UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-19-4

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Paul S. Ryerson, Chairman
Nicholas G. Trikouros
Dr. Gary S. Arnold

In the Matter of	Docket No. 72-1051-ISFSI
HOLTEC INTERNATIONAL	ASLBP No. 18-958-01-ISFSI-BD01
(HI-STORE Consolidated Interim Storage Facility)	May 7, 2019

MEMORANDUM AND ORDER

(Ruling on Petitions for Intervention and Requests for Hearing)

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Before the Board are six petitions to intervene and requests for a hearing concerning a license application by Holtec International (Holtec) to construct and operate a consolidated interim storage facility for spent nuclear fuel in Lea County, New Mexico. The petitioners are: (1) Beyond Nuclear, Inc. (Beyond Nuclear); (2) Sierra Club; (3) Don't Waste Michigan, Citizens for Alternatives to Chemical Contamination, Nuclear Energy Information Service, Public Citizen, Inc., San Luis Obispo Mothers for Peace, and Nuclear Issues Studies Group (collectively, Joint Petitioners); (4) Fasken Land and Minerals, Ltd. and Permian Basin Land and Royalty Owners (together, Fasken); (5) Alliance for Environmental Strategies (AFES); and (6) NAC International Inc. (NAC).

Because Holtec has revised its license application in response to petitioners' initial contentions, both the Board's and the NRC Staff's views as to their admissibility have changed over time. It appears the NRC Staff now asserts that two of the six hearing requests should be granted because, in its view (1) Beyond Nuclear has demonstrated standing and its only

proffered contention is admissible; and (2) Sierra Club has demonstrated standing and has proffered two admissible contentions (Sierra Club Contentions 1 and 4).[1] Holtec opposes the standing of all six petitioners and asserts that none of their proffered contentions is admissible.

The Board concludes that Beyond Nuclear, Sierra Club, and Fasken have demonstrated standing. However, the Board denies Beyond Nuclear's petition, because its sole contention no longer identifies a genuine dispute with Holtec's license application. Likewise, neither Sierra Club nor Fasken has proffered an admissible contention and their petitions are therefore denied. Although the Board does not rule on its standing, AFES has not proffered an admissible contention and its petition is denied for that reason. Joint Petitioners and NAC have neither demonstrated standing nor proffered an admissible contention. Because no petitioner has both demonstrated standing and proffered an admissible contention, this proceeding is terminated.

I. BACKGROUND

The nation's growing inventory of spent nuclear fuel from commercial nuclear power reactors is generally stored at the reactor sites where it was generated, initially immersed in pools of water and then, after a suitable delay, encased in protective dry-cask storage systems.[2] What to do with the spent fuel "has vexed scientists, Congress, and regulatory agencies for the

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[1] See NRC Staff's Consolidated Response to Petitions to Intervene and Requests for Hearing Filed by [AFES], [Beyond Nuclear], [Joint Petitioners], [NAC], and The Sierra Club (Oct. 9, 2018) at 65–67, 72–74 [hereinafter NRC Staff Consol. Answer]; NRC Staff Answer to Motions to Amend Contentions Regarding Federal Ownership of Spent Fuel (Feb. 19, 2019) [hereinafter NRC Staff Answer to Beyond Nuclear and Fasken Motion]. But see Tr. at 331–35 (NRC Staff stating at oral argument that issues identified in Beyond Nuclear's contention and in Sierra Club Contention 1 appeared "to have been cured for the present time"). Initially, the Staff also deemed Sierra Club Contention 8 to be admissible (NRC Staff Consol. Answer at 79), but announced at oral argument that it no longer was taking a position on the admissibility of that contention. Tr. at 261.

[2] U.S. Gov't Accountability Off., GAO-17-340, Commercial Nuclear Waste: Resuming Licensing of the Yucca Mountain Repository Would Require Rebuilding Capacity at DOE and NRC, Among Other Key Steps at 1 (2017).

last half-century."[3] After rejecting early disposal proposals that ranged from "burying nuclear waste in polar ice caps to rocketing it to the sun," a consensus appeared to settle on deep geologic burial in a permanent repository.[4] Congress passed the Nuclear Waste Policy Act of 1982 (NWPA),[5] which ultimately led the U.S. Department of Energy (DOE) to submit an application to the NRC for authorization to construct a geologic repository at Yucca Mountain, Nevada.[6] However, shortly after DOE's application was submitted in June 2008, Congress stopped funding the Yucca Mountain project, and a pending adjudication before an NRC licensing board was suspended in September 2011.[7] To date, more than seven years later, Congress has provided no new funding for a permanent nuclear waste repository at Yucca Mountain.

