UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	Docket No. 72-1050
INTERIM STORAGE PARTNERS LLC	)	
(Consolidated Interim Storage Facility)	)	November 20, 2018

INTERIM STORAGE PARTNERS LLC'S ANSWER OPPOSING HEARING REQUEST AND PETITION TO INTERVENE FILED BY PERMIAN BASIN LAND AND ROYALTY ORGANIZATION AND FASKEN LAND AND MINERALS

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I. INTRODUCTION

Pursuant to 10 C.F.R. § 2.309(i)(1), Interim Storage Partners LLC ("ISP") submits this Answer opposing the "Petition . . . for Intervention and Request for Hearing" filed by Permian Basin Land and Royalty Organization ("PBLRO") and Fasken Land and Minerals ("Fasken") (collectively, "Petitioners") with the U.S. Nuclear Regulatory Commission ("NRC") on the above-captioned docket on October 29, 2018 ("Petition").[1] The Petition concerns ISP's pending application for a specific license under 10 C.F.R. Part 72 to build and operate a Consolidated Interim Storage Facility ("CISF") in Andrews County, Texas, referred to as the "WCS CISF" (the "Application").[2] As explained below, the Atomic Safety and Licensing Board ("Board")

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1 Petition of Permian Basin Land and Royalty Organization and Fasken Land and Minerals for Intervention and Request for Hearing (Oct. 29, 2018) (ML18302A412). The Petition included four exhibits: Exhibit 1, Declaration of Tommy Taylor ("Taylor Decl."); Exhibit 2, Declaration of D.K. Boyd; Exhibit 3, Declaration of Aaron Pachlhofer ("Pachlhofer Decl."); and Exhibit 4, T.M. LEHMAN AND K.A. RAINWATER, GEOLOGY OF THE WCS – FLYING "W" RANCH, ANDREWS COUNTY, TEXAS (Apr. 2000) ("Lehman and Rainwater").

2 ISP, WCS CISF License Application, Rev. 2 (July 19, 2018) (ML18206A595) (including the Safety Analysis Report, Rev. 2 ("SAR"), Environmental Report, Rev. 2 ("ER"), and Consolidated Emergency Response Plan, Rev. 1 ("CERP")).

should deny the Petition because Petitioners have failed to satisfy their affirmative burden to demonstrate standing, and have failed to submit an admissible contention.

Petitioners assert standing on both proximity-based and traditional standing grounds. However, neither entity fulfills its affirmative burden to demonstrate standing on either basis. For example, Fasken claims representational standing as a representative of its employee, Tommy Taylor. However, Mr. Taylor has not authorized Fasken to represent his personal interests in this proceeding. Moreover, Fasken is a commercial entity, and has not demonstrated how its commercial interests would be germane to representation of any individual. Similarly, PBLRO claims representational standing to represent D.K. Boyd, who is already represented in this proceeding by Beyond Nuclear. Thus, as a threshold matter, neither entity has "demonstrated" representational standing. Furthermore, Petitioners have not demonstrated any "obvious potential for offsite consequences" from the WCS CISF—a precondition to establishing proximity-based standing in this proceeding. Indeed, the Commission has generically determined that such consequences from a facility such as this are not merely improbable, but also implausible, due to the lack of a significant offsite dispersal mechanism. Accordingly, proximity-based standing is unavailable to Petitioners. Likewise, Petitioners also have failed to demonstrate standing on traditional grounds, as explained further below.

Setting aside their failure to establish standing, Petitioners also have failed to proffer an admissible contention. As explained below, each of Petitioners' five proposed contentions suffers from a combination of fatal defects for failure to satisfy each of the six elements of 10 C.F.R. § 2.309(f)(1). In general, Petitioners disregard rather than dispute directly relevant information in the Application, raise issues immaterial to issuance of the requested license, and fail to provide adequate support—or reasonable explanations—for their contentions.

Accordingly, because Petitioners have failed to demonstrate standing, and have failed to submit an admissible contention, the Petition must be denied.

II. WCS CISF PROCEDURAL HISTORY

On April 28, 2016, Waste Control Specialists LLC ("WCS") submitted to the NRC an Application for a specific license pursuant to 10 C.F.R. Part 72 for a CISF on its site located in western Andrews County, Texas. WCS currently operates Low-Level Waste and Mixed Waste facilities on this site.

On January 30, 2017, the NRC published a notice in the *Federal Register* announcing its acceptance of the WCS CISF Application and an opportunity to request a hearing and petition for leave to intervene.[3] On April 18, 2017, WCS requested that the NRC temporarily suspend all review activities associated with its Application.[4] Approximately 14 months later, by letters dated June 8, 2018, and July 19, 2018, ISP (a joint venture between WCS and Orano CIS, LLC) submitted a request to the NRC to resume review of the Application for the WCS CISF, and submitted an updated version of the Application (to revise the name of the applicant and make a few other changes).[5]

On August 29, 2018, the NRC published a notice in the *Federal Register* announcing its decision to continue reviewing the Application and providing a new opportunity to request a

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3 *See* License Application; Docketing and Opportunity to Request a Hearing and to Petition for Leave to Intervene, 82 Fed. Reg. 8773 (Jan. 30, 2017) ("Original Notice of Hearing Opportunity"). On April 4, 2017, and in a corrected notice dated April 10, 2017, the NRC published in the *Federal Register* (82 Fed. Reg. 16,435; 82 Fed. Reg. 17,297) an order granting all petitioners an extension of time until May 31, 2017, to file hearing requests on WCS's Application.

4 Letter from R. Baltzer, WCS, to NRC Document Control Desk (Apr. 18, 2017) (ML17110A206). On April 19, 2017, WCS and the NRC Staff jointly requested that the Original Notice of Hearing Opportunity be withdrawn, pending possible future resumption of the Application review. Joint Request to Withdraw the Federal Register Notice Providing an Opportunity to Submit Hearing Requests (Apr. 19, 2017) (ML17109A480). On June 22, 2017, the Commission granted that request. *Waste Control Specialists LLC* (Consolidated Interim Storage Facility), CLI-17-10, 85 NRC 221, 222-23 (2017).

5 Although ISP is the new applicant name, the proposed facility name remains the "WCS CISF."

hearing and petition for leave to intervene.[6] On October 29, 2018, Petitioners filed the instant Petition seeking a hearing and proposing five contentions.[7]

III. PETITIONERS HAVE NOT DEMONSTRATED STANDING

A. Legal Standards for Standing

The AEA allows individuals "whose interest may be affected" to intervene in NRC licensing proceedings.[8] The Commission has long applied judicial concepts of standing to determine whether a petitioner's interest provides a sufficient basis for intervention.[9] "Essential to establishing standing are findings of (1) injury, (2) causation, and (3) redressability."[10] Both an individual and an organization may assert standing. An organization may assert standing in its own right (*i.e.*, organizational standing), or may assert a right to represent the interests of its members (*i.e.*, representational standing), which requires a showing that: (1) its members would otherwise have standing in their own right; (2) the interests that the organization seeks to protect are germane to its purpose; and (3) neither the claim asserted nor the relief requested requires an

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6 *See* Interim Storage Partner's Waste Control Specialists Consolidated Interim Storage Facility; Revised License Application; Opportunity to Request a Hearing and to Petition for Leave to Intervene; Order Imposing Procedures, 83 Fed. Reg. 44,070 (Aug. 29, 2018) ("Notice of Hearing Opportunity").

7 On September 28, 2018, Petitioners filed a document styled as a Motion to "Dismiss Licensing Proceeding[] for . . . WCS Consolidated Interim Storage Facility" on the above-captioned docket seeking the establishment of a separate proceeding to contest the NRC's "jurisdiction" to consider the Application. *See* Motion of Fasken Land and Minerals and Permian Basin Land and Royalty Owners to Dismiss Licensing Proceedings for Hi-Store Consolidated Interim Storage Facility and WCS Consolidated Interim Storage Facility (Sept. 28, 2018) (ML18271A244) ("Motion to Dismiss"). On October 29, 2018, the Secretary of the Commission denied that motion on procedural grounds, but referred it to the ASLBP "for consideration under § 2.309." Office of the Secretary of the Commission, Order at 2-3 (Oct. 29, 2018) (ML18302A329). ISP is responding to that pleading separately.

8 AEA § 189a (codified at 42 U.S.C. § 2239(a)).

9 *Private Fuel Storage, LLC* (Indep. Spent Fuel Storage Installation), CLI-98-13, 48 NRC 26, 30 (1998).

10 *EnergySolutions, LLC* (Radioactive Waste Import/Export Licenses), CLI-11-3, 73 NRC 613, 621 (2011).

individual member to participate in the proceeding.[11] In all cases, "the petitioner bears the burden to provide facts sufficient to establish standing."[12]

1. Proximity-Plus Standing

In cases involving reactor facilities, the Commission will apply a standing presumption based on proximity to the site.[13] However, no such automatic presumption exists for nuclear materials proceedings, such as this one.[14] To show standing based on geographic proximity to a materials facility, a petitioner bears an affirmative burden to demonstrate that "the proposed action involves a significant source of radioactivity producing an obvious potential for offsite consequences."[15] As the Commission has made clear, "conclusory allegations about potential radiological harm" are insufficient to satisfy this burden.[16]

Assuming the petitioner meets its burden to demonstrate an obvious potential for offsite consequences, the presiding officer then must determine the appropriate presumptive distance. This distance corresponds to the radius within which persons may "face a *realistic* threat of harm" from a release of radioactive material.[17] In reactor proceedings, the Commission has adopted a 50-mile presumptive distance; however, it has "required far closer proximity in other licensing proceedings."[18] The presumptive radius for ISFSI proceedings is particularly small, "because an ISFSI is essentially a passive structure rather than an operating facility, and there

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11 *PFS*, CLI-98-13, 48 NRC at 30-31.

12 *PPL Bell Bend, LLC* (Bell Bend Nuclear Power Plant), CLI-10-7, 71 NRC 133, 139 (2010).

13 *See Fla. Power & Light Co.* (St. Lucie, Units 1 and 2), CLI-89-21, 30 NRC 325, 329 (1989).

14 *See Nuclear Fuel Servs., Inc.* (Erwin, Tennessee), CLI-04-13, 59 NRC 244, 248 (2004).

15 *Ga. Inst. of Tech.* (Ga. Tech Research Reactor), CLI-95-12, 42 NRC 111, 116 (1995).

16 *NFS*, CLI-04-13, 59 NRC at 248.

17 *Calvert Cliffs 3 Nuclear Project, LLC & UniStar Nuclear Operating Servs., LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 917 (2009) (emphasis added).

18 *Consumers Energy Co.* (Big Rock Point Indep. Spent Fuel Storage Installation), CLI-07-19, 65 NRC 423, 426 (2007) (quotation omitted).

therefore is less chance of widespread radioactive release."[19] Nevertheless, in each materials proceeding, the appropriate distance must be evaluated on a "case-by-case basis, taking into account the nature of the proposed action and the significance of the radioactive source."[20]

Where a petitioner is unable to demonstrate "proximity-plus" standing to intervene, traditional standing principles will apply.[21]

2. Traditional Standing

For traditional standing, a petitioner must establish that: (1) it has suffered or will suffer a distinct and palpable injury that constitutes injury-in-fact within the zones of interests arguably protected by the AEA or the National Environmental Policy Act of 1969, as amended ("NEPA")); (2) the injury is fairly traceable to the challenged action; and (3) the injury is likely to be redressed by a favorable decision.[22] To demonstrate a distinct and palpable injury-in-fact sufficient to establish standing, the petitioner must demonstrate that the injury-in-fact is both "(a) concrete and particularized and (b) 'actual or imminent,' not 'conjectural' or 'hypothetical."'[23] The mere ability to *imagine* circumstances where a party could be affected is not enough—the

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19 *Id.*

20 *Ga. Tech.*, CLI-95-12, 42 NRC at 116-17. *See also Big Rock Point ISFSI*, CLI-07-19, 65 NRC at 426.

21 *See U.S. Army Installation Command* (Schofield Barracks, Oahu, Hawaii, and Pohakuloa Training Area, Island of Hawaii, Hawaii), CLI-10-20, 72 NRC 185, 188 (2010); *USEC Inc.* (American Centrifuge Plant), CLI-05-11, 61 NRC 309, 311-12 (2005) (quoting *NFS*, CLI-04-13, 59 NRC at 248) (If "there is no 'obvious' potential for radiological harm at a particular distance frequented by the petitioner, it becomes the petitioner's burden to show a specific and plausible means of how the challenged action may harm him or her.").

22 *Private Fuel Storage, LLC* (Indep. Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 168 (1998) (citing *Yankee Atomic Elec. Co.* (Yankee Nuclear Power Station), CLI-96-1, 43 NRC 1, 6 (1996)); *see also N. States Power Co.* (Prairie Island Nuclear Generating Plant Indep. Spent Fuel Storage Installation), LBP-12-24, 76 NRC 503, 507-08 (2012) (citing *EnergySolutions*, CLI-11-3, 73 NRC at 621). Both the Commission's Notice of Hearing Opportunity for this proceeding and its Rules of Practice require a petitioner to set forth: (1) the nature of its right under the AEA to be made a party to the proceeding; (2) the nature and extent of its property, financial, or other interest in the proceeding; and (3) the possible effect of any decision or order that may be issued in the proceeding on its interest. Notice of Hearing Opportunity, 83 Fed. Reg. at 44,071; 10 C.F.R. § 2.309(d)(1).

23 *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 560 (1992); *Sequoyah Fuels Corp. & General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 72 (1994).

petitioner must demonstrate that "the injury is certainly impending."[24] In the NRC licensing context, "unsupported general references to radiological consequences are insufficient to establish a basis for injury" to establish standing.[25] Accordingly, standing will be "denied when the threat of injury is too speculative."[26]

B. Petitioners' Representational Standing Claims Are Fundamentally Flawed and Insufficient to Demonstrate Standing

As a preliminary matter, the Petition suffers from certain fundamental flaws that are fatal to Fasken's and PBLRO's respective assertions of representational standing in this proceeding. As noted above, representational standing requires an organization to demonstrate that a named member has "authorized the organization to represent him or her and to request a hearing on his or her behalf."[27] Here, the Petition asserts that "Tommy Taylor and D.K. Boyd have authorized both Fasken and PBLRO to request a hearing on their behalf."[28]

As to Mr. Taylor, this statement is simply incorrect. His declaration merely notes that he is "authorized to effect Fasken's efforts in support of PBLRO's participation" in this proceeding.[29] Nowhere does the declaration purport to authorize Fasken or PBLRO—or any entity—to represent Mr. Taylor's *personal* interests, or to speak on his behalf in any way. Indeed, Mr. Taylor signed the declaration "On Behalf of Fasken Land and Minerals, Ltd. &

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24 *Nw. Airlines, Inc. v. Fed. Aviation Admin.*, 795 F.2d 195, 201 (D.C. Cir. 1986) (emphasis in original) (citing *Babbitt v. United Farm Workers Nat'l Union*, 442 U.S. 289, 298 (1979)).

25 *Sacramento Mun. Util. Dist.* (Rancho Seco Nuclear Generating Station), LBP-92-23, 36 NRC 120, 130 (1992).

26 *Sequoyah Fuels*, CLI-94-12, 40 NRC at 72 (citing *Whitmore v. Ark.*, 495 U.S. 149, 158-59 (1999); *L.A. v. Lyons*, 461 U.S. 95, 105 (1983)) (finding an assertion of offsite injury was not too speculative to establish standing where the petitioner submitted expert affidavits directly challenging information in the application regarding groundwater flow paths).

27 *Entergy Nuclear Operations, Inc.* (Palisades Nuclear Plant) *et al*., CLI-08-19, 68 NRC 251, 258-59 (2008).

28 Petition at 7 (citing Exh. 1 ¶ 16, Exh. 2 ¶ 16).

29 *Id*., Exh. 1 ¶ 16.

Permian Basin Land and Royalty Owners (PBLRO)," not on his own behalf.[30] Accordingly, because Fasken has not demonstrated that any "member" has "authorized the organization to represent him or her and to request a hearing on his or her behalf,"[31] it has not fulfilled the threshold requirements for representational standing.[32]

Likewise, to the extent Fasken seeks to represent Mr. Boyd,[33] its standing claim is defective because Mr. Boyd's declaration does not assert that he is a "member" of Fasken. Indeed, nothing in the Petition or its exhibits suggests that Fasken has *any* "members."[34] Thus, to the extent the Petition can be read to imply that Mr. Boyd is a "member" of Fasken (and, by extension, that Fasken may represent his interests), that implication lacks a factual foundation.

Moreover, Mr. Boyd already has authorized another entity, Beyond Nuclear, to represent his interests in this proceeding.[35] Whereas, the Commission has explicitly rejected such "multiple representation" as "detrimental to the process of adjudication."[36] The Commission has explained that individuals cannot simultaneously authorize multiple organizations to represent their interests because it "might lead to confusion" as to which entity is speaking for the

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30 *Id*., Exh. 1 at 3.

31 *Palisades*, CLI-08-19, 68 NRC at 258-59.

32 Fasken may not attempt to cure this fatal defect by "belatedly submit[ing] evidence regarding standing" at the "eleventh-hour" by appending a revised authorization affidavit to its reply brief. *Id*. *See also id*. at 262 (Commission explicitly "disavow[ing]" any interpretation of its prior case law that "might be read to imply that authorization affidavits *may* be filed with a reply" (emphasis added)).

33 Petition at 7 (asserting Mr. Boyd has "authorized *both* Fasken and PBLRO" to represent him) (emphasis added).

34 *See generally* Petition, Exh. 1 (describing Fasken as a commercial enterprise rather than a membership organization).

35 *See* Beyond Nuclear, Inc.'s Hearing Request and Petition to Intervene, Attach. 03, "Declaration of D.K. Boyd" ¶ 16 (Oct. 3, 2018) (ML18276A242) ("authoriz[ing] Beyond Nuclear to request a hearing and intervene on [his] behalf").

