.

Mr. Alvarez also mentioned problems involving transportation of high burnup fuel. At pp. 77-79 of the NWTRB Report, it states:

A simple (and expected) example of a condition outside the limits of a CoC is a case in which the SNF cask or canister has not been cooled for the minimum time required by the CoC. In this case, the licensee will allow more time for the SNF to cool before attempting to transport the cask or canister holding the SNF. However, this approach will lead to delays in the removal of SNF from some nuclear power plant sites .

...

The NWTRB Report further discusses the minimum burnup versus the initial enrichment, referred to as the loading curve, and points out that the loading curve and what is called the burnup credit have not been addressed for newer, larger-capacity dry storage casks and canisters. These matters must be addressed before the SNF can be transported to a CIS.

Mr. Alvarez also raises the problem of repackaging in order to transport high burnup fuel. As noted at the outset, if the fuel is repackaged into smaller containers, it would take until approximately the year 2070 for the SNF to all be removed from nuclear power plant sites. NWTRB Report p. 77. And repackaging the waste will be expensive and time-consuming. As Mr. Alvarez states in his declaration, a repackaging facility would have to be developed and constructed at reactor sites where there presently is no capability for unloading and loading canisters, a prospect likely to cost \$1,000,000,000 to \$2,000,000,000 each, and would take a decade or more to complete. Development of DTS capability at reactor sites would also require significant advance planning. The additional cost and delay to accommodate repackaging would not allow the waste to be transported to the CISF in line with ISP/WCS's schedule.

Indeed, absent resolution by DOE and the participating reactor owners in the form of using standardized TAD canisters to complete SNF deliveries to ISP/WCS by 2070, the NWTRB predicts that conclusion of the transportation campaign will take until 2100:

However, if no repackaging occurs, some of the largest SNF canisters storing the hottest SNF would not be cool enough to meet the transportation requirements until approximately 2100 (Williams 2013).

NWTRB Report, p. 77. Not only is one 40-year license period insufficient to accomplish all SNF transport, but two consecutive 40-year license periods may not be time enough. The infusion of reality from NWTRB greatly expands the time line for the project from 50 to 80 years.

Additionally, the economics of at-reactor storage and CISF storage will change dramatically. At-reactor storage requires DOE payments to utility companies; payments also will be made from DOE to ISP/WCS for an extra generation to cover operations and maintenance of CISF storage operations.

The ISP/WCS ER does not discuss high burnup fuel issues relative to the questions of thermal limitations during transport or thermal requirements relative to canister size and volume, nor does the significantly-changed cost-benefit analysis from an 80-year transport effort appear in the ER. The current Environmental Report does not suffice to satisfy NEPA.

Mr. Alvarez also found there to be a substantial lack of data regarding potential damage to the SNF during transport:

No comprehensive examinations of U.S. commercial SNF have been conducted following transportation to determine if the SNF was damaged in transit. However, SNF handling, loading, and shipping operations can subject the SNF assemblies to vibration loads, small impulse loads (e.g., bumps in the road), and, in severe conditions such as an accident, strong shock loads. How these vibrations and impulse loads may affect the SNF and its ability to meet transportation requirements are not fully understood, but they are the subject of ongoing DOE research.

NWTRB Report p. 38. The ISP/WCS ER has not addressed this topic in any systematic way, and transportation arrangements cannot be made until the implications of possible damage to the SNF during transit are adequately understood.

4. Contention 17 Is Within the Scope of the Proceeding

The ISP/WCS storage facility in Texas is integral to an overall project that includes physical transport and delivery of SNF and GTCC waste to the facility, in order for interim storage activity to take place. Segmenting consideration of the transportation component from the storage component breaks the project up into pieces and prevents the overall project from being

comprehensively analyzed for its environmental impacts. “Segmentation is an attempt to circumvent 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). Where an agency attempts to consider related actions separately by segmenting the mandated unified review into multiple independent analyses that insulate each project from the impacts created by its sister projects, it “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 NWTRB Report significantly expands the expected time period needed to complete the action of transporting SNF to the ISP/WCS CISF. The “scope” of an EIS is “the range of actions, alternatives, and impacts to be considered in an environmental impact statement.” 40 C.F.R. § 1508.25. The NRC regulation governing the scope of the EIS, (10 C.F.R. § 51.29(a)(1)), cross-references to a CEQ regulation, 40 C.F.R. § 1502.4, which directs that