The Holtec proposal before the Board is not for another permanent repository, but for what is acknowledged by its very name to be a temporary solution: a consolidated interim storage facility (CISF). While a license to construct and operate Yucca Mountain would have required DOE to demonstrate a reasonable expectation that it would meet specified performance standards throughout the "period of geologic stability," defined to "end 1 million years after disposal,"[8] the licensing requirements for an interim storage facility under 10 C.F.R. Part 72 apply to renewable terms of no more than "40 years from the date of issuance."[9]

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[3] NEI v. EPA, 373 F.3d 1251, 1257 (D.C. Cir. 2004).

[4] Id.

[5] Nuclear Waste Policy Act of 1982, 42 U.S.C. § 10101 (1983) [hereinafter NWPA].

[6] See Letter from Edward F. Sproat III, Director, DOE Office of Civilian Radioactive Waste Management, to Michael F. Weber, Director, NRC Office of Nuclear Material Safety and Safeguards (NMSS) (June 3, 2008) (ADAMS Accession No. ML081560407).

[7] U.S. Dep't of Energy (High-Level Waste Repository), LBP-11-24, 74 NRC 368 (2011).

[8] 10 C.F.R. § 63.302.

[9] Id. § 72.42(a).

On March 30, 2017, Holtec submitted an application to the NRC to construct and operate a CISF.[10] Holtec intends to construct and operate the first phase of its CISF on approximately 1,000 acres of land in Lea County, New Mexico.[11] Holtec seeks to store 8,680 metric tons of uranium (MTUs) in two different models of Holtec canisters, up to 500 canisters in total, for a license period of 40 years.[12] On March 19, 2018, the NRC accepted and docketed Holtec's application.[13] If its initial license is granted, Holtec plans "19 subsequent expansion phases to be completed over the course of 20 years," with each phase necessitating a license amendment request.[14]

Holtec's Environmental and Safety Analysis Reports demonstrate marked differences between its proposed facility and a permanent waste repository, such as Yucca Mountain. Holtec's project is substantially less ambitious. For example, Yucca Mountain was to be constructed to comply with performance standards for one million years, but Holtec's Environmental Report anticipates storage at its proposed facility for 120 years (40 years for initial licensing, plus 80 years of potential extensions), and acknowledges that this 120 year period could be reduced if a permanent geologic repository were finally licensed and began operating.[15] While Yucca Mountain was statutorily authorized to store 70,000 metric tons of

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[10] See Letter from Kimberly Manzione, Holtec Licensing Manager, to Michael Layton, Director, NRC Division of Spent Fuel Management, NMSS (Mar. 30, 2017) (ADAMS Accession No. ML17115A418).

[11] [Holtec] HI-STORE [CISF] Environmental Report, at 14 (Rev. 5, Mar. 2019) [hereinafter ER]. The petitioners' originally-filed contentions in this proceeding are based on the earlier version of Holtec's Environmental Report. See [Holtec] HI-STORE [CISF] Environmental Report (Rev. 1, Dec. 2017).

[12] See ER at 14.

[13] See Holtec International's HI-STORE Consolidated Interim Storage Facility for Interim Storage of Spent Nuclear Fuel, 83 Fed. Reg. 12,034 (Mar. 19, 2018).

[14] ER at 14.

[15] Id.

high level radioactive waste,[16] Holtec's initial license application requests permission to store up to 8,680 MTUs.[17] While the Yucca Mountain repository would be constructed at least 700 feet below the surface,[18] Holtec's license application contemplates a maximum excavation depth of 25 feet.[19] And all parts of the Holtec storage system—both for transportation and storage—would use canisters and casks that have been separately approved by the NRC, and hence are not part of Holtec's license application for the Lea County storage facility.[20]

On July 16, 2018, the NRC published notice in the Federal Register of an opportunity to request a hearing and petition to intervene by September 14, 2018.[21] On September 12, 2018, AFES filed its petition to intervene and request for a hearing.[22] On September 14, 2018, NAC,

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[16] 42 U.S.C. § 10134(d).

[17] ER at 14. Holtec's Environmental Report, however, analyzes the potential full 20-phase capacity of up to 100,000 MTUs.