36 *Id*.

individual.[37] Accordingly, because Mr. Boyd has authorized another entity to represent his interests, and neither Fasken nor PBLRO has identified any other members that have "authorized the organization to represent him or her and to request a hearing on his or her behalf,"[38] they have failed to satisfy the threshold requirements for representational standing in this proceeding.

C. Neither Fasken Nor PBLRO Has Demonstrated Proximity-Plus Standing

Petitioners assert that they "meet standing requirements under the proximity presumption."[39] However, as explained below, neither has demonstrated an "obvious" potential for offsite consequences from the WCS CISF, nor demonstrated any interests within the hypothetical radius of potential harm. Accordingly, proximity-plus standing is unavailable here.

1. Petitioners Have Not Demonstrated an Obvious Potential for Offsite Consequences

Petitioners claim that "[t]he potential for offsite consequences from the WCS CISF is 'obvious' due to the extraordinary volume of [anticipated] spent nuclear fuel."[40] Specifically, they cite the possibility of up to "40,000 MTU of spent nuclear fuel at the WCS CISF."[41] However, the Commission has explained that the mere existence of a source of radiation—even a significant one—does not, itself, demonstrate an "obvious potential for offsite consequences."[42] To demonstrate proximity-plus standing, Petitioners bear the *further* burden of demonstrating "a

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37 *Big Rock Point ISFSI*, CLI-07-19, 65 NRC at 426-27. Likewise, Mr. Boyd's authorization for both Fasken *and* PBLRO to represent his interests is improper for these same reasons. *See* Petition, Exh. 1 ¶ 16.

38 *Palisades*, CLI-08-19, 68 NRC 251 at 258-59.

39 Petition at 4.

40 *Id.* at 5-6.

41 *Id*. at 6.

42 *Schofield Barracks*, CLI-10-20, 72 NRC at 189.

plausible mechanism through which those materials could harm" them.[43] Petitioners simply have not done so.

Citing a portion of the Safety Analysis Report ("SAR") submitted with the Application, Petitioners incorrectly assert that ISP "recognizes at least one plausible scenario that would result in off-site consequences from storage of spent nuclear fuel at the WCS CISF."[44] However, they simply misconstrue the Application. The quoted language merely confirms that analyses required by 10 C.F.R. § 72.106 (to confirm the adequacy of area boundaries) have, in fact, been performed. Nowhere does the Application "acknowledge[]" any "plausible scenario" of offsite consequences from the WCS CISF—because there is none. Petitioners' misreading of the Application does not demonstrate an "obvious" potential for offsite consequences. And the Petition offers no other legitimate bases for its assertion that such consequences exist.

Additionally, in promulgating its Part 72 emergency planning rule—declining to impose any offsite emergency planning requirements whatsoever on away-from-reactor ISFSIs—the Commission determined there simply is no plausible possibility of offsite consequences.[45] The Commission's determination that only *onsite* emergency planning is required at away-from-reactor ISFSIs is directly relevant to proximity-based standing because the proximity presumption in reactor proceedings is *based* on the offsite emergency planning zone ("EPZ").[46] As the Commission explained:

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43 *Id*.

44 Petition at 6.

45 *See, e.g.*, Emergency Planning Licensing Requirements for Independent Spent Fuel Storage Facilities (ISFSI) and Monitored Retrievable Storage (MRS); Final rule, 60 Fed. Reg. 32,430, 32,439 (June 22, 1995) ("ISFSI EP Rule").

46 *Strata Energy, Inc.* (Ross In Situ Uranium Recovery Project), CLI-12-12, 75 NRC 603, 610 n.32 (2012) (explaining the presumptive distance "corresponds roughly to the emergency planning zone for ingestion pathways").

> To be a potential radiological hazard to the general public, radioactive materials must be released from a facility and dispersed offsite. For this to happen:
>
> - The radioactive material must be in a dispersible form,
> - There must be a mechanism available for the release of such materials from the facility, and
> - There must be a mechanism available for offsite dispersion of such released material.
>
> Although the inventory of radioactive material contained in 1000 MTHM of aged spent fuel may be on the order of a billion curies or more, *very little is available in a dispersible form*; there is *no mechanism* available for the release of radioactive materials in significant quantities from [the] facility; and the *only* mechanism available for offsite dispersion is atmosphere dispersion.[47]

Because the Commission generically concluded that: (1) "[t]here exists *no significant dispersal mechanism* for the radioactive material contained within a storage cask";[48] and (2) "the postulated *worst-case* accident involving an ISFSI has *insignificant consequences to the public health and safety*,"[49] the final rule imposed onsite-only emergency planning requirements on away-from-reactor ISFSI licensees limited to dry storage of aged fuel, such as the WCS CISF. In other words, the required EPZ limit is the site boundary. Notably, the Commission's conclusion does not rest simply on a finding that the possibility of offsite consequences is improbable (*e.g.*, would require the simultaneous failure of multiple independent safety systems); rather, it is based on the Commission's well-considered conclusion that there simply is no

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47 ISFSI EP Rule, 60 Fed. Reg. at 32,431 (citing NUREG-0575, Final Generic Environmental Impact Statement on Handling and Storage of Spent Light Water Power Reactor Fuel, Vol. 1 § 4.2.2, "Safety and Accident Considerations" (Aug. 1979) (ML022550127)) (emphasis added).

48 *Id*. at 32,439.

49 *Id*. at 32,431 (citing NUREG-1140, A Regulatory Analysis on Emergency Preparedness for Fuel Cycle and Other Radioactive Material Licensees (Jan. 1988) (ML12174A320)).

plausible offsite dispersal mechanism.[50] Ultimately, Petitioners offer nothing to contradict the Commission's generic conclusions in this regard.

Because Petitioners failed to carry their burden to demonstrate some "obvious" potential for offsite consequences specific to the ISP proceeding (and because the Commission generically determined such potential does not exist), they have not demonstrated proximity-plus standing.

2. Petitioners Have Not Identified Any Interests Within the Radius of Obvious Potential for Offsite Consequences

Even assuming *arguendo* Petitioners had demonstrated some "obvious" potential for offsite consequences specific to the ISP proceeding, they still have failed to demonstrate any interests within the radius of potential harm. Specifically, Fasken asserts proximity-based organizational standing based on its "interests situated eighteen miles from the WCS CISF"; and PBLRO asserts proximity-based representational standing based on its member D.K. Boyd's "property four miles from the site."[51] Despite their explicit recognition that the presumptive radius must be determined on a "case-by-case basis,"[52] without any further explanation or discussion, Petitioners make the conclusory assertion that "[i]t is plausible that radiological harm would impact" these interests.[53] Although petitioners need not establish a "causal link" between the proposed action and their *specific* interests, they still must provide a rational basis for

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50 *Compare Ga. Tech.*, CLI-95-12, 42 NRC at 116 (finding a scenario in which "three independent redundant safety systems [] fail" did not "altogether strain[] credibility" and thus was enough to invoke the proximity presumption) *and CFC Logistics, Inc.* (Materials License), LBP-03-20, 58 NRC 311, 320 (2003) (finding that a "very strained accident scenario" was enough to invoke the proximity presumption because the scenario "*could* result in the dispersion of radioactive material into the air" (emphasis added)) *with* ISFSI EP Rule, 60 Fed. Reg. at 32,439 (noting that design basis events were "unlikely," and that "[n]o credible dynamic events have been identified that could" cause a cask rupture, but declining to impose offsite EPZ requirements on away-from-reactor ISFSIs for the *second and additional* reason that "[t]here exists no significant dispersal mechanism for the radioactive material contained within a storage cask").

51 Petition at 5.

52 *Id*. (citing *Exelon Generation Co. LLC & PSEG Nuclear, LLC* (Peach Bottom Atomic Power Station, Units 2 & 3), CLI-05-26, 62 NRC 577, 580-81 (2005)).

53 *Id*.

concluding that their interests are within a distance that *generally* could be affected by the purported "obvious" potential for offsite consequences. Petitioners' vague unsupported claims here simply are not enough to fulfill their burden to "demonstrate" this requisite element of proximity-plus standing.

Furthermore, Petitioners' references to incompatible legal precedent are unhelpful to their claims. For example, Petitioners note that, in proceedings involving spent fuel pool expansions and *at-reactor* ISFSIs, presiding officers have used a presumptive distance of 17 miles.[54] These proceedings, however, are fundamentally different than *away-from-reactor* ISFSI proceedings. Spent fuel pools and at-reactor ISFSIs entail wet storage, "fresh" spent fuel, and cask-loading or fuel-handling operations. These features present distinct radiological hazards not found at away-from-reactor ISFSIs limited to dry storage of aged fuel. The Commission explicitly considered these differences in declining to impose offsite emergency planning requirements on dry away-from-reactor ISFSIs:

> In the case of an operating nuclear power plant, the dispersal mechanism for radioactive material in the spent fuel is either derived from the heat produced during the fission process or the decay heat which exists in the short period immediately following shutdown. During these times, the potential exists for an accident that could cause the fuel cladding to fail. . . . On the other hand, spent fuel stored in an ISFSI is required to be cooled for at least one year. . . . At this age, spent fuel has a heat generation rate that is too low to cause significant particulate dispersal in the unlikely event of a cask confinement boundary failure.[55]

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[54] *See, e.g.*, *Id.* at 5 (citing *Pac. Gas & Elec. Co.* (Diablo Canyon Power Plant Indep. Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 428-29 (2002) (adopting a 17-mile presumptive distance for an at-reactor ISFSI proceeding and, in turn, citing the 17-mile presumptive distance for a spent fuel pool expansion proceeding in *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant), LBP-99-25, 50 NRC 25, 29-31 (1999))).

[55] *See, e.g.*, ISFSI EP Rule, 60 Fed. Reg. at 32,439.

Ultimately, neither the presumptive distance determinations in cases involving at-reactor ISFSIs, which entail vastly different potential radiological harms, nor any other case cited by Petitioners,[56] are at all relevant to the "case-by-case" analysis at issue here.

Rather, the Board should look to the presumptive zone of harm codified in the relevant emergency planning regulations. By way of example, the 50-mile proximity presumption in reactor proceedings is based on the 50-mile offsite EPZ for reactors.[57] For Part 72 ISFSI licensing actions (based on the important differences in potential radiological harm noted above), the Commission determined that the zone of potential harm from "the consequences of worst-case accidents involving an ISFSI located on a reactor site" were bounded by the reactor EPZ; but, that no offsite EPZ was necessary for away-from-reactor ISFSIs.[58] Thus, even assuming proximity-plus standing exists here, the radius of potential harm nonetheless is limited to the site boundary.

Notably, the Commission *explicitly rejected* the possibility of even a small, 1-mile offsite EPZ for such licensees, concluding it was unwarranted.[59] In other words, the Commission has

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56 Petitioners cite three other cases in this regard. Petition at 4-5 (citing *PFS*, LBP-98-7, 47 NRC at 142; *Armed Forces Radiobiology Research Inst.* (Cobalt-60 Storage Facility), ALAB-682, 16 NRC 150, 154 (1982); and *Vt. Yankee Nuclear Power Corp.* (Vt. Yankee Nuclear Power Station), CLI-00-20, 52 NRC 151, 163-64 (2000)). All are inapposite here. In *PFS*, the Board evaluated standing on traditional grounds, not on the basis of the proximity-plus presumption. Indeed, the decision does not, even once, reference this alternative path to demonstrating standing, or articulate its associated legal standards. Moreover, the decision articulates no basis—technical or otherwise—for its conclusions about the distance at which a plausible harm could accrue offsite (in evaluating injury-in-fact claims), and therefore appears arbitrary to the extent it could be interpreted to establish some "presumptive" radius of harm. Moreover, the *AFRRI* proceeding involved an operating irradiation facility, and the *Vt. Yankee* proceeding involved the license transfer of an operating power reactor—both wholly dissimilar from the "passive structure" at issue here. *See Big Rock Point ISFSI*, CLI-07-19, 65 NRC at 426.

57 *Ross ISR*, CLI-12-12, 75 NRC at 610 (explaining the presumptive distance "corresponds roughly to the emergency planning zone for ingestion pathways"); *see also* 10 C.F.R. § 50.47(c)(2) (establishing a 50-mile radius as the presumptive offsite EPZ for ingestion pathways). The lack of an offsite EPZ does not *per se* preclude proximity-plus standing. However, it casts serious doubt on any assertion that (unspecified) offsite *radiological* consequences are somehow "obvious."

58 ISFSI EP Rule, 60 Fed. Reg. at 32,439.

59 *Id*. at 32,435.

generically concluded that away-from-reactor ISFSIs do not pose a "realistic threat" of offsite harm.[60] Nevertheless, even assuming *some* speculative radiological harm (not identified by Fasken or PBLRO) could accrue at the site boundary, they offer no explanation for how this harm could travel the (unspecified) distance to their interests or members in a form that could cause harm. This omission is particularly conspicuous where the Commission has generically determined that, at facilities such as the WCS CISF, "*very little* [radioactive material] is available in a dispersible form; [and] there is *no mechanism available* for the release of radioactive materials in significant quantities from the facility."[61] Ultimately, Petitioners' "conclusory allegations about potential radiological harm" are insufficient to satisfy its affirmative burden to demonstrate that a zone of potential harm extends beyond the site boundary—much less, that it extends more than four miles offsite to their alleged interests.[62] Accordingly, Petitioners' alleged interests or members located at unspecified distances from the WCS CISF are insufficient to demonstrate proximity-plus standing.

D. Petitioners Have Not Demonstrated Traditional Standing

Petitioners also assert that they "have standing pursuant to traditional standing doctrine,"[63] purporting to identify both radiological and economic injuries. Specifically, they allege radiological injury on the basis of some speculative "harm," to their purported "members," who allegedly "live, work and travel on or along" certain "transportation routes."[64] Ultimately, these vague claims simply are insufficient to meet their burden to "demonstrate" standing.

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60 *Cf. Calvert Cliffs*, CLI-09-20, 70 NRC at 917.

61 ISFSI EP Rule, 60 Fed. Reg. at 32,431 (citing NUREG-0575, Vol. 1 § 4.2.2) (emphasis added).

62 *NFS*, CLI-04-13, 59 NRC at 248.

63 Petition at 2.

64 *Id*.

As a threshold matter, Fasken has not articulated any connection between these alleged injuries and some cognizable organizational or representational interest. Fasken is a commercial entity, and does not appear to have any "members"; thus, the Petition's assertions of harm to "members" are inapplicable to Fasken. Further, to the extent Fasken speculates that its *employees* could suffer some radiological injury from hypothetical chance encounters with minute doses of radiation (likely below background levels),[65] it fails to explain how, even if true, this could result in some institutional harm to *Fasken*. Moreover, the only employee identified by Fasken—Mr. Taylor—has not authorized Fasken to represent his personal interests in this proceeding.[66] Not to mention, Fasken has not demonstrated that a non-membership commercial organization such as Fasken even *could* act as a representative.[67] Ultimately, the Petition's assertions of radiological harm appear entirely inapplicable to Fasken. Additionally, to the extent PBLRO alleges radiological harm to its member, Mr. Boyd, its theories of injury-in-fact, causation, and redressability are also fatally flawed, as explained below.

1. Petitioners' Alleged Transportation Safety-Related Harms Are Outside the Scope of This Proceeding

Petitioners' assertions of radiological injury, purportedly stemming from "proximity to routine shipments of spent nuclear fuel,"[68] amount to concerns regarding transportation safety. However, such concerns are not within the scope of this proceeding, and therefore cannot provide a basis for standing.

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65 *Id.* at 3.

66 Moreover, the Petition incorrectly asserts that Highway 176 (upon which Mr. Taylor purportedly travels) "parallels the Texas and New Mexico Railway for approximately 40 miles." *Id.* As noted in Mr. Boyd's declaration, it is Highway 18, not Highway 176, which "parallels" the railway. *Id.*, Exh. 2 ¶ 7.

67 General health and travel interests of individual persons are not remotely "germane" to Fasken's commercial purpose; thus, it fails to satisfy threshold requirements for representational standing. *See PFS*, CLI-98-13, 48 NRC at 30-31.

68 Petition at 3.

ISP's Application seeks a specific-license for an ISFSI under 10 C.F.R. Part 72; it does not request approval of a new transportation package design or approval of any specific transportation route. On the other hand, the safety and security of spent fuel transportation is governed by the standards in 10 C.F.R. Parts 71 and 73 and through regulations issued by the Department of Transportation.[69] For example, an *entirely separate application and approval process* are required for any planned road or rail routes over which spent fuel may be transported.[70] The appropriateness of the route selection—including whether spent fuel should (or should not) travel along the routes identified in the Petition and accompanying affidavits—simply is not at issue in this proceeding. The Commission has recognized that alleged harms from activities separately authorized and regulated by transportation licensing and regulatory oversight regimes are insufficient to establish AEA-based standing in non-transportation licensing proceedings.[71] Ultimately, Petitioners' claims in this regard fail to identify an interest that may be affected by *this* ISFSI licensing proceeding.

2. Petitioners' Allegations of Potential Exposure to Minute Doses of Radiation and Geographic Proximity to Transportation Routes Are Insufficient to Establish Standing

Nevertheless, even if transportation safety issues outside the scope of this proceeding somehow could provide a basis for standing here, Petitioners' purported threat of injury—*de*

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69 *See* 10 C.F.R. § 71.0, "Purpose and scope." *See also Private Fuel Storage, LLC* (Indep. Spent Fuel Storage Installation), LBP-99-34, 50 NRC 168, 176-77 (1999) (noting that "shipment of spent nuclear fuel [is] governed by Part 71 and do[es] not require a specific license under Part 72").

70 *See* 10 C.F.R. § 73.37(b)(1)(vi); *see also* NUREG-0561, Rev. 2, Physical Protection of Shipments of Irradiated Reactor Fuel §§ 2.1, "NRC Approval of SNF Shipment Routes," 2.1.1, "Route Selection Criteria" (Apr. 2013) (ML13120A230).