[a]gencies shall use the criteria for scope (§ 1508.25) to determine which proposal(s) shall be the subject of a particular statement. 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(a). Loading and shipping SNF from reactor sites to the ISP/WCS CISF for interim storage is a “single course of action” which must be evaluated in a single impact statement. This is because an EIS must include all “connected actions.” 40 C.F.R. § 1508.25(a)(1). The § 1508.25 definition of “connected actions” is incorporated into NRC NEPA regulations by 10 C.F.R. § 51.14(b); separate actions are “connected” if, among other things, 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.” 40 C.F.R. § 1508.25(a)(1)(ii) and (iii).

Transportation and delivery actions precede interim storage actions and are inevitably intertwined. Absent transport and delivery of SNF to ISP/WCS, there will be no consolidated interim storage facility in west Texas. The two actions, transportation and storage, are “connected,” “interdependent,” and “depend on the larger action for their justification.” They are “connected actions” that lack “independent utility.” See *Soc’y Hill Towers Owners’ Ass’n v. Rendell*, 210 F.3d 168, 181 (3d Cir. 2000) (collecting cases); *Nw. Res. Info. Ctr. v. Nat’l Marine Fisheries Serv.*, 56 F.3d 1060, 1067–69 (9th Cir. 1995) (collecting cases); *Communities, Inc. v. Busey*, 956 F.2d 619, 627 (6th Cir. 1992) (same). Actions lack independent utility when it would be irrational, or at least unwise, to undertake one without the other. *Trout Unlimited v. Morton*, 509 F.2d 1276 (9th Cir. 1974). For example, the Ninth Circuit has held that the construction of a road to facilitate logging and the sale of timber from the logging were “connected actions” that had 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.”).

According to 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.” The word “region” is not defined in 10 C.F.R. Part 72, but presumably refers to the “region of influence” around ISP/WCS’s site, *i.e.*, a radius of 50 miles.

5. The Issues Raised Are Material to the Findings that the NRC Must Make to Support the Action that is Involved in this Proceeding

a. The Overall Project’s Environmental Impacts Must Be Weighed Against Benefits

The ASLB must consider the new information and Contention 17. The NWTRB findings have extended the needed time window and hence, scope of actions, to at least 80 years, spanning two putative license periods. There is considerable scientific and engineering research to be completed before any kinetic steps toward transport of the SNF can occur and the ascertaining of that information may push the transport phase into the second 40 year period. It is evident that the full range of anticipated activity and its environmental effects must be included within a revamped, much more expansive, EIS.

Following properly definition of the scope of the proposed action and any connected actions, the EIS must evaluate the environmental effects of the overall proposed action. 10 C.F.R. §§ 51.71(d), 51.90; 40 C.F.R. § 1508.25(a)(1). The NRC uses this information to “[d]etermine, after weighing the environmental, economic, technical, and other benefits against environmental and other costs . . . whether the combined license should be issued, denied, or appropriately conditioned to protect environmental values.” 10 C.F.R. § 51.107(a)(3).

*b. If Transportation Is Not Part of the Project, Preparations
And Transport Are Still the Source of Cumulative Impacts*

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 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. § 1508.7); see also 40 C.F.R. § 1508.25(c) (stating that the scope of an EIS includes consideration of cumulative impacts). According to CEQ Regulations at 40 C.F.R. § 1508.7, “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.”

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).

Transporting SNF to the ISP/WCS CISF undeniably triggers other actions in the form of storage-related activities.

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.* Here, as the NWTRB has demonstrated, forecasting the need for transport activities and performance of associated safety and protective action analyses is meaningfully possible.

NRC regulations promulgated pursuant to NEPA recognize the legitimacy of cumulative effects analysis. By 10 C.F.R. § 51.14(b), the NRC incorporated the CEQ’s definition of “effects” found in 40 C.F.R. § 1508.8, which addresses both direct effects, “which are caused by the action and occur at the same time and place,” and indirect effects, “which are caused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable.” Section 1508.8 further provides that:

Effects and impacts as used in these regulations are synonymous. Effects includes 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, whether direct, indirect, or cumulative.