[18] U.S. DOE, Office of Civilian Radioactive Waste Management, Final Supplemental Environmental Impact Statement for a Geologic Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada at S-7 (June 2008).

[19] [Holtec] HI-STORE [CISF] Safety Analysis Report at 30 (rev. 0F Jan. 2019) [hereinafter SAR]. The petitioners' originally-filed contentions in this proceeding are based on the earlier version of Holtec's SAR. See [Holtec] HI-STORE [CISF] Safety Analysis Report (rev. 0A Oct. 2017).

[20] See 10 C.F.R. § 72.214 (Certificate Number 1040). Holtec's license application proposes the exclusive use of the HI-STORM UMAX canister storage system.

[21] Holtec International's HI-STORE Consolidated Interim Storage Facility for Interim Storage of Spent Nuclear Fuel, 83 Fed. Reg. 32,919, 32,919 (July 16, 2018) [hereinafter Notice of Opportunity to Request a Hearing].

[22] [AFES'] Petition to Intervene and Request for Hearing (Sept. 12, 2018) at 1 [hereinafter AFES Pet.].

Joint Petitioners, Beyond Nuclear, and Sierra Club timely filed their petitions.[23] The NRC also received five petitions from local governmental bodies to participate in the proceeding.[24]

On September 14, 2018, the Commission received motions to dismiss the proceeding from Beyond Nuclear and Fasken.[25] On September 24, 2018, Holtec and the NRC Staff filed answers opposing both motions to dismiss.[26] Beyond Nuclear and Fasken filed replies.[27] Although the Secretary of the Commission denied both motions on procedural grounds,[28] it

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[23] Petition to Intervene and Request for Hearing of NAC International, Inc. (Sept. 14, 2018) [hereinafter NAC Pet.]; [Joint Petitioners'] Petition to Intervene and Request for an Adjudicatory Hearing (Sept. 14, 2018) [hereinafter Joint Pet'rs Pet.]; Beyond Nuclear, Inc.'s Hearing Request and Petition to Intervene (Sept. 14, 2018) [hereinafter Beyond Nuclear Pet.]; Petition to Intervene and Request for Adjudicatory Hearing by Sierra Club (Sept. 14, 2018) [hereinafter Sierra Club Pet.].

[24] Petition by Eddy-Lea Energy Alliance to Participate as an Interested Local Governmental Body (Sept. 4, 2018) [hereinafter ELEA Pet.]; Corrected Petition by the Board of Commissioners for Lea County, New Mexico to Participate as an Interested Local Governmental Body (Sept. 12, 2018) [hereinafter Lea Cty. Pet.]; Petition by the City of Carlsbad, New Mexico to Participate as an Interested Local Governmental Body (Sept. 12, 2018) [hereinafter Carlsbad Pet.]; Petition by the City of Hobbs to Participate as an Interested Local Governmental Body (Sept. 13, 2018)[hereinafter Hobbs Pet.]; Petition by Eddy County to Participate as an Interested Local Governmental Body (Sept. 13, 2018)[hereinafter Eddy Cty. Pet.].

[25] Beyond Nuclear, Inc.'s Motion to Dismiss Licensing Proceedings for Hi-Store [CISF] and WCS [CISF] for Violation of the [NWPA] (Sept. 14, 2018) [hereinafter Beyond Nuclear Motion to Dismiss]; Motion of [Fasken] to Dismiss Licensing Proceedings for Hi-Store [CISF] and WCS [CISF] (Sept. 14, 2018) [hereinafter Fasken Motion to Dismiss].

[26] [Holtec's] Answer Opposing Beyond Nuclear Motion to Dismiss Licensing Proceeding for HI-STORE [CISF] (Sept. 24, 2018) [hereinafter Holtec Answer to Beyond Nuclear Motion to Dismiss]; [Holtec's] Answer Opposing [Fasken] Motion to Dismiss Licensing Proceeding for HI-STORE [CISF] (Sept. 24, 2018) [hereinafter Holtec Answer to Fasken Motion to Dismiss]; NRC Staff's Response to Motions to Dismiss Licensing Proceedings (Sept. 24, 2018) [hereinafter NRC Staff Response to Motions to Dismiss].