71 *Cf., e.g.*, *EnergySolutions*, CLI-11-3, 73 NRC at 625 (finding radioactive materials transportation challenges outside the scope of an import/export proceeding); *UniTech Services Group, Inc.* (Export of Low-Level Waste), CLI-18-2, 87 NRC 78, 81-82 (2018) (finding claims of "chance highway encounters" and other transportation-related allegations of injury lacked a "sufficient nexus" to an export license proceeding to establish standing because transportation is "separately authorized . . . by transportation licensing" requirements).

minimis radiological exposures from chance encounters along possible transportation routes—is conjectural or hypothetical at best, and certainly is not "concrete and particularized."[72] Accordingly, these claims are insufficient to establish traditional standing.

As noted above, Petitioners assert radiological injury on the basis that their "members" or "employees" who live or travel on or near certain transportation routes could be "exposed to unwanted radiation"; that "there is a risk of radiologic harm from an accident" caused by SNF shipments; and that even small exposures of unwanted radiation are sufficient injury-in-fact to establish standing.[73] However, to the extent they assert that mere physical presence or property ownership on or near potential transportation routes establishes standing, their claims are contrary to settled law. For example, in 2004, the Commission explained that "mere geographical proximity to potential transportation routes is insufficient to confer standing."[74] Moreover, "tenuous assumptions" that a transportation accident "might occur" are "entirely speculative in nature," and therefore fail to establish standing.[75] Likewise, "[t]he mere fact that additional radioactive waste will be transported" does not, *per se*, demonstrate an injury-in-fact *vis-à-vis* a higher likelihood of an accident; any asserted injury on this basis is "purely speculative and legally insufficient to demonstrate standing."[76] Petitioners' nearly identical arguments in this regard also fail for these same reasons.[77]

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72 *Sequoyah Fuels*, CLI-94-12, 40 NRC at 72.

73 Petition at 2-3.

74 *U.S. Dep't of Energy* (Plutonium Export License), CLI-04-17, 59 NRC 357, 364 n.11 (2004).

75 *Exxon Nuclear Co.* (Nuclear Fuel Recovery and Recycling Center), LBP-77-59, 6 NRC 518 (1977).

76 *Northern States Power Co.* (Pathfinder Atomic Plant), LBP-90-3, 31 NRC 40 (1990).

77 *See also* Petition at 4 (implying, without any basis or explanation whatsoever, that "a radiological release that interferes or precludes continued [oil and gas] production in the Permian Basin" could occur).

Moreover, to the extent the Petition could be read to assert facts *beyond* "mere geographic proximity" that somehow establish a clear causal nexus to radiological injury, its arguments still miss the mark.[78] Specifically, Petitioners claim that even "minor exposure[s]" from proximity to a shipment of spent nuclear fuel constitute a sufficient injury-in-fact to establish standing.[79] For this proposition, they cite an unreviewed standing discussion from a 2001 licensing board decision in the *MOX* proceeding.[80] However, that case is unpersuasive in light of more recent—and controlling—precedent to the contrary. In 2011, the Commission categorically held that "[m]ere potential exposure to minute doses of radiation within regulatory limits *does not constitute a 'distinct and palpable' injury on which standing can be founded*."[81]

Indeed, the *Diablo Canyon* case cited by Petitioners confirms this standing limitation.[82] There, the Board observed that "simply showing the potential for any radiological impact, no matter how trivial, is not sufficient to meet the requirement of a showing of a 'distinct and palpable harm' under standing element one."[83] The Board concluded that an alleged radiological exposure "four or five orders of magnitude below average natural background radiation levels . . . clearly falls below the level that can be considered substantial enough for standing

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78 Petitioners claim the ER acknowledges "rail casks could release radioactivity in 'exceptionally severe accidents.'" Petition at 2. However, that language is merely a quote from an NRC study explaining that "only rail casks without inner welded canisters" present this possibility. ER at 4-15 (citing NUREG-2125, Spent Fuel Transportation Risk Assessment at xxiv (Jan. 2014) (ML14031A323)). Petitioners do not assert that ISP would use "rail casks without inner welded canisters." Thus, this reference does not demonstrate a "clear causal nexus" to an alleged injury-in-fact.

79 Petition at 2.

80 *Id*. at 3, 5 (citing *Duke Cogema Stone & Webster* (Savannah River Mixed Oxide Fuel Fabrication Facility), LBP-01-35, 54 NRC 403, 417 (2001), *rev'd on contention admissibility grounds without reviewing standing*, CLI-02-24, 56 NRC 335 (2002)).

81 *EnergySolutions*, CLI-11-3, 73 NRC at 623 (emphasis added).

82 Petition at 2.

83 *Diablo Canyon ISFSI*, LBP-02-23, 56 NRC at 428.

purposes."[84] Here, the injury alleged by Petitioners —from radiologic exposure received during "routine shipments" of SNF[85]—presents this identical factual scenario. The NRC has generically concluded that the potential radiological exposures to members of the public from routine transportation of spent fuel "are approximately four to five orders of magnitude less than the collective background radiation dose."[86] Thus, as a matter of law, the hypothetical and minute radiological exposures upon which Petitioners seek to establish traditional standing fall far short of demonstrating an injury-in-fact.

3. Petitioners' Claims of Economic Injury Are Speculative and Not Supported by Any Objective Fundament

Finally, Petitioners allege standing based on speculative assertions of unspecified "impacts on property values" due to mere "proximity to nuclear facilities and transportation routes."[87] Nevertheless, the properties purportedly impacted by this proceeding—Fasken's interests 18 miles from the proposed WCS CISF (and 2 miles from the proposed Holtec CISF), and Mr. Boyd's interests four miles from the proposed WCS CISF—are *already* "proximate" to *multiple* existing nuclear facilities. Thus, their assertion in this regard is simply illogical and unsupported. Nevertheless, where a petitioner seeks to base its claim to standing on economic loss, "what is necessary is a showing . . . that the purported economic loss has some objective fundament, rather than being based solely on the petitioner's (or affiant's) perception of the economic loss in light of the proposed licensing action."[88]

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84 *Id*. at 429.

85 Petition at 3.

86 NUREG-2125 at xxiv. *See also* ER at 4-14 to -15 ("All of the NRC's assessments have concluded that the risk from radiation emitted from a transportation cask during routine, incident-free transportation is a small fraction of the radiation dose received from the natural background").

87 Petition at 3-4.

88 *Strata Energy, Inc.* (Ross In Situ Recovery Uranium Project), LBP-12-3, 75 NRC 164, 184 (2012) (citing *Diablo Canyon ISFSI*, LBP-02-23, 56 NRC at 432 (generic, unsubstantiated claims regarding health,

Petitioners fail to provide any objective basis, whatsoever, for their speculative concern. Importantly, the Board "need not uncritically accept" such "contested, untenable, conjectural, [and] conclusory" standing claims.[89] Rather, it must "weigh" those claims "and exercise its judgment about whether the standing element at issue has been satisfied."[90]

In essence, Petitioners ask the Board to hold that proximity to a nuclear materials facility, *per se*, results in property devaluation (and thus, demonstrates standing). But such a holding would eviscerate the Commission's prior ruling that a pure proximity presumption is not appropriate in materials proceedings.[91] Furthermore, the blanket determination requested here is entirely inappropriate given the Commission's recognition in the *LES* case that the precise opposite effect also is possible—*i.e.*, that property values near a nuclear installation "may actually *increase*."[92] For example:

- "parcels of property near the [facility] may increase in value, as possible sites for new business ventures supporting [the licensee] (*e.g.*, food service and equipment vendors)";[93]
- "increased demand for homes by migrating employees" also may "tend to increase the value of property near nuclear facilities";[94] and

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safety, and property devaluation impacts are insufficient to establish standing), *aff'd*, CLI-03-1, 57 NRC 1 (2003).

89 *Ross ISR*, LBP-12-3, 75 NRC at 177.

90 *Id*.

91 *Ross ISR*, CLI-12-12, 75 NRC at 610 n.32 ("we do not see a sound basis for departing from our current practice of basing standing [in materials proceedings] on the circumstances specific to the particular license application").

92 *La. Energy Servs., LP* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 108 (1998) (emphasis in original).

93 *Id*.

94 *Id*. at 109.

- the "influx of new tax money,"[95] may result in improved schools, infrastructure, and other government amenities which, in turn, could boost property values.

The Commission's decision in *LES* makes clear that some parcels of land near nuclear facilities may increase in value,[96] while other areas may decrease in value, and the only way to know the difference is through a fact-specific analysis. Given this explicit acknowledgement, Petitioners' conclusory and speculative claims of economic loss—which are not accompanied by *any* reasoned explanation whatsoever—are conjectural or hypothetical at best. Without some objective fundament, these baseless assertions certainly do not demonstrate a "concrete and particularized" injury capable of demonstrating standing.[97]

Additionally, the CISF would be co-located with WCS's *existing* low-level waste and mixed waste facilities. Petitioners offer no explanation of how the addition of passive spent fuel storage capabilities to the existing industrial activities in this area—including "a stone quarry, a hazardous waste and low-level radioactive waste landfill, a large power transmission substation, a county landfill, a uranium enrichment plant, and an aboveground oilfield waste disposal land farm"[98]—purportedly would introduce some incremental effect on property values.[99] Whereas,

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95 *Id*. at 108.

96 *Id*. ("To be sure, the Board also found that two or three parcels of property near the [facility] may increase in value").

97 *Sequoyah Fuels*, CLI-94-12, 40 NRC at 72.

98 ER at 3-62.

99 Petitioners cite *Kelly v. Selin*, 42 F.3d 1501, 1509-10 (6th Cir. 1995), for the proposition that assertions of diminished property values, alone, can demonstrate standing. However, the court in *Kelly* did not find standing on that basis alone. Rather, the court considered the property value claims in conjunction with a bundle of other claims, including "aesthetic interests" and "physical health," and the potential disruption of "enjoyment of [] lakefront property." *Id*. The court said nothing to suggest that unsubstantiated assertions of property devaluation, alone, would have demonstrated Article III standing. Moreover, that case also is factually distinguishable in that the action proposed was to *begin* storing waste, for the first time, at a lakefront location; here, WCS seeks to *continue* storing waste, albeit of a different type, at an *existing nuclear waste facility*. By any objective measure, Petitioners' alleged economic harm is far more speculative and attenuated than that in *Kelly*.

in the context of an existing facility, if the likelihood of an alleged injury is "just as high with or without the proposed" licensing action, there is no injury-in-fact, fairly traceable to the proposed licensing action, that could be remedied therein.[100] Here, we simply do not know—because Petitioners provide no benchmark or other objective indicator of potential (positive, negative, or neutral) property value impact.

They could have attempted to make the required "nonsubjective showing" by:

> demonstrating the value of property at a comparable distance from [the proposed] facility had dropped from what it was prior to the submission of [the] license application [or] actual sales/offers before and after the licensing proposal at issue in the proceeding, or by providing the declaration of a local realtor or property appraiser who furnishes an independent assessment of the property's value before and after the licensing action was proposed before the agency.[101]

Nevertheless, Petitioners failed to do so here. More importantly, they failed to provide *any* objective basis for their speculative—and quite likely wrong—claim. Given that "the petitioner bears the burden to provide facts sufficient to establish standing,"[102] and they have not done so here, these claims are insufficient to demonstrate traditional standing.

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In summary, Petitioners have failed to demonstrate either organizational or representative standing, under either proximity-plus or traditional standing theories. Accordingly, the Petition must be denied.

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100 *Tenn. Valley Auth.* (Sequoyah Nuclear Plant, Units 1 & 2; Watts Bar Nuclear Plant, Unit 1), LBP-02-14, 56 NRC 15, 27 (2002).

101 *Id*.

102 *Bell Bend*, CLI-10-7, 71 NRC at 139.

IV. PETITIONERS HAVE NOT SUBMITTED AN ADMISSIBLE CONTENTION

A. Legal Standards for Contention Admissibility

Under 10 C.F.R. § 2.309(f)(1), a hearing request "must set forth with particularity the contentions sought to be raised." In addition, Section 2.309(f)(1) states that each contention must:

> (i) Provide a specific statement of the issue of law or fact to be raised or controverted;
>
> (ii) Provide a brief explanation of the basis for the contention;
>
> (iii) Demonstrate that the issue raised is within the scope of the proceeding;
>
> (iv) Demonstrate that the issue raised is material to the findings the NRC must make to support the action that is involved in the proceeding;
>
> (v) Provide a concise statement of the alleged facts or expert opinions, including references to the specific sources and documents that support the petitioner's position and upon which the petitioner intends to rely; and
>
> (vi) Provide sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact.[103]

Failure to comply with any one of these six admissibility requirements is grounds for rejecting a proposed contention.[104] These requirements are "strict by design."[105] The rules were "toughened . . . in 1989 because in prior years 'licensing boards had admitted and litigated numerous contentions that appeared to be based on little more than speculation.'"[106] The purpose of the six criteria is to "focus litigation on concrete issues and result in a clearer and

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103 10 C.F.R. §§ 2.309(f)(1)(i)-(vi). *See also Susquehanna Nuclear, LLC* (Susquehanna Steam Elec. Station, Units 1 & 2), CLI-17-4, 85 NRC 59, 74 (2017) (reciting the six Section 2.309(f)(1) admissibility factors).

104 *See* Changes to Adjudicatory Process; Final Rule, 69 Fed. Reg. 2182, 2221 (Jan. 14, 2004); *see also Private Fuel Storage, LLC* (Indep. Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999).

105 *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-01-24, 54 NRC 349, 358 (2001).

106 *Id.* (citing *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, & 3), CLI-99-11, 49 NRC 328, 334 (1999)).

more focused record for decision."[107] The Commission has explained that it "should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing."[108]

The petitioner alone bears the burden to meet the standards of contention admissibility.[109] Thus, where a petitioner neglects to provide the requisite support for its contentions, the presiding officer may not cure the deficiency by supplying the information that is lacking or making factual assumptions that favor the petitioner to fill the gap.[110] A contention that merely states a conclusion, without reasonably explaining why the application is inadequate, cannot provide a basis for the contention.[111] A "material issue" is one that would "make a difference in the outcome of the licensing proceeding."[112] The petitioner must demonstrate that the subject matter of the contention would impact the grant or denial of a pending license application.[113]

A contention that challenges an NRC rule is outside the scope of the proceeding because, absent a waiver, "no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding."[114] This includes contentions that advocate stricter requirements than agency rules impose or that otherwise seek to litigate a generic determination established by a

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107 Changes to Adjudicatory Process, 69 Fed. Reg. at 2202; *see also Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 & 3), LBP-08-13, 68 NRC 43, 61 (2008).

108 Changes to Adjudicatory Process, 69 Fed. Reg. at 2202.

109 *See Entergy Nuclear Operations, Inc.* (Palisades Nuclear Plant), CLI-15-23, 82 NRC 321, 325, 329 (2015) ("[I]t is Petitioners' responsibility, not the Board's, to formulate contentions and to provide 'the necessary information to satisfy the basis requirement' for admission"); *DTE Elec. Co.* (Fermi Nuclear Power Plant, Unit 2), CLI-15-18, 82 NRC 135, 149 (2015) ("[T]he Board may not substitute its own support for a contention.").

110 *See Palisades*, CLI-15-23, 82 NRC at 329; *Fermi*, CLI-15-18, 82 NRC at 149; *Ariz. Pub. Serv. Co.* (Palo Verde Nuclear Station, Units 1, 2, & 3), CLI-91-12, 34 NRC 149, 155 (1991).

111 *USEC, Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006).

112 *Oconee*, CLI-99-11, 49 NRC at 333-34.

113 *See Indian Point*, LBP-08-13, 68 NRC at 62.

114 10 C.F.R. § 2.335(a).

Commission rulemaking.[115] Similarly, any contention that collaterally attacks applicable statutory requirements or the basic structure of the NRC regulatory process must be rejected as outside the scope of the proceeding.[116] Accordingly, a contention that simply states the petitioner's views about regulatory policy—or takes issue with the nature of existing regulations—does not present a litigable issue.[117]

Equally important, the Commission has stated further that the petitioner must "read the pertinent portions of the license application . . . state the applicant's position and the petitioner's opposing view," and explain why it disagrees with the applicant.[118] If a petitioner believes the license application fails to adequately address a relevant issue, then the petitioner is to "explain why the application is deficient."[119] A contention that does not *directly controvert* a position taken by the applicant in the application is subject to dismissal.[120] For example, if a petitioner submits a contention of omission, but the allegedly missing information is indeed in the license application, then the contention does not raise a genuine dispute.[121]

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115 *See Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), LBP-01-6, 53 NRC 138, 159-60, *aff'd*, CLI-01-17, 54 NRC 3 (2001) (rejecting the petitioner's contention that a license renewal applicant was required to prepare a probabilistic risk assessment, where NRC regulations did not require such an analysis).

116 *Carolina Power & Light Co.* (Shearon Harris Nuclear Power Plant, Unit 1), LBP-07-11, 66 NRC 41, 57-58 (2007) (stating that a contention that attacks applicable statutory requirements "must be rejected by a licensing board as outside the scope of the proceeding") (citing *Phila. Elec. Co.* (Peach Bottom Atomic Power Station, Units 2 & 3), ALAB-216, 8 AEC 13, 20 (1974)).

117 *See Peach Bottom*, ALAB-216, 8 AEC at 20-21.

118 Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process; Final Rule, 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989); *see also Millstone*, CLI-01-24, 54 NRC at 358.

119 Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,170; *see also Palo Verde*, CLI-91-12, 34 NRC at 156.

120 *See S.C. Elec. & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 & 3), CLI-10-1, 71 NRC 1, 21-22 (2010); *Tex. Utils. Elec. Co.* (Comanche Peak Steam Elec. Station, Unit 2), LBP-92-37, 36 NRC 370, 384 (1992), *vacated as moot*, CLI-93-10, 37 NRC 192 (1993).

121 *See Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 and 3), LBP-04-15, 60 NRC 81, 95 (2004); *see also Summer*, CLI-10-1, 71 NRC at 21-22.