NRC regulations at 10 C.F.R. § 51.45(b)(1) require the Environmental Report to address impacts of the proposed action on the environment, and they “shall be discussed in proportion to their significance.” The transportation impacts of the overall ISP project are of high significance to completion of the storage project. There will be no transportation of waste to Texas if there is no CISF to receive it. The delivery of SNF and GTCC waste to Texas is essential to if there is to be a “consolidated” interim storage facility there. Accordingly, the DOE analyses of the travel-worthiness of high burnup SNF and its potential for damage from shipping are obligatory under NEPA. This is especially true given the complex interplay of these investigations with the decisions on when to require standardized TAD canisters as shipping containers, and the

behavior of high burnup fuel in larger canisters that are presently licensed for transport.

c. *The NWTRB Findings Conceive of TADs as a Form of Mitigation*

The questions of when and whether to commence use of DOE-prescribed TAD canisters for shipping SNF can trigger complex and expensive mitigation activities. If these special smaller canisters are required to be used at reactor sites, then very expensive DTS or comparable loading systems will have to be planned, licensed and constructed at multiple sites. Indeed, such facilities may have to be built to unload existing dry storage casks and load the SNF into transport canisters. If the dispersion of SNF assemblies into multiple smaller TADs is not required until the SNF is delivered to the ISP/WCS SNF, on the other hand, that may obligate planning, construction and use of a DTS system much earlier in time than the end of the first century. Also, the volume and management considerations for low-level radioactive waste at the CISF will be altered considerably.

Essentially, these are important decisions concerning mitigation and they have yet to be made by DOE in consultation with nuclear utilities and ISP.

NEPA directs that an EIS identify any adverse environmental effects which cannot be avoided. 42 U.S.C. § 4332(2)(C)(ii). The U.S. Supreme Court found that this clause implies an obligation to discuss the extent to which adverse impacts may be avoided, along with those impacts that cannot. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351-52, 109 S.Ct. 183 (1989). The Court added that inclusion of a reasonably complete discussion of possible mitigation measures serves NEPA's "action forcing" function.

CEQ's NEPA regulations define "mitigation" as measures to avoid, minimize, rectify, reduce, or compensate for environmental impacts. 40 C.F.R. § 1508.20. The regulations require

that a federal agency discuss possible mitigation measures in defining the scope of an EIS,⁷ in discussing alternatives to the proposed action⁸ and the consequences of the proposed action and its alternatives,⁹ and in explaining its ultimate decision.¹⁰

NEPA does not impose a substantive obligation on federal agencies to require mitigation of environmental impacts, but requires discussion of mitigation in sufficient detail as to ensure that environmental consequences have been fairly evaluated. *Robertson v. Methow Valley Citizens Council*, 490 U.S. at 352-353. None of this is presently possible, given the present state of indecision about these critical policies.

A NEPA concern directly related to mitigation measures is that the obligatory EIS discussion of alternatives to the project, as proposed by ISP/WCS, cannot be completed. CEQ regulations direct Federal agencies to “[u]se the NEPA process to identify and assess the reasonable alternatives to proposed actions that will avoid or minimize adverse effects of these actions. . . .” 40 CFR § 1500.2(e); *see* 40 CFR § 1500.2(f). The mitigation measures discussed in an EIS must cover the range of impacts of the proposal. The measures must include such things as design alternatives that would decrease pollution emissions, construction impacts, and other possible efforts. Mitigation measures must be considered even for impacts that by themselves would not be considered “significant.” Once the proposal itself is considered as a whole to have significant effects, all of its specific effects on the environment (whether or not “significant”)

⁷40 C.F.R. § 1508.25(b).

⁸40 C.F.R. §§ 1502.14(f), 1508.25(b)(3).

⁹40 C.F.R. § 1502.16(h).

¹⁰40 C.F.R. § 1505.02(c).

must be considered, and mitigation measures must be developed where it is feasible to do so. CEQ, “Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations,” March 1981, Questions 19a and b, citing 40 C.F.R. §§ 1502.14(f) and 1502.16(h); *see* 40 C.F.R. § 1508.25(b)(3).