[27] Beyond Nuclear's Reply to [Holtec], and NRC Staff Responses to Beyond Nuclear's Motion to Dismiss (Sept. 28, 2018) [hereinafter Beyond Nuclear Reply on Motion to Dismiss]; Reply of Movants Fasken and PBLRO to Staff's Response to Motions to Dismiss (Sept. 28, 2018) [hereinafter Fasken Reply to NRC Staff on Motion to Dismiss]; Reply of [Fasken] to [Holtec's] Response to Motion to Dismiss (Sept. 28, 2018) [hereinafter Fasken Reply to Holtec on Motion to Dismiss].

[28] Order of the Secretary, [Holtec] (HI-STORE [CISF]) [and] Interim Storage Partners LLC (WCS [CISF]) Docket Nos. 72-1051 & 72-1050 (Oct. 29, 2018) (unpublished) [hereinafter Order Denying Motions to Dismiss].

observed that Beyond Nuclear's concurrently-filed petition incorporated arguments by reference contained in its motion to dismiss.[29] The Secretary, therefore, referred both Beyond Nuclear's and Fasken's motions to the Board to be considered under 10 C.F.R. § 2.309.[30]

On October 9, 2018, Holtec[31] and the NRC Staff[32] filed answers to the petitions. Holtec opposed the standing of all petitioners and the admission of all contentions. The NRC Staff supported the standing of two petitioners (Beyond Nuclear and Sierra Club) and the admissibility of four of their contentions (Beyond Nuclear's sole contention and Sierra Club Contentions 1, 4, and 8).[33] On October 16, 2018, petitioners AFES, Beyond Nuclear, Joint Petitioners, NAC, and Sierra Club filed replies.[34] On December 3, 2018, Holtec and the NRC

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[29] Id. at 2.

[30] Id. at 2–3. On December 27, 2018, Beyond Nuclear petitioned the United States Court of Appeals for the District of Columbia Circuit to review the Secretary's Order, which denied Beyond Nuclear's Motion to Dismiss and referred it as a petition to this Board. That appeal remains pending, although Beyond Nuclear has requested it be held in abeyance pending the outcome of this proceeding. See Notice of Beyond Nuclear's Petition for Review of NRC Order in D.C. Circuit U.S. Court of Appeals, Docket Nos. 72-1050/1051 (Jan. 16, 2019).

[31] [Holtec's] Answer Opposing [AFES'] Petition to Intervene and Request for Adjudicatory Hearing on [Holtec's] HI-STORE [CISF] Application (Oct. 9, 2018) [hereinafter Holtec Answer to AFES]; [Holtec's] Answer Opposing Beyond Nuclear's Hearing Request and Petition to Intervene on [Holtec's] HI-STORE [CISF] Application (Oct. 9, 2018) [hereinafter Holtec Answer to Beyond Nuclear]; [Holtec's] Answer Opposing [NAC's] Petition to Intervene and Request for Hearing on [Holtec's] HI-STORE [CISF] Application (Oct. 9, 2018) [hereinafter Holtec Answer to NAC]; [Holtec's] Answer Opposing Sierra Club's Petition to Intervene and Request for Adjudicatory Hearing on [Holtec's] HI-STORE [CISF] Application (Oct. 9, 2018) [hereinafter Holtec Answer to Sierra Club]; [Holtec's] Answer Opposing [Joint Petitioners'] Petition to Intervene and Request for an Adjudicatory Hearing on [Holtec's] HI-STORE [CISF] Application (Oct. 9, 2018) [hereinafter Holtec Answer to Joint Pet'rs].

[32] NRC Staff Consol. Answer.

[33] The NRC Staff also did not oppose the admissibility of NAC Contention 3, but deemed it to be moot inasmuch as the Staff opposed NAC's standing.

[34] Consolidated Response by Petitioner [AFES] to Answers by [Holtec] and NRC Staff (Oct. 16, 2018) [hereinafter AFES Reply]; Beyond Nuclear's Reply to Oppositions to Hearing Request and Petition to Intervene (Oct. 16, 2018) [hereinafter Beyond Nuclear Reply]; Combined Reply of [Joint Petitioners] to Holtec and NRC Answers (Oct. 16, 2018) [hereinafter Joint Pet'rs Reply]; Reply in Support of Petition to Intervene and Request for Hearing of [NAC] (Oct. 16, 2018)

Staff filed supplemental responses opposing consideration of Fasken's motion to dismiss as a petition.[35] Fasken filed a reply on December 10, 2018.[36]

The Board heard oral argument on January 23 and 24, 2019 in Albuquerque, New Mexico. Numerous motions proffering new and amended contentions that were filed after oral argument are addressed infra.