B. Proposed Contention 1 Is Inadmissible

Proposed Contention 1 states:

> The Applicant's proposed CISF is not needed to ensure safe storage of SNF, even for indefinite durations.[122]

According to Petitioners, the statement of purpose and need in Section 1.1 of ISP's ER is incomplete and inaccurate because it wrongly claims there is a strategic need for the orderly transfer of SNF to a "safer and more secure centralized storage location."[123] Petitioners argue that the claim that centralized storage is safer and more secure implies that at-reactor storage is unsafe and "conflicts with the NRC's findings in the Waste Confidence Rule as expressed in NUREG-2157."[124]

This proposed contention should be rejected as it is inconsitent with NEPA requirements for the statement of purpose and need in an ER, misreads ISP's ER, and, by focusing on a single phrase from the statement of purpose and need, ignores other stated needs for the project. In this regard, the proposed contention raises issues outside the scope of this proceeding, does not raise an issue that is material to the findings the NRC must make, does not provide references to specific sources and documents that support the proposed contention or upon which Petitioners will rely, and does not show the existence of a genuine dispute on a material issue of fact or law with the Application as required by 10 C.F.R. §§ 2.309(f)(1)(iii)-(vi).

By way of background, applications under Part 72 are subject to an environmental review under NEPA and the NRC's implementing regulations in 10 C.F.R. Part 51. These regulations require a Part 72 applicant to submit an ER that addresses the environmental impacts of the

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122 Petition at 9.

123 *Id*.

124 *Id*.

proposed action and compare those impacts to the impacts of reasonable alternatives.[125] To facilitate this review, 10 C.F.R. § 51.45(b) states that an ER "shall contain a description of the proposed action, [and] a statement of its purposes . . . ."[126] NRC guidance on the scope of an ER's statement of purpose and need explains that the statement of purpose and need "should explain why the proposed action is needed."[127] That guidance states that "[e]xamples of need include a benefit provided if the proposed action is granted or descriptions of the detriment that will be experienced without approval of the proposed action. In short, the need describes what will be accomplished as a result of the proposed action."[128]

Consistent with NEPA, the NRC regulations, and the relevant regulatory guidance, Section 1.1 of ISP's ER identifies multiple, independent needs for the proposed CISF:

- The only alternative currently available to the commercial nuclear power utilities is to continue to store SNF at an ISFSI located at an existing operating commercial nuclear reactor.
- Although 9 nuclear power plants across the U.S. have been decommissioned and the spent fuel pools have been dismantled and decommissioned, the SNF remains and continues to be stored in onsite ISFSIs.
- Many policymakers and stakeholders in the communities that host shutdown reactors want to have the SNF stored in onsite ISFSIs removed to complete decommissioning of the site and allow for more beneficial uses of the land.
- A CISF is needed to ensure that the SNF at these commercial reactor sites can be safely removed so that remaining lands can be returned to greenfield status.
- Nuclear power utilities continue to remain responsible for the surveillance, maintenance, emergency preparedness, and physical security of the SNF stored at

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125 *See* 10 C.F.R. § 51.60 (requiring the ER to provide the information required by 10 C.F.R. § 51.45).

126 10 C.F.R. § 51.45(b). The Council on Environmental Quality ("CEQ") regulations also state: "The statement shall briefly specify the underlying purpose and need to which the agency is responding in proposing the alternatives including the proposed action." 40 C.F.R. § 1502.13.

127 NUREG-1748, Environmental Review Guidance for Licensing Actions Associated with NMSS Programs § 6.1.1 (Aug. 2003) (ML032450279).

128 *Id.*

their ISFSIs. These activities are estimated to cost each of the utilities an estimated $6 million per year.

- Developing a CISF in Andrews County, Texas would serve a national strategic need by providing for an orderly transfer of SNF from the twelve shutdown reactors to a safer and more secure centralized storage location.

- Not only would the CISF serve the needs of the 12 shutdown reactors, it would also be available to serve the needs of the existing 99 operating commercial nuclear reactors in the U.S., including those located in Texas, until a permanent repository becomes available.[129]

As shown above, the ER has described and specified the need for the proposed construction of the CISF along with its benefits. The ER also describes what the construction of the CISF will achieve if approved. The ER's statement of purpose and need thus complies with all applicable requirements.[130]

1. Proposed Contention 1 Misconstrues or Ignores Relevant Information in the Application and Therefore Is Unsupported and Fails to Raise a Genuine Material Dispute

Despite the ER identifying many needs for the proposed project, Petitioners object to the statement in the ER that storage of SNF at the proposed CISF would be "safer and more secure" than on-site storage.[131] Petitioners do not, however, object to any of the other needs for the CISF identified in the ER,[132] which makes this proposed contention immaterial. Even if one of those needs is somehow unsupported, the remaining needs for the CISF stand on their own, such as allowing multiple sites to be fully decommissioned and relieving utilities of maintenance and security obligations. Since Petitioners' proposed contention does not raise a material issue, it should be rejected.

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129 ER at 1-5 to 1-6.

130 *See* 10 C.F.R. Part 51, App. A § 4; NUREG-1748 at 6-1.

131 Petition at 9-10.

132 *Id*.

Petitioners also claim the ER's statement of purpose and need "conflicts with the NRC's findings in the Waste Confidence Rule as expressed in NUREG-2157."[133] Petitioners argue that, because the ER claims that storing SNF in a CISF is "safer and more secure," ISP is necessarily arguing that on-site storage of SNF is unsafe. This argument, however, relies on a misreading of the ER by Petitioners and a misunderstanding of the NRC's Generic Environmental Impact Statement for Continued Storage of Spent Nuclear Fuel (the "GEIS") and Continued Storage Rule (10 C.F.R. § 51.23).

Petitioners observe that the GEIS concluded that "at-reactor storage in spent fuel pools and on-site ISFSIs is an acceptable means to manage SNF"[134] and that "at-reactor SNF storage could continue safely indefinitely."[135] Nowhere in the ER does ISP disagree with the GEIS or its conclusions in any way. And ISP never claims that storing SNF on-site at nuclear facilities is not safe or secure, or could not continue. Rather, storing SNF at a CISF would be more safe and more secure for multiple reasons (such as consolidating and enhancing monitoring and security functions). In short, there is no basis to argue that the ER in any way contradicts the GEIS or Continued Storage Rule or suggests that on-site storage of SNF is unsafe.

Petitioners next argue that the proposed CISF will not further the cause of establishing a permanent repository and may, in fact, be a diversion from establishing one.[136] This argument misconstrues the purpose of the CISF project identified in the ER. The purpose of the project is not to provide permanent storage of SNF but is to provide an interim storage facility as a temporary alternative to at-reactor storage. Until a permanent repository is constructed, without

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133 *Id.* at 9.

134 *Id*.

135 *Id*. at 10.

136 *Id*. at 13.

the CISF, SNF will have no other option than being stored in on-site ISFSIs. Providing an option is the identified purpose of the project, and Petitioners are thus raising an immaterial issue.

Finally, Petitioners argue that the Application's "failure to discuss the restriction in 42 USC 10168(d)(1)," which they claim renders any CISF "an exercise in futility unless and until a permanent repository is licensed," constitutes a "material omission from Applicant's ER."[137] This argument is unsupported and fails to demonstrate a genuine material dispute because it is premised on a disingenuous misreading of the Application. In essence, Petitioners are recycling the argument from their earlier Motion to Dismiss, erroneously asserting that the Application *relies* on an assumption that the U.S. Department of Energy ("DOE") will take title to SNF at some point before emplacement at the WCS CISF—which they claim is contrary to 42 U.S.C. § 10168(d)(1).[138] However, as explained in much greater detail in ISP's Answer pleading responding to that argument (which ISP incorporates by reference here), the Application does not rely on any such assumption; rather, the Application clearly contemplates that either DOE *or* some other entity may hold title to the SNF to be stored at the CISF.[139] In other words, it does not "rely" on the assumption Petitioners deride as invalid, and therefore—even assuming *arguendo* Petitioners' strained interpretation of 42 U.S.C. § 10168(d)(1) is correct—the WCS CISF is not an "exercise in futility" as Petitioners allege. Accordingly, this line of argument also is unsupported and fails to raise a genuine material dispute with the Application.

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137 *Id.* at 14-15.

138 *See generally* Motion to Dismiss.

139 *See generally* Interim Storage Partners LLC's Answer Opposing Fasken's and PBLRO's Motion to Dismiss as Referred to the ASLBP for Consideration Under 10 C.F.R. § 2.309 (Nov. 20, 2018).

2. Proposed Contention 1 Raises Issues Immaterial to This Proceeding

Petitioners also argue that some needs for the project identified in the ER are not actually needs at all. As shown below, however, these arguments fail to raise a material issue about the sufficiency of the ER. First, Petitioners argue that the "needs" identified in the ER "are actually preferences that mainly accommodate reactor owners" and the wants of communities to have the SNF removed so that nuclear sites can be fully decommissioned.[140] That the cited needs for the project also align with some policy preferences of a set of stakeholders is immaterial.[141] Furthermore, this need is entirely consistent with the recommendations of the Blue Ribbon Commission ("BRC") on America's Nuclear Future, which the Application seeks, in some degree, to advance.[142]

Next, Petitioners argue there is no need for the project because ISP did not cite information suggesting that plants will not be decommissioned without a CISF.[143] This argument, however, is immaterial because it ignores the fact that future decommissioning projects will merely exacerbate stranded spent fuel issues and associated costs, as identified by the BRC.[144] That some sites may be *partially* decommissioned despite the lack of a CISF does not eliminate the need for the proposed project, which allows sites to return to greenfield status, *i.e.*, to be *fully* decommissioned.[145] Thus, Petitioners' argument does not undercut the potential benefits of the project identified in the ER. A "material issue" is one that would "make a

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140 Petition at 10.

141 Indeed, Petitioners would only substitute the policy preferences of another set of stakeholders.

142 *See* Blue Ribbon Commission on America's Nuclear Future, Report to the Secretary of Energy at 32-35 (Jan. 2012) ("BRC Report").

143 Petition at 11.

144 BRC Report at 32-35.

145 ER at 1-5 ("A CISF is needed to ensure that the SNF at these commercial reactor sites can be safely removed so that the remaining lands can be returned to *greenfield status*") (emphasis added).

difference in the outcome of the licensing proceeding."[146] Ultimately, Petitioners simply have not identified such an issue here.

3. Petitioners' Challenge to the NRC's Continued Storage Rule Is Outside the Scope of This Proceeding

Petitioners also argue that ISP "is obliged to address the why [sic] its proposed facility in Andrews County will not become a de facto permanent SNF storage facility."[147] This argument impermissibly challenges the NRC's Continued Storage Rule. That rule states that the ER need not contain an analysis of the environmental impacts of indefinite storage because that analysis is presented in NUREG-2157, codified in 10 C.F.R. § 51.23. Section 51.23(b) provides that "the environmental reports described in §§ 51.50, 51.53, and 51.61 are not required to discuss the environmental impacts of spent nuclear fuel storage in a reactor facility storage pool or an ISFSI for the period following the term of the reactor operating license, reactor combined license, or ISFSI license."[148] This argument is an impermissible attack on the NRC regulatory scheme and must be rejected as outside the scope of this proceeding.[149]

* * *

Taken together, Petitioners' arguments are unsupported, outside the scope of this proceeding, and do not demonstrate the existence of a genuine dispute with the Application on a material issue of fact or law. They did not show how the statement of purpose and need fails to provide a basis for evaluating an array of potential benefits, detriments, or alternatives to the

146 *Oconee*, CLI-99-11, 49 NRC at 333-34.

147 Petition at 13.

148 10 C.F.R. § 51.23(b).

149 10 C.F.R. § 2.335(a); *Shearon Harris*, LBP-07-11, 66 NRC at 57-58 (stating that a contention that attacks applicable statutory requirements "must be rejected by a licensing board as outside the scope of the proceeding") (citing *Peach Bottom*, ALAB-216, 8 AEC at 20).

proposed action, or, as a whole, fails to satisfy any legal requirement. Accordingly, Proposed Contention 1 should be rejected for failure to satisfy 10 C.F.R. §§ 2.309(f)(1)(iii)-(vi).

C. Proposed Contention 2 Is Inadmissible

Proposed Contention 2 states:

> ISP's SAR fails to provide adequate data regarding active and abandoned oil and gas wells and borings on and near the WCS site, contrary to the requirements of 10 C.F.R. 72.103.

Based on Mr. Pachlhofer's use of a petroleum industry Geographic Information System ("GIS")-based software, Petitioners claim that the Application fails to mention and investigate in the SAR a total of 4,947 well bores drilled in Texas and New Mexico within a 10-mile radius of the WCS site, as they claim is required by 10 C.F.R. § 72.103.[150] As discussed below, Petitioners ignore portions of the Application that address this subject matter and they fail to provide any support or identify a legal requirement for additional discussion of the well bores in a 10-mile radius of the site. For these reasons, Proposed Contention 2 must be rejected for failing to satisfy 10 C.F.R. §§ 2.309(f)(1)(iv), (v), and (vi).

1. Proposed Contention 2 Fails to Demonstrate a Genuine Dispute, Because Petitioners Fail to Address Relevant Information in the Application

Proposed Contention 2 is based on 10 C.F.R. § 72.103(a)(1), which states in its entirety:

> East of the Rocky Mountain Front (east of approximately 104° west longitude), except in areas of known seismic activity including but not limited to the regions around New Madrid, MO; Charleston, SC; and Attica, NY; sites will be acceptable if the results from onsite foundation and geological investigation, literature review, and regional geological reconnaissance show no unstable geological characteristics, soil stability problems, or potential for vibratory ground motion at the site in excess of an appropriate response spectrum anchored at 0.2 g.

[150] Petition at 16; Pachlhofer Decl. at 6.

To address the requirements of this regulation, ISP performed a detailed site investigation, which is described in the following sections of the SAR and related attachments. Of note, SAR Section 2.1 describes the geography and demography of the site, and provides the foundation for the Section 72.103(a)(1) investigation. The evaluation of "unstable geological characteristics, soil stability problems, or potential for vibratory ground motion at the site" is provided throughout SAR Chapter 2 and its attachments. This includes SAR Section 2.6, which is titled "Geology and Seismology," and includes Subsections 2.6.1 (Basic Geologic and Seismic Information), 2.6.2 (Vibratory Ground Motion), 2.6.3 (Surface Faulting), 2.6.4 (Stability of Subsurface Materials), 2.6.5 (Slope Stability), and 2.6.6 (Volcanism). Relevant SAR attachments include Attachment D (Seismic Hazard Evaluation for WCS CISF) and Attachment E (Geotechnical Investigation for WCS CISF).

Petitioners claim that "ISP's SAR fails to admit the presence of the nearly 5,000 wells located within 10 miles of the site."[151] But, as acknowledged by Petitioners,[152] Section 2.1 already explains that ISP considered local land uses, including "drilling for and production from oil and gas wells." It cannot be said that ISP ignored oil and gas wells in the Application. Indeed, these statements in the SAR demonstrate that ISP specifically considered oil and gas wells as part of the Section 72.103(a)(1) "regional geological reconnaissance." And there is no requirement—and Petitioners have identified none—to further enumerate or list gas, oil, or any other wells within any specific radius of the site, particularly if they do not actually impact the consideration of "unstable geological characteristics, soil stability problems, or potential for vibratory ground motion at the site" that are the subject of Section 72.103(a)(1). Therefore, to

151 Petition at 17.

152 *Id*.

the extent Proposed Contention 2 is a claim of omission related to the quantification of oil and gas wells within 10 miles of the site, it fails for not identifying any legal requirement for additional enumeration of those wells, nor providing any "supporting reasons" for such a claim of omission, as required by 10 C.F.R. § 2.309(f)(1)(vi).

Moreover, Petitioners fail to challenge those extensive sections of the Application that actually evaluate and reach conclusions required by Section 72.103(a)(1). As noted above, those include SAR Section 2.6, which addresses geology and seismology, and Attachments D and E, which address the seismic hazard evaluation and geotechnical investigation, respectively. Additionally, SAR Section 2.7 summarizes the site conditions affecting construction and operation of the WCS CISF, and reaches favorable conclusions related to Section 72.103(a)(1), including favorable geological conditions, soil stability, and ground motion. In this contention based on Section 72.103(a)(1), Petitioners fail to challenge the very information and conclusions in the Application that address that regulation. For this reason alone, Contention 2 fails, as 10 C.F.R. § 2.309(f)(1)(vi) requires that a contention identify "specific portions of the application . . . that the petitioner disputes." The Commission has stated that a petitioner must "read the pertinent portions of the license application . . . state the applicant's position and the petitioner's opposing view," and explain why it disagrees with the applicant.[153] Petitioners have not even attempted to do so here.

Similarly, Petitioners ignore information in the Application describing the absence of oil and gas wells on the CISF site. Petitioners incorrectly claim that discussion of the oil and gas

[153] Rules of Practice for Domestic Licensing Proceedings – Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989); *see also Millstone*, CLI-01-24, 54 NRC at 358.

wells is limited to a "few statements indicating that 'drilling for and production from oil and gas wells' were land uses within a few miles of the WCS CISF."[154] In fact, the Application states:

> Subsurface petroleum product exploration and production have been conducted in the area of the Central Basin Platform for over 75 years. The local area has been heavily explored for oil and gas reserves over the last 35 years. Most of the oil wells in the vicinity of the CISF site have been abandoned or are in the process of secondary or tertiary recovery. The *absence of oil wells on the site* supports the absence of favorable conditions for oil production. Oil and gas wells are also located to the west in New Mexico.[155]

Thus, the Application fully acknowledges the oil and gas wells in the region and highlights the "absence of oil wells on the site." Petitioners do not challenge these statements, further failing to satisfy 10 C.F.R. § 2.309(f)(1)(vi). The Commission has explained that a contention that does not directly controvert a position taken by the applicant in the application is subject to dismissal.[156]

Finally, because Petitioners do not identify any actual concerns related to the oil and gas wells, the Board and ISP are left to only guess at which site features they believe are impacted by these wells. To the extent Petitioners are claiming that the oil and gas activities represented by the wells are causing some sort of additional seismic activity (*i.e.*, induced seismicity), this is fully addressed in the SAR. For example, SAR Section 2.6.2 (Vibratory Ground Motion) states: "The absence of late-Quaternary faulting and the low to moderate rate of background seismicity, *even that associated with petroleum recovery activities*, results in relatively low seismic hazard at the WCS CISF."[157] The SAR also includes an Attachment D that provides the Seismic Hazard Evaluation, which includes an entire Section 4.3 that evaluates any induced seismicity from oil

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154 Petition at 17 (quoting SAR, p. 2-2).