6. Genuine Disputes Exist with the Applicant On a Material Issues of Law and Fact

Intervenor SEED Coalition has articulated several genuine disputes of fact and law with ISP/WCS regarding the legal adequacy of the environmental analysis on which the applicant relies in seeking a license to construct and operate a CISF.

1) ISP/WCS’s insistence that all transport will be concluded within a 20-year window of time is contradicted by the NWTRB Report.

2) ISP/WCS’s financial forecasts of costs of operation and maintenance of its CISF will be significantly different if the NWTRB projections of a 50 to 80 year transportation campaign turn out to be accurate; the DOE will have to pay considerably more to nuclear utilities to store SNF at reactor sites, and will also have to support operations and maintenance for a considerably longer time at the CISF than currently projected.

3) Projections of needed infrastructure improvements to highways and especially to rail lines and associated bridges, trackage and other facilities will become much more costly if a generation or two is added to the expected transportation phase.

4) Dry transfer systems or an equivalent means of unloading and loading canisters at multiple reactor sites, along with the anticipated expense of same, but be addressed now. This is not a “new” fact, but with the weight of the NWTRB behind it, is “new” in the sense that it can’t simply be ignored any longer.

5) Depending on the outcome of DOE studies of the strains of transport on SNF and possibilities of damage being caused to the waste, the requirement of constructing a DTS at the CISF may be moved up considerably within the first 100 years of operations, as opposed to ISP/WCS's current plan to install such a system only at the end of the first century.

6) The NWTRB has effectively revised the scope of the project to include transportation preparations as integral to the operation of the CISFs.

7) Even if transportation is not deemed to be part of the overall project, the potential for thousands of barge, truck and rail delivery trips comprise cumulative impacts which must be accounted for within the EIS.

8) The decisions as to whether and when to incorporate TAD canisters into the project, and whether and when to insert DTS capabilities into the canister loading process implicate serious issues of mitigation which cannot presently be addressed in the EIS.

IV. THE CONTENTION IS TIMELY PURSUANT TO 10 C.F.R. § 2.309(c)

Intervenor SEED Coalition's proposed new Contention 17 satisfies the three-prong test in 10 C.F.R. § 2.309(c)(i)-(iii), as follows:

(i) The information upon which the filing is based was not previously available. The NWTRB Report on which Contention 17 relies was not publicly available until September 23, 2019.

(ii) The information upon which the filing is based is materially different than information previously available. The NWTRB has identified several flaws and/or weaknesses in DOE's role in the development of the ISP/WCS CISF which change the expected timing and sequencing of SNF storage activity at the facility.

(iii) The filing has been submitted in a timely fashion based on the availability of the subsequent information, within 30 days of issuance of the report. *Shaw AREVA MOX Services* (Mixed Oxide Fuel Fabrication Facility), LBP-08-11, 67 NRC 460, 493 (2008).

V. CONCLUSION

In light of the foregoing facts, arguments and points of authority, Intervenor SEED Coalition respectfully requests that the Atomic Safety and Licensing Board grant leave for Intervenor to file and adjudicate Contention 17.

WHEREFORE, SEED Coalition prays the Atomic Safety and Licensing Board, pursuant to 10 C.F.R. § 309(c), admit Contention 17 as a late-filed contention.

/s/ Terry J. Lodge
Terry J. Lodge, Esq.
316 N. Michigan St., Ste. 520
Toledo, OH 43604-5627
(419) 205-7084
tjlodge50@yahoo.com/lodgelaw@yahoo.com
Counsel for Sustainable Energy and Economic
Development (SEED) Coalition, Intervenor

CERTIFICATE OF SERVICE

Pursuant to 10 C.F.R. § 2.305, I hereby certify that on October 23, 2019, a copy of the foregoing “Motion of Intervenor Sustainable Energy and Economic Development (SEED) Coalition for Leave to File Late-Filed Contention and Contention 17” and accompanying declaration was deposited in the Electronic Information Exchange (the NRC’s E-Filing System) in this proceeding, for automated distribution to all registered counsel and parties.

/s/ Terry J. Lodge
Terry J. Lodge, Esq.
Counsel for Intervenor SEED Coalition