II. STANDING ANALYSIS

In a licensing proceeding such as this, the NRC must grant a hearing "upon the request of any person whose interest may be affected by the proceeding."[37] However, to determine whether a petitioner has a sufficient interest, the Commission applies contemporaneous judicial concepts of standing.[38] Although the Commission instructs us to construe the petition in favor of the petitioner when we determine standing,[39] it is nonetheless each petitioner's burden to demonstrate that standing requirements are met.[40] As relevant here, a petitioner may satisfy this burden in one of three ways.

[hereinafter NAC Reply]; Sierra Club's Reply to Answers Filed by [Holtec] and NRC Staff (Oct. 16, 2018) [hereinafter Sierra Club Reply].

[35] [Holtec's] Answer Opposing [Fasken's] Motion / Petition to Intervene on [Holtec's] HI-STORE [CISF] Application (Dec. 3, 2018) [hereinafter Holtec Supplemental Answer to Fasken Motion to Dismiss]; NRC Staff's Supplemental Response to Motion to Dismiss by [Fasken] (Dec. 3, 2018) [hereinafter NRC Staff Supplemental Answer to Fasken Motion to Dismiss].

[36] Reply of [Fasken] to Holtec's Answer Opposing Movants' Motion to Dismiss/Petition to Intervene (Dec. 10, 2018) [hereinafter Fasken Reply to Holtec]; Reply of [Fasken] to NRC Staff's Supplemental Response and Opposition to Motion to Dismiss (Dec. 10, 2018) [hereinafter Fasken Reply to NRC Staff].

[37] 42 U.S.C. § 2239(a)(1)(A).

[38] Fla. Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 & 4), CLI-15-25, 82 NRC 389, 394 (2015).

[39] Id.

[40] See Commonwealth Edison Co. (Zion Nuclear Power Station, Units 1 & 2), CLI-00-05, 51 NRC 90, 98 (2000). 10 C.F.R. § 2.309(d) specifies information that a petitioner should include in its petition to establish standing, but does not set the standard the Board must apply when deciding whether that information is sufficient.

First, a petitioner may show traditional standing. This requires a showing that a person or organization has suffered or might suffer a concrete and particularized injury that is: (1) fairly traceable to the challenged action; (2) likely redressable by a favorable decision; and (3) arguably within the zone of interests protected by the governing statutes[41]—here primarily the Atomic Energy Act (AEA) and the National Environmental Policy Act (NEPA).[42]

Second, a petitioner may take advantage of proximity presumptions the Commission has created to simplify standing requirements for individuals who reside within, or have frequent contacts with, a geographic zone of potential harm. In proceedings that involve construction or operation of a nuclear power plant, the zone is deemed to be the area within a 50-mile radius of the site.[43] In other proceedings, such as this one, a "proximity plus" standard is applied on a "case-by-case basis, taking into account the nature of the proposed action and the significance of the radioactive source."[44] The smaller the risk of offsite consequences, the closer a petitioner must be to be realistically threatened. Although the Commission has not established a clear standard, the relevant distance from a consolidated interim storage facility is likely less than 50 miles because such a storage facility "is essentially a passive structure rather than an operating facility, and…therefore [has] less chance of widespread radioactive release."[45] If no "obvious

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[41] Calvert Cliffs 3 Nuclear Project, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 915 (2009).

[42] 42 U.S.C. §§ 2011-2297; id. §§ 4321–47.

[43] PPL Bell Bend, LLC (Bell Bend Nuclear Power Plant), CLI-10-07, 71 NRC 133, 138-39 (2010).

[44] Ga. Inst. of Tech. (Ga. Tech Res. Reactor, Atlanta, Ga.), CLI-95-12, 42 NRC 111, 116-17 (1995). See Sequoyah Fuels Corp. and Gen. Atomics (Gore, Okla. Site), CLI-94-12, 40 NRC 64, 75 n.22 (1994) ("[A] presumption based on geographic proximity is not confined solely to Part 50 reactor licenses, but is also applicable to materials cases where the potential for offsite consequences is obvious.").