155 Application at 12-2 (emphasis added).

156 *See Summer*, CLI-10-1, 71 NRC at 21-22; *Comanche Peak*, LBP-92-37, 36 NRC at 384.

157 Emphasis added.

and gas activities.[158] Proposed Contention 2 mentions none of this information, contrary to 10 C.F.R. § 2.309(f)(1)(vi).

2. Proposed Contention 2 Is Unsupported and Immaterial, Because Petitioners Identify No Actual Impact from Oil and Gas Wells

Even assuming that ISP had not considered the oil and gas wells identified by Petitioners, which is not the case as described above, Petitioners have not identified any actual impact from the oil and gas wells that would affect the WCS CISF. This failure renders Proposed Contention 2 deficient for failing to identify a material issue, contrary to 10 C.F.R. §§ 2.309(f)(1)(iv) and (vi), and for failing to provide the requisite support, contrary to 10 C.F.R. § 2.309(f)(1)(v).

Petitioners allege a total of almost 5,000 well bores within 10 miles of the WCS site, but they do not describe where those wells are located within that 10-mile radius. A review of public sources from Texas and New Mexico readily shows that the entire WCS property only includes a handful of wells, most of which are "dry holes" (*i.e.*, wells drilled for oil and gas, but never produced).[159] The proposed CISF boundary itself includes only a *single dry hole*, and no other oil or gas wells, and certainly no actively producing wells. Except for a handful of them, the almost 5,000 wells identified by Petitioners are miles away from the site. Petitioners provide no claims or information to satisfy their burden of explaining how these wells could impact the WCS CISF. Petitioners also make vague, generalized statements about abandoned wells or orphan wells, but again provide no explanation for how they could possibly impact the CISF.[160]

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158 This Attachment D is proprietary and withheld from public disclosure. Petitioners could have, but did not, seek access to the information in accordance with the procedures outlined in the Notice of Hearing Opportunity. *See* Notice of Hearing Opportunity, 83 Fed. Reg. at 44,073-75.

159 *See* Texas Railroad Commission Map, *available at* http://wwwgisp.rrc.texas.gov/GISViewer2/; New Mexico Oil Conservation Division Oil and Gas Map, *available at* http://nm-emnrd.maps.arcgis.com/apps/webappviewer/index.html?id=4d017f2306164de29fd2fb9f8f35ca75.

160 *See* Petition at 17; Pachlhofer Decl. at 6-7.

Thus, these statements about wells—without any articulation of relevance to the suitability of the CISF site itself—are simply not material nor supported. The Commission has ruled that a contention will be ruled inadmissible if the petitioner has offered no tangible information but instead only "bare assertions and speculation."[161]

Petitioners make a single statement that "these abandoned wells should be analyzed as potential pathways to groundwater."[162] But this claim too is unsupported. As a preliminary matter, Petitioners fail to address the many statements in the Application explaining that the project would preclude groundwater contamination. For example, SAR Section 2.7 states: "The method of storage (dry cask), the nature of the storage casks, the extremely low permeability of the red bed clay and the depth to groundwater beneath the WCS CISF preclude the possibility of groundwater contamination from the operation of the WCS CISF." The existence of wells, even if they were on the CISF site, does not affect this conclusion. Moreover, as noted above, except for a single dry hole, the wells identified by Petitioners are located beyond the CISF footprint. Petitioners have provided no support regarding their groundwater claim, rendering this single statement immaterial. A contention that merely states a conclusion, without reasonably explaining why the application is inadequate, cannot provide a basis for the contention.[163]

Additionally, Mr. Pachlhofer discusses orphan wells and a recent problem Fasken had with one on a Fasken site,[164] but again he does not explain why orphan wells are likely at the CISF (given only a single dry hole in the CISF footprint), how an orphan well would even impact the CISF if one existed, or why any orphan wells discovered in the future would not be

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161 *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003) (quoting *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 208 (2000)).

162 Petition at 17.

163 *USEC*, CLI-06-10, 63 NRC at 472.

164 Pachlhofer Decl. at 6-7.

addressed during construction. Mr. Pachlhofer similarly refers to other activities in the vicinity of the site (*e.g.*, "Some facilities, such as gas plants, are staffed 24 hours a day, seven days a week") and transportation on State Highway 176,[165] but utterly fails to provide any support or explanation for why these activities are material to the licensing of the CISF.

Petitioners' reference to *Exelon Nuclear Texas Holdings, LLC* (Victoria County Station Site), LBP-11-16, 73 NRC 645 (2011) ("*VCS*") likewise does not support admission of Proposed Contention 2, as that case is not binding on the Board and it is readily distinguishable. *VCS* addressed petitioner challenges regarding active and abandoned oil and gas wells at a greenfield site under consideration for siting a light water nuclear power reactor.[166] The WCS CISF, on the other hand, is a passive dry storage facility, at a site that has an existing waste disposal operator and that has been extremely well investigated. Additionally, the *VCS* petitioner relied upon 10 C.F.R. §§ 100.20(b) and 100.21(e) as the regulatory basis for their contention—those regulations address a very different subject: the "nature and proximity of manrelated hazards" and "[p]otential hazards associated with nearby . . . industrial . . . facilities." Petitioners here cite to Section 72.103, which addresses: "unstable geological characteristics, soil stability problems, or potential for vibratory ground motion." These very different topics are not addressed in the *VCS* case for the contention referenced by Petitioners. Furthermore, the *VCS* petitioner had identified hundreds of wells for the VCS site, referring to the site "as a veritable 'Swiss cheese' and unsuitable as a location of a future nuclear power plant"[167]; whereas, Petitioners here have not identified any onsite active wells, and only a single dry hole exists on the WCS CISF footprint. As discussed above, Petitioners here have not identified any impact from any well on the CISF.

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165 *Id.* at 7.

166 *See* Petition at 16-17; *VCS*, LBP-11-16, 73 NRC at 665-70.

167 *VCS*, LBP-11-16, 73 NRC at 665.

These are much different circumstances, and as such, *VCS* is not helpful to their argument. Accordingly, Proposed Contention 2 must be rejected for failing to satisfy 10 C.F.R. §§ 2.309(f)(1)(iv), (v), and (vi).

* * *

In summary, because Petitioners ignore relevant portions of the Application, and fail to provide any support or identify a legal requirement that purportedly has not been satisfied, Proposed Contention 2 must be rejected as contrary to 10 C.F.R. §§ 2.309(f)(1)(iv), (v), and (vi).

D. <u>Proposed Contention 3 Is Inadmissible</u>

Proposed Contention 3 states:

> The Applicant's Emergency Response Plan (ERP) Fails to Address How Licensee Will Protect the Facility from Credible Fire and Explosion Effects Including Those that are Caused by Aircraft Crashes.[168]

Although Petitioners cite multiple NRC regulations and guidance documents, Proposed Contention 3 centers on ISP's compliance with the requirements of 10 C.F.R. § 72.122(c).[169] As summarized by Petitioners, Proposed Contention 3 alleges that ISP cannot meet Section 72.122(c)'s requirements unless it can establish that its "portable spill and contamination control equipment is capable of effectively minimizing the adverse effects of a catastrophic fire resulting from a plane crash" without assistance from a suppressant foam-producing truck provided by

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168 Petition at 18.

169 *See id.* at 18-20, 22, 25-26. 10 C.F.R. § 72.122(c) ("Protection against fires and explosions") states in full:

> Structures, systems, and components [("SSCs")] important to safety [("ITS")] must be ***designed*** and located so that they can continue to perform their *safety functions* effectively under *credible fire and explosion exposure conditions*. Noncombustible and heat-resistant materials must be used wherever practical throughout the ISFSI or MRS, particularly in locations vital to the control of radioactive materials and to the maintenance of safety control functions. Explosion and fire detection, alarm, and suppression systems shall be ***designed*** and provided with sufficient capacity and capability to minimize the adverse effects of fires and explosions on structures, systems, and components important to safety. The design of the ISFSI or MRS must include provisions to protect against adverse effects that might result from either the operation or the failure of the fire suppression system. (Emphasis added).

Andrews County Volunteer Fire Department ("ACVFD").[170] As discussed further below, Petitioners claim (incorrectly) that ISP must demonstrate compliance with the fire and explosion-related facility *design* requirements contained in Section 72.122(c) through the Consolidated Emergency Response Plan ("CERP"), a document prepared to meet the *emergency planning and response* requirements of 10 C.F.R. § 72.32.[171]

Proposed Contention 3 should be rejected as inadmissible under 10 C.F.R. §§ 2.309(f)(1)(iv)-(vi) because its lacks adequate support and fails to establish a genuine dispute with the Application on a material issue of law or fact. Petitioners' contention hinges on the premise that ISP has included "the potential for an airplane crash as a credible incident" in its Application.[172] As explained below, that premise is erroneous and reflects Petitioners': (1) failure to carefully review the *relevant* portions of the SAR; (2) misplaced reliance on a single statement in the CERP; and (3) improper conflation of Section 72.122(c) and other regulations that have no bearing on the identification and analysis of credible fire and explosion exposure conditions.

1. Neither the SAR Nor the CERP Identifies an Airplane Crash as a Credible Accident Condition Within the Meaning of 10 C.F.R. § 72.122(c)

a. The Relevant SAR Sections, Which Petitioners Entirely Ignore, Do Not Include an Aircraft Crash as a Credible Accident Condition

First, contrary to Petitioners' claim, ISP has *not* identified an airplane crash into a cask/canister system as a credible accident condition for purposes of demonstrating compliance with 10 C.F.R. § 72.122(c). While Petitioners allege deficiencies in the Application *vis-à-vis* the requirements of Section 72.122(c), they fail to identify—and certainly do not challenge—the

170 Petition at 26.

171 *See, e.g.*, *id.* at 19 ("the ERP does not describe the on-site means of mitigating a credible airplane crash").

172 *Id.* at 20.

relevant portions of the SAR. As indicated in SAR Table 4-2 ("WCS CISF Compliance with General Design Criteria"), SAR Section 3.3.6 describes the manner in which the CISF will comply with Section 72.122(c)'s fire and explosion protection requirements.[173] Section 4.3.8 ("Fire Protection System") and Section 7.5.3 ("Cask Handling Building Structural Design") of the SAR describe the design features that provide fire and explosion protection.[174] Further, Section 4.3.8 and Tables A.3-1, B.3-1, C.3-1, D.3-1, E.3-1, F.3-1 and G.3-1 in Appendices A through G provide information for each authorized canister/cask system listed in the Proposed Technical Specifications (Appendix A to the Application) to demonstrate its capability to withstand postulated fire and explosion accidents.[175] *Petitioners reference none of these SAR sections, tables, or appendices in their Petition.* Consequently, they fail to directly controvert the pertinent portions of the Application, as required by 10 C.F.R. § 2.309(f)(1)(vi).[176]

Similarly, Petitioners fail to mention SAR Chapter 12, which demonstrates the capability of structures, systems and components ("SSCs") important to safety ("ITS") to withstand postulated *credible* accidents. Specifically, Chapter 12 presents the engineering analyses performed to qualify the storage and transportation systems to be received at the CISF for off-normal operating conditions and for a range of credible and hypothetical accidents conditions. Section 12.1 and Section 12.2 address off-normal events and postulated accident events, respectively, to establish that the WCS CISF system designs satisfy the applicable operational and safety acceptance criteria.[177]

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173 *See* SAR at 4-32 (Table 4-2, Sheet 1).

174 *See id* at 4-11 to 4-12, 4-32, 7-33 to 7-39.

175 *See id.* at 4-32 (Table 4-2, Sheet 1).

176 *Summer*, CLI-10-1, 71 NRC at 21-22.

177 *See* SAR at 12-1 to 12-8.

As noted in the introductory paragraph to Chapter 12 and in Section 12.2, ISP followed the guidance in NRC Regulatory Guide 3.48,[178] which directs applicants to use the design events identified by ANSI/ANS 57.9-1984 as the bases for the accident analyses performed for the storage and transportation systems.[179] Section 12.2 describes the design basis accident events specified by ANSI/ANS 57.9-1984, and other credible accidents postulated to affect the normal safe operation of the WCS CISF.[180] It also describes the analyses for a range of hypothetical accidents, including those with the potential to result in a total effective dose equivalent of greater than 5 rem outside the owner controlled area or the sum of the deep-dose equivalent specified in 10 C.F.R. § 72.106.[181] Table 12-1 ("Off-Normal and Accident Evaluations for the Storage Systems at the WCS CISF") cites the appropriate Appendix (Appendix A.12, B.12, C.12, etc.) for each authorized canister/cask system (*e.g.*, NUHOMS® MP187 Cask System, Standardized Advanced NUHOMS® System) listed in the Proposed Technical Specifications where each accident condition is analyzed to demonstrate that the requirements of 10 C.F.R. § 72.122 are met, and that adequate safety margins exist for the WCS CISF system design.[182]

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178 NRC Regulatory Guide 3.48, Rev. 1, "Standard Format and Content for the Safety Analysis Report for an Independent Spent Fuel Storage Installation or Monitored Retrievable Storage Installation (Dry Storage)" (Aug. 1989) (ML003739163).

179 *Id.* at 8-3. The NRC accepts use of ANSI/ANS 57.9 and the codes and standards cited therein as the basic references for ISFSI structures important to safety that are not designed in accordance with the ASME B&PVC Section III. *See* NUREG-1567, Standard Review Plan for Spent Fuel Dry Storage Facilities, Final Report at 5-17 (Mar. 2000). Accident events are considered to occur infrequently, if ever, during the lifetime of the facility. *Id.* at 15-1. ANSI/ANS 57.9 subdivides this class of accidents into Design Event III (a set of infrequent events that could be expected to occur during the lifetime of the ISFSI) and Design Event IV (events that are postulated because they establish a conservative design basis for SSCs important to safety). *Id*. NUREG-1567 states that it makes no distinction between these two classes of events, and that the effects of natural phenomena, such as earthquakes, tornadoes, hurricanes, floods, tsunami, and seiches, are considered to be accident events. *Id.*

180 SAR at 12-3.

181 *Id.*

182 *Id.* at 12-1, 12-10. The Appendices cited in Table 12-1 describe the radiological calculations performed to confirm that on-site and off-site dose rates are within acceptable limits. The resulting accident condition stresses in the WCS CISF system components were evaluated, and compared with the applicable code limits. Where appropriate, ISP combined the accident condition stresses with those of normal operating

Review of SAR Section 12.2 and the SAR Appendices referenced therein makes clear that, consistent with NRC guidance and ANSI/ANS 57.9-1984, ISP considered the following postulated accident conditions, as applicable to each system:

- Up/Blockage of Air Inlets/Outlets
- Drop Accidents
- Earthquakes
- Lightning
- Fire/Explosion
- Flood
- Tornado Wind and Missiles
- Tip Over/Overturning.[183]

Thus, contrary to Petitioners' claim, ISP did not include an airplane crash as a "credible" accident condition for purposes of demonstrating compliance with 10 C.F.R. § 72.122(c). Petitioners do not identify any regulation requiring that an applicant include and analyze an aircraft crash into a canister/cask system to meet the *fire and explosion protection* requirements set forth in that regulation. For this reason, Proposed Contention 3 fails to identify a material issue, and fails to directly contest the specific portions of the Application that are germane to ISP's compliance with Section 72.122(c).

b. Petitioners Misconstrue the CERP's Purpose and Conflate Different Part 72 Regulations in Claiming That the CERP Identifies an Airplane Crash as a Credible Accident and the CERP Must Comply with Section 72.122

As noted above, in claiming that ISP does not comply with 10 C.F.R. § 72.122(c), Petitioners cite a table appearing in Appendix C ("Facility Emergency Action Levels") to the CERP.[184] The required contents of the CERP, however, are specified in an entirely different regulation, 10 C.F.R. § 72.32, which requires, among other things, that the Emergency Plan

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loads in accordance with the load combination definitions. Load combination results for the WCS CISF and the evaluation for fatigue effects also are presented in the Appendices.

183 *Id.* at 12-3; Appendices A.12 through G.12.

184 *See* Petition at 19 (quoting CERP at 59).

accompanying a CISF application identify different types of radioactive material accidents and an "alert" classification for such accidents.[185] Appendix C lists types of "Incidents" that might trigger an "Alert" and "Site Area Emergency"—as those terms are defined and used in the CERP—at the WCS site.[186] An "incident" is broadly defined as "[a]n occurrence that requires action by the Emergency Response Organization."[187] Table A ("Emergency Classification") of the CERP provides the criteria for each Emergency Action Level and the expected response. It defines Alert as "an incident that led or could lead to a release to the environment of radioactive or hazardous material, but the release is not expected to require a response by an off-site response organization to protect persons off-site."[188] Table A defines a Site Area Emergency as "an incident that led or could lead to a significant release to the environment of radioactive or other hazardous material and that could require a response by an off-site organization to protect persons off-site."[189] Appendix C lists an "Airplane Crash" as one type of incident, and indicates that "[a] plane crash on Facility property" would trigger an Alert, and "[a] plane impacting a hazardous material or radiologically controlled area" would trigger a Site Area Emergency.[190]

Notably, Appendix C largely resembles Appendix A ("Examples of Initiating Conditions") to Regulatory Guide 3.67, Revision 1, the guidance document on which the CERP is based.[191] Appendix A, like Appendix C to the CERP, "provides a list of examples of initiating

185 *See* 10 C.F.R. §§ 72.32(a)(1)-(3).

186 CERP at 59-60 (App. C).

187 *Id.* at 57 (App. B).

188 *Id.* at 15 (Tbl. A).

189 *Id.*

190 *Id.* at 59 (App. C).

191 *See* Regulatory Guide 3.67, Rev. 1, "Standard Format and Content for Emergency Plans for Fuel Cycle and Materials Facilities," App. A at A-1 (Apr. 2011) (ML103360487).

conditions for declaring an alert or site area emergency."[192] It does not purport to identify or establish credible fire and explosion exposure conditions for purposes of compliance with Section 72.122(c). Section 72.32, Regulatory Guide 3.67, and the CERP, in fact, contain no references to 10 C.F.R. § 72.122(c). Importantly, the fact that CERP Appendix C lists an airplane crash alongside other incidents like fires, explosions, tornadoes (among others) does not mean that it is or can be considered a "credible fire and explosion exposure condition" within the meaning of Section 72.122(c). As SAR Section 13.5 ("Emergency Response Planning") explains:

> All accidents and off-normal events evaluated in Chapter 12 of this SAR were considered in the planning basis for development of the CERP. *The planning basis includes credible events* ***as well as hypothetical accidents whose occurrence is not considered credible****, so as not to limit the scope of Emergency Response Planning*. Evaluation of the consequences of credible and hypothetical accidents postulated to occur at the WCS CISF determined that releases of radioactivity would not require response by an off-site organization to protect persons beyond the boundary of the WCS CISF owner-controlled area. There is a single emergency classification level for events at the WCS CISF, the Alert classification, which is based on the *worst-case consequences of potential accidents which are postulated to occur at the WCS CISF*.[193]

The key point here is that the CERP is not intended to demonstrate compliance with or otherwise implement the requirements of Section 72.122(c), and discussion of an event in the CERP does not mean that it is credible for the CISF. As explained above, Section 72.122(c) is a *design-centered* regulation intended to ensure that SSCs classified as ITS, as well as explosion and fire detection, alarm, and suppression systems, are appropriately designed and located in light of credible fire and explosion exposure conditions. In contrast, Section 72.32—the requirements of which are implemented via the CERP—is intended to ensure appropriate *onsite*

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192 *Id.* at 7.

193 SAR at 13-37 (emphasis added).

and offsite emergency responses to any incident potentially involving the release of radioactive or other hazardous material without limitation to credibility.[194] Petitioners improperly conflate these two disparate sets of requirements throughout their proposed contention in repeatedly arguing that the CERP must comply with the requirements of 10 C.F.R. § 72.122(c).[195] Thus, Petitioners' unsupported reading of the Application and the NRC's regulations fails to identify a material issue or raise a genuine dispute.

2. Petitioners' Various Criticisms of the Application Are Unsupported

a. Petitioners Have Identified No Deficiencies in the SAR

Petitioners' failure to challenge the relevant SAR sections identified above is by itself grounds for dismissal of the contention under Section 2.309(f)(1)(vi). It follows that Petitioners also have failed to provide adequate support for their allegations of non-compliance with Section 72.122(c), as required by Section 2.309(f)(1)(v). In short, they have not explained how the information presented in the numerous SAR sections cited above fails to comply with the facility design-related requirements in Section 72.122(c). Consequently, they have provided no information to suggest that any SSC classified as ITS will be unable to perform its safety function effectively under *credible* fire and explosion exposure conditions.[196] Moreover, insofar

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194 *See* Application at 11-1 ("The Emergency Plan (EP) has been prepared to establish the procedures and practices for management control over unplanned or emergency events that may occur at the CISF, and to meet the requirements of 10 CFR 72.32(a)."); SAR at 13-37 ("A [CERP] has been prepared for the WCS CISF with an outline and content that complies with the requirements of 10 CFR 72.32(a).").

195 *See, e.g.*, Petition at 19 ("The on and off-site procedures listed in the ERP to prevent fires and explosions do not comply with 10 C.F.R. § 72.122 which requires that suppression systems 'be designed and provided with sufficient capacity and capability to minimize the adverse effects of fires and explosions on SSCs.'"); *id.* at 20 ("[T]he ERP's inclusion of an airplane crash as a credible incident requires compliance with requirements of sub-section 72.122(c)."); *id.* at 22 ("[T]he ERP fails to specifically state how their on-site emergency equipment will effectively minimize the adverse effects of an extreme fire or explosion caused by an airplane crash, including a large commercial aircraft, and thus does not satisfy the requirements of 10 CFR § 72.122(c) . . . .").

196 In this regard, they present no information challenging ISP's statements in SAR Section 3.3.6 that: (1) the WCS CISF is a low fire load facility; (2) the surface of the Protected Area is non-combustible; (3) the WCS CISF contains no permanent flammable material other than some electrical and electronic components within the Cask Handling Building ("CHB"); (4) the other materials of construction, concrete and steel, can

as Petitioners' contention arguably challenges ISP's compliance with regulations other than Section 72.122(c), it likewise fails for lack of specificity and adequate support.

b. Petitioners' Criticisms of the CERP Are Not Adequately Supported

Petitioners discuss portions of the CERP at some length in their contention, but never specifically allege that it fails to comply with 10 C.F.R. § 72.32. They cite that regulation only once in quoting a portion of Section 72.32(a).[197] Inasmuch as Petitioners express concerns about the contents of the CERP, those concerns stem from the erroneous premise that the CERP must specifically address fires or explosions resulting from aircraft crashes as a credible accident condition. As explained above, that is not the case. Appendix C to the CERP lists an aircraft crash as one type of incident (a hypothetical, beyond-design basis incident in this case) that could trigger an Alert or Site Area Emergency.[198]

Furthermore, Petitioners fail to provide any documentary or expert opinion support for their principal criticisms of the CERP. Among other things, Petitioners merely *speculate* that: (1) the time required to erect berms will "increase the amount of radioactive material released in the environment;" (2) "it is . . . unlikely that the facility could extinguish the fire and mitigate the release of gaseous and/or radioactive fumes until the ACVFD arrived with its suppressant foam producing truck;" (3) "it is unlikely, and ultimately unknown that the site's suppression system is designed and capable to minimize the adverse effects resulting from catastrophic fires and explosions;" and (4) a suppressant foam producing truck "would have the highest probability of

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withstand any credible fire hazard; (5) the amount of flammable liquids that are allowed in the CHB is controlled during operations; (6) there is a fire suppression system in the CHB that is installed to mitigate the consequences of a fire; (7) WCS CISF-initiated explosions are not considered credible since no explosive materials are present; and (8) the effects of externally-initiated explosions are bounded by the design basis tornado generated missile load analysis performed for the authorized storage systems. SAR at 3-19 to 3-20.

197 *See* Petition at 18 (quoting 10 C.F.R. § 72.32(a)).

198 CERP at 59 (App. C).

preventing a catastrophic fire in relation to the current on-site mitigation equipment WCS proposes to use."[199] Such bald, conclusory assertions are insufficient to meet the requirement set forth in 10 C.F.R. § 2.309(f)(1)(v).[200]

c. Petitioners' Claim That the Application Contains a "Material Omission" in Violation of 10 C.F.R. § 72.11 Is Unsupported

Petitioners' claim that the Application suffers from a "material omission" that "violates 10 CFR § 72.11" clearly lacks legal and factual support.[201] First, Section 72.11 does not impose any specific technical requirements on applicants. Rather, it is intended to discourage and prevent applicants from willfully submitting incomplete or inaccurate information to the NRC. Second, Petitioners point to no regulation requiring the information that they allege to be missing: *i.e.*, "the size, velocity, weight, and fuel loads of different aircraft" to be used "when assessing the hazards an airplane crash would have on the site."[202] For the reasons explained above, there is no requirement that ISP provide such information or perform such an assessment for purposes of complying with Section 72.122(c), Section 72.32, or any other regulation cited by Petitioners in their contention.[203] Thus, no "material omission" exists; and Petitioners have not identified a material issue, as required by 10 C.F.R. § 2.309(f)(1)(iv).

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199 Petition at 21, 23-25.

200 *USEC*, CLI-06-10, 63 NRC at 472.

201 Petition at 22.

202 *Id.*

203 As Chapter 11 of the Application notes, the emergency classification approach used in the CERP "is based on worst-case consequences of potential accidents at the CISF and the guidance of NUREG-1567, and is consistent with NUREG-1140, which concluded that the worst-case accident involving a CISF has insignificant consequences to the public health and safety." Application at 11-1. Related to this point, it warrants mention that the NRC, DOE, and the commercial nuclear power industry have analyzed the potential radiological consequences of an aircraft crash impact on dry storage cask systems. For example, in NUREG–1864, "A Pilot Probabilistic Risk Assessment of Dry Cask Storage System at the Nuclear Power Plant" (2007), the NRC analyzed various phases of the dry cask storage process from loading fuel from the spent fuel pool, preparing the cask for storage and transferring it outside the reactor building, moving the cask from the reactor building to the storage pad, and storing the cask for 20 years on the storage pad. The study assessed a comprehensive list of initiating events, including dropping the cask during handling and external events during onsite storage, such as earthquakes, floods, high winds,

d. Petitioners' Claim that the SAR Does Not Meet NRC "ALARA" Requirements in 10 C.F.R. Part 20 Is Unsupported

Petitioners' claim that ISP does not demonstrate compliance with the NRC's "ALARA" requirements in 10 C.F.R. § 20.1101(b) also lacks support. Section 20.1101(b) requires each licensee to "use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses and doses to members of the public that are as low as is reasonably achievable (ALARA)."[204] SAR Section 9.1 describes in detail the program features for ensuring that occupational exposures are ALARA at the WCS CISF.[205] It specifically states that "[t]he ISP ALARA program follows the requirements in 10 CFR Part 20, as well as relevant guidelines of Regulatory Guide 8.8,"[206] the guidance document that Petitioners cite in their contention.[207] Section 9.1.2 ("Design Considerations") explains that, consistent with 10 C.F.R. § 72.126(a), ALARA considerations have been incorporated into the WCS CISF design, including the layout of the WCS CISF and the SNF storage systems selected,[208] using guidance from Regulatory Guide 8.8, Regulatory Position 2.[209] Section 9.1.3 describes the WCS CISF operational considerations that will serve to assure ALARA

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lightning strikes, *accidental aircraft crashes*, and pipeline explosions. The study also modeled potential cask failures from mechanical and thermal loads.

204 10 C.F.R. § 20.1101(b). ALARA means "making every reasonable effort to maintain exposures to radiation as far below the dose limits in this part as is practical consistent with the purpose for which the licensed activity is undertaken, taking into account the state of technology, the economics of improvements in relation to state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and in relation to utilization of nuclear energy and licensed materials in the public interest." *Id.* § 20.1003.

205 *See generally* SAR at 9-2 to 9-9.

206 *Id.* at 9-2 (citing Regulatory Guide 8.8, Rev. 3, "Information Relevant to Ensuring That Occupational Radiation Exposures at Nuclear Power Stations Will Be As Low As Is Reasonably Achievable" (June 1978) (ML003739549) (reviewed Mar. 2018 (ML18075A000)).

207 Petition at 25 (quoting Regulatory Guide 8.8 at 8.8-4).

208 The storage systems are designed to comply with 10 C.F.R. Part 72 ALARA requirements. SAR at 9-4.

209 *Id.*

conditions.[210] Petitioners ignore these ALARA-specific SAR sections. In addition, they fail to explain how analysis of the consequences of a beyond-design basis aircraft crash, or having a suppressant-foam producing truck on site, is necessary for compliance with the NRC's Part 20 ALARA requirements.

* * *

In summary, for the reasons set forth above, Proposed Contention 3 is not admissible because it lacks adequate support and fails to establish a genuine dispute with the Application on a material issue of law or fact, contrary to the requirements of 10 C.F.R. §§ 2.309(f)(1)(iv) and (vi).

E. Proposed Contention 4 Is Inadmissible

Proposed Contention 4 states:

> ISP has failed to adequately discuss and evaluate the impact the proposed site will have on the environment and has also failed to include adverse information specifically relating to potential of waste-contaminated groundwater traveling to aquifers and other groundwater formations located below and around the proposed site.[211]

Proposed Contention 4 further asserts that "ISP fails to properly provide an adequate description of the environment and the impact that the proposed action will have on the environment pursuant to 10 C.F.R. §§ [sic] 51.45(b)(1) and NUREG-1567 § 2.4.5," and "also fails to include critical adverse information in its SAR pursuant to 10 C.F.R. §§ [sic] 51.45(e)."[212] According to Petitioners, the cited section of NUREG-1567 directs applicants to include in the SAR "[a]n analysis bounding the potential groundwater contamination from site operations," and "adequate information for an independent review of all subsurface hydrology-

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210 *See id.* at 9-6 to 9-8.

211 Petition at 26.

212 *Id.* at 31.

related design bases and compliance with dose radiological exposure standards."[213] Petitioners argue that ISP's alleged failure to do so contravenes 10 C.F.R. § 51.45(e), an NRC NEPA-implementing regulation.[214] They offer the declaration of geologist Aaron Pachlhofer in ostensible support of their proposed contention.[215]

As a preliminary matter, Proposed Contention 4 commingles references to ISP's ER and SAR, but never clearly identifies which portion(s) of the Application it purports to challenge; thus, it fails to satisfy 10 C.F.R. § 2.309(f)(1)(i). And as further explained below, it also is inadmissible because it lacks adequate support and fails to establish a genuine dispute with the Application on a material issue of law or fact, contrary to 10 C.F.R. §§ 2.309(f)(1)(v) and (vi).

1. Proposed Contention 4 Lacks Sufficient Specificity

As a threshold matter, Proposed Contention 4 should be rejected as lacking sufficient specificity under 10 C.F.R. § 2.309(f)(1)(i). That provision requires a petitioner to "provide a specific statement of the issue of law or fact to be raised or controverted," by "articulat[ing] at the outset the specific issues [it] wish[es] to litigate."[216] To be admissible, a contention "must explain, with specificity, particular safety or legal reasons requiring rejection of the contested [application]."[217]

Petitioners have not done so here because it is unclear exactly what section of the Application they seek to challenge. On the one hand, they allege noncompliance with 10 C.F.R. § 51.45, which sets forth the required contents of an applicant's ER. Yet they never once cite a

213 *Id*. at 27.

214 *Id*. at 31.

215 *Id*. at 32.

216 *Oconee*, CLI-99-11, 49 NRC at 338.

217 *Millstone*, CLI-01-24, 54 NRC at 359-60.

specific section or page of ISP's ER as deficient. On the other, they contend the SAR does not include certain "adverse information" in purported contravention of 10 C.F.R. § 51.45(e).[218] As noted above, that regulation pertains solely to an applicant's ER, and thus is irrelevant to the SAR, the contents of which are governed by the NRC's Part 72 regulations in this case. Thus, it is unclear whether Petitioners seek to contest the adequacy of the ER or the SAR—or both. As such, they have failed to meet their burden to plead their contention with sufficient specificity to put opposing parties on notice of which claims they will need to defend.[219]

2. Proposed Contention 4 Lacks Adequate Factual or Expert Support and Fails to Directly Controvert the Relevant Sections of the SAR and ER

Whether Proposed Contention 4 is treated as an environmental contention or a safety contention, it is inadmissible for two additional reasons—in either case, it lacks adequate support and fails to establish a genuine material dispute with the Application, contrary to the requirements of 10 C.F.R. §§ 2.309(f)(1)(v) and (vi), respectively. In short, Proposed Contention 4 is based on two faulty and patently unsupported premises: (1) the notion that WCS CISF will release radiological materials to the environment, and (2) the postulated radiological release will result in contamination of groundwater below the site.

a. Petitioners Fail to Provide Adequate Support for Their Claim That WCS CISF Operations Will Cause a Significant Radiological Release to the Environment

With regard to the first premise, Petitioners fail to provide sufficient information, in the form of alleged facts, references, or expert opinion, for the *supposition* that WCS CISF operations will result in a release of radioactive material to the environment. Instead, Petitioners

218 *See, e.g.*, Petition at 26.

219 *Fermi*, CLI-15-18, 82 NRC at 146 n.53.

merely postulate the "potential of casks releasing radioactive material upon impact of large, fully-fueled aircrafts," and incorrectly claim that "WCS concedes this [is a] credible incident."[220] As ISP's response to Proposed Contention 3 makes clear,[221] ISP has made no such concession. On the contrary, ISP does not view an aircraft crash into a dry storage cask as an even remotely "credible" accident condition for purposes of demonstrating compliance with 10 C.F.R. § 72.122(c) or any other Part 72 regulation. And, from a NEPA perspective, such a crash constitutes a "worst-case" scenario that does not require analysis as a reasonably foreseeable impact of normal (or even off-normal) WCS CISF operations.[222]

Petitioners thus fail to identify *any* plausible mechanism by which a significant quantity of radioactive material might be released from the WCS CISF and serve as a potential source of groundwater contamination. In doing so, they overlook relevant discussion in the SAR and ER that severely undercuts their contention. Specifically, those documents indicate that:

- Storage overpacks will be used to store canisters containing spent fuel and [Greater-than-Class C ("GTCC")] waste. The canisters are drained of all liquid prior to being shipped to the WCS CISF. Therefore, liquid releases cannot result from operation of the WCS CISF.[223]
- There will be no liquid or process GTCC waste stored at the WCS CISF.[224]

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220 Petition at 28.

221 *See supra* Section IV.D.

222 The "hard look" required by NEPA is subject to a "rule of reason," such that the consideration of environmental impacts must address only those impacts "that are reasonably foreseeable or have some likelihood of occurring." *S. Nuclear Operating Co*. (Early Site Permit for Vogtle ESP Site), LBP-09-7, 69 NRC 613, 719 (2009). The agency has broad discretion over the thoroughness of the analysis, and may decline to examine issues the agency in good faith views as "remote and speculative" or "inconsequentially small." *Id*.; *see also Vt. Yankee Nuclear Power Corp.* (Vt. Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 44 (1989) (citing *Limerick Ecology Action, Inc. v. NRC*, 869 F.2d 719, 739 (3d Cir. 1989)). Furthermore, NEPA does not call for a "worst-case" inquiry because it "creates a distorted picture of a project's impacts and wastes agency resources." *Private Fuel Storage, LLC* (Indep. Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 352 (2002) (citing *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 354-55 (1989)).

223 SAR at 2-35.

224 *Id.* at 3-3.

- There are no potential gaseous or liquid wastes generated as a result of WCS CISF operations. As a result, there is no equipment needed to be installed to maintain control over radioactive materials in gaseous and liquid effluents.[225]

- There are no radioactive liquid wastes generated by the receipt, transfer and storage of canisterized SNF or GTCC waste at the WCS CISF.[226]

- The only operation at the WCS CISF that may generate small volumes of solid waste is the decontamination of transportation casks, which will have no significant impact on the existing Waste Control Specialists licensed or permitted disposal facilities.[227]

- The WCS CISF will not process liquids or gases or contain, collect, store, or transport radioactive liquids. Any solid radioactive waste collected during canister transfer operations will be temporarily staged in a designated area in the Cask Handling Building until transferred to a licensed disposal facility as described in Section 6.4.[228]

- Only canisterized SNF and GTCC waste are authorized for storage at the WCS CISF. Canisters will not be opened, nor will SNF assemblies or GTCC waste be removed from the canisters at the WCS CISF. Additionally, the SNF will be stored dry inside the canisters, so that no radioactive liquid is available for release.[229]

- The cask storage pad is a potential source of low-level radioactivity that could enter runoff, though such an occurrence is highly unlikely. The storage system design and construction, along with environmental monitoring of the storage pad, combine to make the potential for contaminant release through this system extremely low. An initial analysis of maximum potential levels of radioactivity in rainwater runoff due to surface contamination of the dry casks shows that any potential levels of radioactive discharges would be well below (two orders of magnitude or more) the effluent discharge limits of 10 CFR Part 20, Appendix B.[230]

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225 *Id.* at 6-2.

226 *Id.* at 6-3. *See also id.* at 9-18 ("There are no liquid or gaseous effluent releases from the WCS CISF."); 9-30 ("As described in Section 6.1.2.1, there are no radioactive liquid radioactive wastes to monitor for the WCS CISF."); Application at 5-1 ("Operation of the WCS CISF will not create any radioactive materials or result in any credible liquid or gaseous effluent release.").

227 *Id.* at 6-8.

228 *Id.* at 9-6.

229 *Id.* at 9-13.

230 ER at 4-31. That the Application does not consider credible a mechanism for transport of radionuclides should not be surprising at all. Indeed, the Commission reached the same conclusion in its consideration of whether to require an EPZ for away from reactor ISFSIs. *See* ISFSI EP Rule, 60 Fed. Reg. at 32,431.

Significantly, Petitioners do not challenge—or even acknowledge—the foregoing SAR and ER statements, which support the conclusion that there is no potential for releases of significant quantities of radioactive material from WCS ISP operations due to the storage cask/canister designs, ISP's planned cask/canister-handling practices, and the conduct of environmental monitoring.[231] Mr. Pachlhofer (who is not a nuclear engineer) avers that "there are numerous instances of serious accidents involving radioactive materials that undermine Applicant's claims of safety," and that "more than 100 serious nuclear-related accidents have occurred since the use of civilian nuclear reactors began in 1954."[232] However, he fails to explain how any of the severe accidents cited in his declaration, such as Chernobyl, Three Mile Island, and Fukushima, are relevant to the proposed routine receipt, transfer, and dry storage of SNF/GTCC at the WCS CISF.[233] And, tellingly, he does not identify any examples of incidents involving dry storage facilities. Thus, Petitioners have failed to: (1) directly controvert the Application, and (2) provide any factual or adequate expert support for their assumption that a radiological release will occur at the WCS CISF. Proposed Contention 4 should be dismissed on this ground alone.

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231 As noted in the ER, there is an extensive network of monitoring wells in the vicinity of the CISF that are monitored semi-annually. During each well's monitoring event, the depth to water would be gauged, and groundwater samples would be collected when sufficient water is present. Samples collected from the monitoring wells would be analyzed for radiological and nonradiological constituents. ER at 3-25.

232 Pachlhofer Decl. at 2.

233 Mr. Pachlhofer also cites the 1957 Kyshtym disaster in the former Soviet Union, the 1957 Windscale fire in the UK, the 1979 Church Rock uranium spill in New Mexico, and the 1987 Goiania, Brazil radiotherapy source contamination incident. Again, these incidents have no apparent relevance to proposed WCS CISF operations.

b. *Petitioners Fail to Provide Adequate Support for Their Claim That a Postulated Radiological Release Could Contaminate Groundwater Beneath the Site*

Petitioners' second core premise—that postulated radioactive material releases could contaminate aquifers underlying the WCS CISF site—fares no better under even casual scrutiny. In making this claim, Petitioners and Mr. Pachlhofer rely on inaccurate statements and pure speculation. Furthermore, in doing so, they again fail to directly controvert relevant discussion contained in the SAR and ER. Those documents indicate the following:

- The southern and eastern limits of the Ogallala ***Aquifer*** lie to the north and east of the Waste Control Specialists property.[234]
- The Ogallala ***Formation***, if present, is not water bearing in the Waste Control Specialists permitted area, consisting of 542 ha (1,338 acres).[235]
- The Cretaceous Antlers Formation has been identified in the vicinity of the CISF and in the subsurface immediately below the CISF; however, it is unsaturated but for a few isolated perched lenses.[236]
- The shallowest water bearing zone is about 225 feet deep at the WCS CISF. The OAG unit is largely unsaturated beneath the WCS CISF. The nearest downgradient drinking water well identified in the hydrogeologic unit is located approximately 6.5 miles to the east of the proposed WCS CISF at a residence on the Letter B Ranch.[237]
- There are two water-bearing sandstone formations in the Dockum Group in the vicinity of the WCS CISF. Both yield *non-potable* water with less than 5,000 mg/L total dissolved solids. The Santa Rosa Formation sandstone at the base of the Dockum Group is about 250 feet thick and is considered the best aquifer within the Dockum Group. The top of the Santa Rosa Formation sandstone is at 1,140 feet below ground surface at the WCS CISF (SAR Figure 2-13). The Trujillo Formation sandstone, the other Dockum Group water-bearing formation in the area, is about 100 feet thick. The top of the Trujillo Formation is about 600

234 ER at 3-25.

235 *Id.* at 3-26.

236 *Id.* at 3-27.

237 *Id.* at 3-24 to 3-25.

feet below ground surface. About 450 feet of very low permeability Dockum Group fluvial and lacustrine clays separate the two formations.[238]

- Based on water levels encountered during logging of two deep wells at the existing CISF, water levels in the lower Dockum aquifer range from 869 m (2,852 ft) msl (Santa Rosa Formation) to 967 m (3,172 ft) msl (Trujillo Formation).[239]

- The Cenozoic Alluvium aquifer, also referred to as the Cenozoic Pecos Alluvium aquifer is regional in extent, but is not present in the vicinity of the CISF.[240]

- The site region has a semi-arid climate, with low precipitation rates and minimal surface water occurrence. Thus, the potential for negative impacts on surface water resources is very low due to lack of water presence and formidable natural barriers to any surface or subsurface water occurrences. Groundwater at the site would not likely be impacted by any potential releases.[241]

- The method of storage (dry cask), the nature of the canisters, the extremely low permeability of the red bed clay underlying the site, and the depth to groundwater beneath the WCS CISF preclude the possibility of groundwater contamination from the operation of the WCS CISF.[242]

Although Petitioners purport to take issue with certain of these statements, they fall far short of providing sufficient information to support their objections and to trigger an evidentiary hearing on the proposed contention. First, Petitioners' selective use of the terms Ogallala Formation and Ogallala Aquifer interchangeably is inaccurate and misleading. A geologic "formation" refers to the fundamental unit in the local classification of rocks into geologic units based on similar characteristics in lithology (*i.e.*, the description of rocks on the basis of such characteristics as color, mineralogic composition, mode of deposition, and grain size).[243] An

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238 SAR at 2-24.

239 *Id*.

240 ER at 3-28.

241 *Id*. at 4-29 to 4-30.

242 *Id*. at 3-25. There are no anticipated integrated impacts to groundwater quality since the aquifer (Santa Rosa) is very deep and beneath a thick clay confining layer, so it should be unaffected from the small amount of effluents that might be produced during construction and operation. *Id*. at 4-65.

243 *Geologic Formation*, DEFINED TERM, https://definedterm.com/geologic_formation (last visited Nov. 12, 2018).

"aquifer" is an underground body of porous materials, such as sand, gravel, or fractured rock, filled with water and capable of supplying useful quantities of water to a well or spring.[244] A geologic formation (or portions thereof) may not contain water under saturated conditions and therefore not be considered an aquifer. Thus, ISP's statement that "[t]he Ogallala *Formation*, if present, is not water bearing in the WCS CISF area" is entirely accurate.[245] It does not constitute an "equivocal characterization of the aquifers in the area," as Petitioners wrongly suggest.[246] Moreover, Petitioners' assertion that "the Ogallala *Formation* 'is present in the subsurface along the north and east sides of the WCS-Flying 'W' Ranch at a depth of 45-105 ft" clearly does not establish that the Ogallala Aquifer is present *beneath* the WCS CISF site.[247]

Petitioners do not present any information to substantiate a contrary conclusion; *i.e.*, that the Ogallala Aquifer extends beneath the WCS CISF site, the hydrogeology of which has been extensively investigated. During the construction and licensing process for the WCS LLRW disposal facility, over 500 wells and core samples were reviewed by the State of Texas, and the State ultimately concluded that at no point does the WCS site affect the Ogallala Aquifer.[248] In fact, based on those data, the Texas Water Development Board ("TWDB") re-mapped the Ogallala Aquifer in late 2006 to definitively show that the Aquifer's boundary does not extend to WCS' property and to provide a more accurate depiction of the proper location of the Aquifer.[249]

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244 *Aquifer*, DEFINED TERM, https://definedterm.com/aquifer (last visited Nov. 12, 2018).

245 ER at 3-26.

246 Petition at 29.

247 *Id*. at 28.

248 *See Environmental Protection*, WASTE CONTROL SPECIALISTS, http://www.wcstexas.com/about-wcs/environment (last visited Nov. 12, 2018).

249 *See id*.

Mr. Pachlhofer acknowledges this fact in his declaration but claims, without specific references to supporting documents, that "[t]he aquifer mapping changes are still contested."[250] He does reference one study (Lehman and Rainwater) as "show[ing] the Ogallala [Formation] to be present in their cross-sections,"[251] but that study was published in 2000,[252] years before the WCS LLRW site was licensed and the TWDB re-mapped the Ogallala Aquifer. The 2000 Lehman and Rainwater study's statement that "[g]roundwater was found in only three borings that penetrated the Ogallala Formation along the eastern border of the ranch area" hardly constitutes support for the assertion that the Ogallala Aquifer extends beneath the WCS CISF site.[253] Further, the fact that "cross-formational flow" between the Antler and Ogallala Formations may occur does not establish any potential for contamination of aquifers located in either formation by WCS CISF operations.

Petitioners and their proffered expert also fail to adequately support their claim that ISP has "overlooked the potential for groundwater contamination of the Antler and Santa Rosa Formations" due to the alleged "presence of extensive fractures in red bed clays overlying the Santa Rosa aquifer" that "*may* provide a direct pathway to the Santa Rosa Aquifer."[254] Mr. Pachlhofer makes no attempt to explain how postulated radioactive material released at the surface of the WCS CISF could travel through such fractures more than 1,000 feet below ground surface to the Santa Rosa Aquifer. Even assuming such fractures in the low-permeability red bed clays exist, Mr. Pachlhofer provides no information or analysis to suggest that such fractures are

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250 Pachlhofer Decl. at 5.

251 *Id*.

252 *See* Lehman and Rainwater at cover page.

253 Pachlhofer Decl. at 4 (citing Lehman and Rainwater at 9).

254 Petition at 30 (emphasis added); Pachlhofer Decl. at 5 (emphasis added).

interconnected and/or extend the entire depth of the geologic formation(s) overlying the Santa Rosa Aquifer, so as to provide a "direct pathway" to that aquifer.

Indeed, his assertion to that effect is unsupported speculation[255] and contrary to known hydrogeologic conditions at the site that are addressed in the SAR. Specifically, if the low-permeability red bed clays did have high-permeability features such as interconnected fractures, then there would be evidence of cross-formational flow between the Lower Dockum Aquifer and the Ogallala Aquifer, and the Dockum Group would not be classified as an aquitard; *i.e.*, a geologic formation (usually a layer of material such as clay) that restricts the movement of groundwater.[256] As discussed in SAR Section 2.5, however, studies have confirmed that the upper portion of the Dockum Group (Cooper Canyon Formation) serves as an aquitard in the regional and local study area, and that the Lower Dockum Aquifer is receiving essentially no recharge from cross-formational flow, as evidenced by the significant difference in hydraulic head between the Lower Dockum Aquifer and the Ogallala Aquifer.[257]

Mr. Pachlhofer cites a 2007 memo by the Texas Commission on Environmental Quality ("TCEQ") as the source of his claim that "extensive fractures" exist in the red bed clays.[258] But, as noted above, he fails to explain how that document supports his conjectural claim that such

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255 "[A]n expert opinion that merely states a conclusion (*e.g.*, the application is 'deficient,' 'inadequate,' or 'wrong') without providing a reasoned basis or explanation for that conclusion is inadequate" to demonstrate an admissible contention. *USEC*, CLI-06-10, 63 NRC at 472 (internal citations omitted).

256 *Aquitard*, DEFINED TERM, https://definedterm.com/aquitard (last visited Nov. 19, 2018).

257 *See* SAR at 2-25 ("The upper portion of the Dockum Group (Cooper Canyon Formation) serves as an aquitard in the regional and local study area (Nicholson and Clebsch, 1961 [2-27]; Dutton and Simpkins, 1986 [2-8]). This is supported by the fact that the hydraulic head of the lower Dockum aquifer is significantly lower than that of the overlying Ogallala aquifer throughout much of the regional study area. This relative head difference, approximately 200 to 300 feet in western Andrews County, suggests that the lower Dockum aquifer is receiving essentially no recharge from cross-formational flow (Nativ, 1988 [2-25])").

258 Pachlhofer Decl. at 5 (citing "a 2007 TCEQ Memorandum titled 'Uncertainty of Performance Assessment'").

fractures "may" provide a direct pathway to the deep-lying Santa Rosa Aquifer. Moreover, as discussed below, the TCEQ approved the license for the WCS LLRW disposal facility in 2009, and in doing so, concluded that the facility posed no threat to groundwater beneath the site.[259]

In 2014, the Texas Court of Appeals in Austin affirmed the TCEQ's denial of a contested-case hearing request by the Sierra Club that, among other things, raised groundwater contamination concerns.[260] The TCEQ commissioners evaluated Sierra Club's hearing request and WCS's license application at a January 2009 hearing.[261] After reviewing the request and related pleadings, WCS's application, the TCEQ Executive Director's technical review (including the environmental analysis), and other information before the Commission, a majority of the commissioners voted to deny Sierra Club's hearing request and to issue the license to WCS.[262] In its decision denying Sierra Club's appeal, the court cited various conclusions reached by the Executive Director.[263] One of those conclusions included the following:

> The Executive Director does not believe that there is a likely impact on . . . health or property because of groundwater contamination. The Executive Director has determined that the license application provided adequate information on the characterization of the geology and hydrology of the proposed site and proposed design. The proposed design calls for excavation below the Ogallala-Antlers-Gatulia (OAG) formations for a disposal facility situated in the Cooper Canyon formation of the Dockum group. *The Santa Rosa and Trujillo formation, regional aquifers of the Dockum group, are not likely conduits of potential contamination from the proposed disposal facilities* to groundwater in Eunice. The Santa Rosa and Trujillo formations are separated from the aquitard clays of the Cooper Canyon formation above. The Santa Rosa formation is between 1,140 and

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259 *See generally Licenses and Permits*, WASTE CONTROL SPECIALISTS, http://www.wcstexas.com/facilities/licenses-permits (last visited Nov. 12, 2018).

260 *Tex. Comm'n on Envtl. Quality v. Sierra Club*, 455 S.W.3d 228 (2014) (Tex. App.—Austin 2014, pet. denied).

261 *See id.* at 232.

262 *See id*.

263 *See id.* at 239-40.

> 1,400 feet below the surface. The Trujillo formation is situated 600 to 700 feet below the surface.[264]

The TCEQ Executive Director further concluded that "there is no likely impact of the regulated activity on . . . use of groundwater resources," and that "because of the location of the regional aquifers below the proposed facility, groundwater flow and gradients within the regional aquifers, and the design of the facility as required in the draft license, the likelihood of groundwater contamination and migration of contaminants into a well . . . is remote."[265] The court concluded that the administrative record supported the Executive Director's denial of the hearing request.[266] The above-stated conclusions of the TCEQ Executive Director are entirely consistent with the information presented in ISP's ER and SAR, and further demonstrate the lack of factual support for Petitioners' claims that ISP has not adequately considered the potential groundwater contamination from site operations or otherwise satisfied applicable NRC environmental and safety regulations in Part 51 and Part 72, respectively.

* * *

In summary, Proposed Contention 4 is not admissible because it lacks sufficient specificity, lacks adequate support, and fails to establish a genuine dispute with the Application on a material issue of law or fact, contrary to the requirements of 10 C.F.R. §§ 2.309(f)(1)(i), (v) and (vi).

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264 *Application by Waste Control Specialists, LLC For New Radioactive Material License No. R04100*, TCEQ Docket No. 2005-1994-RAW, Executive Director's Response to Hearing Requests, at 12 (Dec. 19, 2008), *available at* https://www.tceq.texas.gov/assets/public/comm_exec/agendas/comm/backup/HR-RFR/2005-1994-RAW.EdR.pdf (emphasis added).

265 *Id.* Thus, Petitioners' and Mr. Pachlhofer's reliance on an August 14, 2007 TCEQ interoffice memorandum titled "Groundwater intrusion into proposed LLRW facility" (Lodde et al.) (*see* Pachlhofer Decl. at 5) also is unavailing. As noted above, the TCEQ Executive Director reviewed the relevant record and concluded that the possibility of groundwater contamination and migration of contaminants from the LLRW disposal facility was remote.

266 *See Sierra Club*, 455 S.W.3d at 240-41.

F. Proposed Contention 5 Is Inadmissible

Proposed Contention 5 states:

> The Applicant's Environmental Report (ER) discusses its assessment of the presence of threatened and endangered species. However, the ER does not adequately characterize the threatened and endangered species in the area of the proposed CISF.[267]

Petitioners further allege that "WCS has failed to adequately evaluate the potential for the presence of threatened and endangered species and relevant conservation efforts that may be undermined by the proposed CISF."[268] Specifically, Petitioners assert that ISP erred by not listing the Dunes Sagebrush Lizard (*Sceloporus arenicolus*)[269] as a threatened species in the ER, and by failing to address the CISF's impact on on-going conservation efforts for the Dunes Sagebrush Lizard and the Lesser Prairie Chicken (*Tympanuchus pallidicinctus*).[270] Finally, Petitioners assert that the information presented in the ER is outdated and therefore its conclusions regarding endangered and threatened species are not reliable; they suggest a new biological evaluation is necessary.[271]

As discussed further below, Proposed Contention 5 is inadmissible because Petitioners fail to specify how the ER's detailed discussions of the Dunes Sagebrush Lizard and the Lesser Prairie Chicken—the only discussions Petitioners allege to be deficient—purportedly do not comply with NRC regulations or NRC guidance, nor do they provide support for such arguments

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267 Petition at 31.

268 *Id*. at 31; *see also* Taylor Decl. ¶ 15; Pachlhofer Decl. at 7-8.

269 The ER uses the common name "Sand Dune Lizard" for the species *Scelopporus arenicolus*. While "Dunes Sagebrush Lizard" is the accepted common name now, according to the U.S. Fish and Wildlife Service ("USFWS"), much of the historical scientific literature uses the common name of "Sand Dune Lizard" for this species. *See* USFWS, Environmental Conservation Online System, Species Profile for Dunes Sagebrush Lizard (*available at* https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=C03J) (last accessed Nov. 9, 2018) ("FWS Dunes Sagebrush Lizard Profile").

270 Petition at 31; Taylor Decl. ¶ 15; Pachlhofer Decl. at 8.

271 Pachlhofer Decl. at 8.

or challenges to an unspecified conservation plan. Indeed, one of Petitioners' primary arguments fails because the Dunes Sagebrush Lizard is not listed as a threatened or endangered species. And finally, Petitioners are unable to demonstrate that NEPA or 10 C.F.R. Part 51 requires ISP to update or perform new ecological studies. Accordingly, Proposed Contention 5 must be rejected for failing to satisfy 10 C.F.R. §§ 2.309(f)(1)(ii), (iv), (v), and (vi).

1. The ER Complies Fully with NRC Regulations and Guidance in Considering the Impact of the CISF on Endangered and Threatened Species

The NRC's regulations in 10 C.F.R. § 72.34 require that ISP submit an ER that complies with the requirements of 10 C.F.R. Part 51. Per Part 51, the ER must contain a baseline description of the environment that would be affected by the proposed construction and operation of the CISF, a description of the impact of the CISF on the environment, and a description of any adverse environmental effects which cannot be avoided.[272] NUREG-1748, Environmental Review Guidance for Licensing Actions Associated with NMSS Programs, provides guidance to the NRC Staff in reviewing applications for construction of ISFSIs, as well as guidance to applicants on the format and technical content of an ER.[273] With respect to the issues raised in Proposed Contention 5, NUREG-1748 states that the applicant "should describe species types, spatial and temporal distribution, and abundance, especially as they relate to listed and endangered species and critical habitat."[274] NUREG-1748 also states that applications should evaluate whether any of the proposed activities are expected to impact communities or

272 10 C.F.R. § 51.45(b).

273 NUREG-1748, Environmental Review Guidance for Licensing Actions Associated with NMSS Programs; Final Report at 6-1 to 6-35 (Aug. 2003) (ML032450279).

274 *Id*. § 6.3.5.

habitats that have been defined as rare or unique or that support threatened and endangered species.[275]

The ER complies fully with these regulations and guidance. First, ER Section 3.5, Ecological Resources, contains an extensive description of the terrestrial communities of the proposed CISF area prior to any disturbances associated with construction or operation of the facility. ER Section 3.5.16 lists the ecological studies of the area conducted in 1997, 2004, 2007, and 2008. This includes a fulsome discussion of the presence, or potential presence, of habitat for and populations of threatened or endangered species, including the Lesser Prairie Chicken, and other terrestrial species of interest, including the Dunes Sagebrush Lizard. Specifically, ER Section 3.5.3.3, Birds, notes that a WCS ranch manager reported seeing a female Lesser Prairie Chicken near the CISF site in 1997, but that no active leks (mating sites) or Lesser Prairie Chickens were detected in subsequent studies.[276] Notwithstanding this finding, ER Section 3.5.4 conservatively lists the Lesser Prairie Chicken among the rare, threatened, or endangered species potentially occurring at the CISF site.

Similarly, ER Section 3.5.3.2 states that the Dunes Sagebrush Lizard is potentially present in the area, but ER Section 3.5.4 notes that the nearest location where a juvenile Dunes Sagebrush Lizard was found was 2.5 miles southeast of the CISF site and ER Section 3.5.6 concludes that the CISF site does not support Dunes Sagebrush Lizard habitat. And Attachment 3-3 to the ER contains a recent letter from the U.S. Fish and Wildlife Service ("USFWS") listing five threatened or endangered species as present or potentially present at the CISF site, including

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275 *Id*. § 6.4.5.

276 *See also* ER §§ 3.5.6 (concluding Lesser Prairie Chicken not present at the site) and 3.5.7 (stating the CISF does not provide optimal habitat and is not part of an important travel corridor for the Lesser Prairie Chicken).

the Lesser Prairie Chicken.[277] Importantly, the USFWS Letter did not list the Dunes Sagebrush Lizard as threatened or endangered and did not identify any critical habitat concerns for any species within the CISF site[278]—all of which is consistent with the ER.

ER Section 4.5, Ecological Resource Impacts, then discusses the potential impacts from the construction and operation of the CISF on these species. As explained in ER Section 4.5.8, no communities or habitats defined as rare or unique or that support threatened and endangered species have been identified in the proposed area of the CISF. Although ER Section 4.5.8 identifies the presence of dune formations adjacent to the proposed area of disturbance with the potential to provide habitat for the Dunes Sagebrush Lizard, it identifies no such population at the site. Based on referenced ecological surveys, ER Section 4.5.8 states that the closest Dunes Sagebrush Lizard population was three miles north of the National Enrichment Facility site,[279] and areas to the west, south, and east of the site do not appear to have any suitable habitat for the Dunes Sagebrush Lizard within 10 to 20 miles. Those studies also conclude there are several thousand acres of sand dune formations suitable for Dunes Sagebrush Lizard populations nearby that would not be impacted by the project. Accordingly, ER Section 4.5.4 concludes that "the ecological impacts of this land disturbance are expected to be small given the CISF area size, *especially in relation to the vast amount of uninhabited and undisturbed land* found throughout the region."[280] Similarly, ER Section 5.1.5, Impact Summary, Ecological Resources, concludes that no substantial impacts from construction and operation of the CISF are anticipated on

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277 ER, Attach. 3-3, Letter from USFWS, "List of threatened and endangered species that may occur in your proposed project location and/or may be affected by your proposed project" at 3 (Apr. 14, 2015) ("USFWS Letter").

278 *See* USFWS Letter.

279 The National Enrichment Facility is 1 mile southwest of the CISF site. ER § 2.2.1.

280 *Id.* § 4.5.4 (emphasis added).

threatened and endangered species because the "impacts on ecological resources would be minimal."

Apart from passing references to ER Section 3.5, Petitioners fail to challenge any of the specific information in Chapters 3, 4, and 5 of the ER. Nor do they make any effort to demonstrate with any specificity how the ER fails to comply with applicable NRC regulations and guidance. Petitioners bear the burden to explain how the ER does not comply with NEPA or NRC regulations.[281] Having failed to meet this burden, the Petition should be rejected as not meeting the requirements of 10 C.F.R. §§ 2.309(f)(1)(v) and (vi).[282]

2. Petitioners' Arguments Regarding an Unspecified Private Conservation Plan Fail to Identify an Admissible Contention

Petitioners claim the proposed CISF is "incompatible" with certain, unspecified "conservation measures" for the Lesser Prairie Chicken and the Dunes Sagebrush Lizard that have been voluntarily developed and implemented by private entities in Texas and New Mexico.[283] However, neither Petitioners nor their affiants otherwise describe these purported "conservation measures," or make a single assertion to explain how the Application purportedly would be "incompatible" with these unspecified measures. On this basis alone, these allegations should be rejected. Bare assertions of inadequacy are insufficient for an admissible contention.[284] Petitioners have the responsibility to provide "the necessary information to satisfy the basis requirement for admission."[285] Where a petitioner has failed to do more than state a conclusion, with no explanation of how or why the application is inadequate, as Petitioners have

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281 *Palisades*, CLI-15-23, 82 NRC at 325.

282 *USEC*, CLI-06-10, 63 NRC at 472.

283 Petition at 32 (citing Taylor Decl. ¶ 15, Pachlhofer Decl. at 8).

284 *Fansteel*, CLI-03-13, 58 NRC at 203 (quoting *Oyster Creek*, CLI-00-6, 51 NRC at 208).

285 *Palisades*, CLI-15-23, 82 NRC at 329; *Palo Verde*, CLI-91-12, 34 NRC at 156.

done here, the proposed contention should be dismissed,[286] pursuant to 10 C.F.R. §§ 2.309(f)(1)(ii), (v), and (vi), as failing to provide an adequate, supported basis for a contention, or identify a genuine dispute with the Application.

3. Petitioners' Assertion That the Dunes Sagebrush Lizard is a Threatened Species is Factually Incorrect and Fails to Support an Admissible Contention

Petitioners argue the ER is deficient because "the Dune Sage Brush lizard [sic] is not included by Applicants as a threatened species"[287] in ER Table 3.5-1 (describing threatened and endangered species present) or specifically described as threatened in ER Section 3.5.4.[288] Specifically, Mr. Pachlhofer (a geologist by training) states that the "site is entirely within the known range" of the Dunes Sagebrush Lizard and avers that the lizard "is listed at [sic] threatened by the [USFWS] and may be listed as endangered in the future."[289]

Contrary to these assertions, the Dunes Sagebrush Lizard is *not* listed by the USFWS as threatened or endangered under the Endangered Species Act; the USFWS withdrew the rulemaking listing the Dunes Sagebrush Lizard as threatened in 2012.[290] Therefore, there are no errors or omissions in ER Table 3.5-1 with regard to the Dunes Sagebrush Lizard and no material issue in dispute.[291] Proposed Contention 5 thus is unsupported and fails to raise a genuine dispute with the Application, contrary to 10 C.F.R. §§ 2.309(f)(1)(v) and (vi).

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286 *Summer*, CLI-10-1, 71 NRC at 21-22.

287 Petition at 32.

288 Pachlhofer Decl. at 8. Mr. Pachlhofer suggests that the reason for this omission is because the ER uses an incorrect common name for the species. *Id.*

289 *Id*.

290 USFWS, Endangered and Threatened Wildlife and Plants; Withdrawal of the Proposed Rule to List Dunes Sagebrush Lizard; Proposed Rule, 77 Fed. Reg. 36,871 (June 19, 2012) ("Withdrawal Notice"); *see also* FWS Dunes Sagebrush Lizard Profile. Two environmental groups filed a petition in June 2018 to relist the species, but no findings on the petition have been made yet. *Id.*

291 *See Oconee*, CLI-99-11, 49 NRC at 333-34.

Moreover, the ER fully considers the lizard's presence or potential presence at the proposed site and appropriately evaluates the impacts of construction and operation of the CISF on the species. As acknowledged by Mr. Pachlhofer, ER Section 3.5.3.2 states that areas near the CISF (the "study area") support Dunes Sagebrush Lizard populations.[292] Also ER Section 3.5.4, the very section Mr. Pachlhofer alleges is deficient, discusses the Dunes Sagebrush Lizard's potential presence at the CISF site. However, ER Section 3.5.6 specifically concludes that "the CISF does not support" Dunes Sagebrush Lizard habitat. And because the CISF site is generally unsuitable for Dunes Sagebrush Lizards, ER Chapter 4 and ER Chapter 5 conclude that there will be no impacts on the lizard.[293]

Accordingly, Proposed Contention 5 is inadmissible with respect to the Dunes Sagebrush Lizard as unsupported,[294] and for failing to raise a genuine dispute with the ER, [295] and therefore should be rejected as contrary to 10 C.F.R. §§ 2.309(f)(1)(v) and (vi).

4. ISP Is Not Required by NEPA, NRC Regulations, or NRC Regulatory Guidance to Conduct Updated Ecological Studies

Finally, Petitioners briefly assert that the ecological assessments on which the ER relies "appear outdated or in error."[296] However, there are no requirements under NEPA, 10 C.F.R. Part 51, or NRC guidance that obligate an applicant to perform additional environmental studies or surveys so long as the applicant appropriately establishes an environmental baseline, nor have

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292 The "study area" referenced by Mr. Pachlhofer is the area that is covered by the ecological studies on which the ER relies, but is not the same as the CISF site.

293 ER §§ 4.5.8, 5.1.5.

294 Procedure Changes in the Hearing Process, 54 Fed. Reg. at 33,170; *Millstone*, CLI-01-24, 54 NRC at 358.

295 *Summer*, CLI-10-1, 71 NRC at 21-22.

296 Pachlhofer Decl. at 7.

Petitioners cited to any such requirements.[297] Nor could they, given recent NRC precedent that NEPA does not require "virtually infinite study" of a site's environment.[298]

In preparing the ER, ISP's obligation is to "present a detailed and thorough description of each affected resource for evaluation of the potential impacts to the environment. . . . This is consistent with one of the goals of NEPA, which is to concentrate on issues significant to the proposed action and their potential environmental impacts."[299] Thus, the ER must—and does—provide a description of the affected environment, including the potential presence of endangered and threatened species, and then discusses the potential impacts on the affected environment.[300] But the preparation of the ER does not demand "virtually infinite study and resources."[301]

ISP has fully met its burden of providing a detailed environmental baseline, including fulsome discussions of the presence or potential presence of the Dunes Sagebrush Lizard and the Lesser Prairie Chicken as discussed above in Section IV.F.1. These discussions were based, in part, on the significant environmental studies establishing the ecological baseline performed in 1997, 2004, and 2007.[302] To the extent that Petitioners vaguely suggest that there may have been changes in range and population of those species, or that purportedly "better" maps exist,[303] they provide no data, citations, references, or other factual information to support their claims. As the Commission recently affirmed in discussing the obligation of the NRC Staff to prepare an

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297 *See S. Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-07-03, 65 NRC 237, 256 (2007).

298 *See Entergy Nuclear Generation Co.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 315 (2010).

299 NUREG-1748 at 6-1.

300 10 C.F.R. § 51.45(b)(1); *see also* NUREG-1748 §§ 6.3.5 and 6.4.5.

301 *Pligrim*, CLI-10-11, 71 NRC at 315.

302 ER § 3.5.16.

303 Pachlhofer Decl. at 8.

environmental assessment, "NEPA does not mandate that an agency undertake studies to obtain information that is not already available," nor must the NRC "undertake studies . . . to determine the best mitigation measures."[304] Petitioners have therefore failed to identify a basis for an admissible contention, provide support for their contention, or demonstrate a genuine dispute with the ER, contrary to 10 C.F.R. §§ 2.309(f)(1)(ii), (v) or (vi).

Notwithstanding that there is no duty to perform additional studies, the ER's evaluation of threatened and endangered species is supported by recent information from the USFWS. The ER includes an April 14, 2015 letter from the USFWS that states only five threatened or endangered species were, or may be, present at the CISF site, including the Lesser Prairie Chicken.[305] The USFWS Letter does not list the Dunes Sagebrush Lizard and does not identify any critical habitat concerns for any species within the CISF site.[306] Moreover, Figure 3.5-1, which maps the location of occurrence of various threatened and endangered species near the CISF site, was updated in 2015 and shows that no threatened or endangered species or critical habitat exists near the CISF site.[307] Petitioners neither cite to nor challenge any of this information.

Petitioners provide no factual support for their vague assertion that the ER's environmental baseline is "dated."[308] Nor do they point to any alleged duty that ISP must perform a new site-specific study to address the changes they allege. Therefore, Proposed Contention 5 fails to satisfy §§ 2.309(f)(1)(ii) and (iv)-(v).

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304 *Florida Power & Light Co.* (Turkey Point Nuclear Generating Station Units 3 and 4), CLI-16-18, 84 NRC 167, 173 (2016).

305 USFWS Letter at 3.

306 *Id*. at 3-4.

307 FWS Dunes Sagebrush Lizard Profile.

308 Pachlhofer Decl. at 8.

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In summary, Proposed Contention 5 is inadmissible because Petitioners' arguments with respect to endangered and threatened species are immaterial, unsupported, and fail to raise a genuine dispute with the Application, and therefore fail to meet the requirements of 10 C.F.R. §§ 2.309(f)(1)(ii), and (iv)-(vi).

V. CONCLUSION

The Board should deny the Petition because Petitioners have failed to satisfy their affirmative burden to demonstrate standing, and also for the additional reason that they have failed to submit an admissible contention.

Respectfully submitted,

Executed in Accord with 10 C.F.R. § 2.304(d)
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Dated in Washington, D.C.
this 20th day of November 2018

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	Docket No. 72-1050
INTERIM STORAGE PARTNERS LLC	)	
(Consolidated Interim Storage Facility)	)	November 20, 2018

CERTIFICATE OF SERVICE

I hereby certify that, on this date, a copy of "Interim Storage Partners LLC's Answer Opposing Hearing Request and Petition to Intervene Filed by Permian Basin Land and Royalty Organization and Fasken Land and Minerals" was filed through the E-Filing system.

Signed (electronically) by Ryan K. Lighty

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