[45] Consumers Energy Co. (Big Rock Point Indep. Spent Fuel Storage Installation), CLI-07-19, 65 NRC 423, 426 (2007).

potential" for harm exists,[46] the petitioner has the "burden to show specific and plausible means" for how the proposed action will affect them.[47] "[C]onclusory allegations about potential radiological harm" are not sufficient.[48]

Third, like most petitioners here, an organization may try to establish representational standing based on the standing of one or more individual members. To establish representational standing, an organization must: (1) show that the interests it seeks to protect are germane to its own purpose; (2) identify at least one member who qualifies for standing in his or her own right; (3) show that it is authorized by that member to request a hearing on his or her behalf; and (4) show that neither the claim asserted nor the relief requested requires an individual member's participation in the organization's legal action.[49]

A. Beyond Nuclear

Beyond Nuclear states that it is "a nonprofit, nonpartisan membership organization that aims to educate and activate the public about the connections between nuclear power and nuclear weapons and the need to abolish both to protect public health and safety, prevent environmental harms, and safeguard our future."[50] Of especial relevance, "Beyond Nuclear advocates for an end to the production of nuclear waste and for securing the existing reactor waste in hardened on-site storage until it can be permanently disposed of in a safe, sound, and suitable underground repository."[51]

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[46] See Sequoyah Fuels, CLI-94-12, 40 NRC at 75 n.22.

[47] Nuclear Fuel Servs., Inc. (Erwin, Tenn.), CLI-04-13, 59 NRC 244, 248 (2004).

[48] Id.

[49] Consumers Energy Co. (Palisades Nuclear Plant), CLI-07-18, 65 NRC 399, 409 (2007).

[50] Beyond Nuclear Pet. at 2.

[51] Id.

Beyond Nuclear claims standing on several different theories,[52] but we need consider only one. Beyond Nuclear submits the declarations of several members who live near the proposed facility and authorize Beyond Nuclear to represent them.[53] One such member—Keli Hatley—lives with her husband and small children just one mile away from the proposed facility.[54] Indeed, Ms. Hatley's cattle currently range on the land where the facility would be constructed, and she rides there on horseback to manage them.[55] If the storage facility is built, Ms. Hatley expects she would have to ride along its fence line.[56]

The NRC Staff does not oppose Beyond Nuclear's claim of standing,[57] and the Board agrees. Ms. Hatley's residence is well within the distance that has been found sufficient in other proceedings that involved even smaller spent fuel facilities.[58]

Holtec opposes Beyond Nuclear's standing[59] because, Holtec asserts, Beyond Nuclear's members have not provided "any plausible explanation of how radionuclides or radiation from inside sealed metal canisters emplaced below ground in steel and concrete storage vaults"

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[52] See Beyond Nuclear Pet. at 2–10.

[53] See id., Ex. 01, Decl. of Daniel C. Berry, III (Sept. 14. 2018); id. Ex. 03, Decl. of Keli Hatley; id. Ex. 05, Decl. Margo Smith.

[54] See id., Ex. 03, Decl. of Keli Hatley ¶ 3.

[55] Id. at ¶ 5.

[56] Id.

[57] NRC Staff Consol. Answer at 8.

[58] See, e.g., Pac. Gas & Elec. Co. (Diablo Canyon Indep. Spent Fuel Storage Installation), LBP-02-23, 56 NRC 413, 429 (2002) (ruling 17 miles sufficient and citing other NRC approvals of standing for petitioners within 10 miles of proposed spent fuel pool expansions); Carolina Power & Light Co. (Shearon Harris Nuclear Power Plant), LBP-99-25, 50 NRC 25, 29–31 (1999) (according standing to a petitioner 17 miles from spent fuel pool); Fla. Power & Light Co. (St. Lucie Nuclear Power Plant, Unit 1), LBP-88-10A, 27 NRC 452, 454–55 (1988), aff'd, ALAB-893, 27 NRC 627 (1988) (conceding standing of individual living within 10 miles of spent fuel pools); Dominion Nuclear Conn., Inc. (Millstone Nuclear Power Station, Unit 3), LBP-00-02, 51 NRC 25, 28 (2000) (granting standing to individual with part-time residence located 10 miles from spent fuel pool).

[59] Holtec Answer to Beyond Nuclear at 13–18.

could reach them.[60] But the purpose of proximity presumptions is to eliminate the need for such factual demonstrations: "When the presumption of having the requisite interest is applied, it becomes unnecessary to establish a causal relationship between the claimed injury and the requested action."[61]

If Ms. Hatley lacks standing to challenge the storage of much of the nation's spent nuclear fuel (potentially up to 100,000 metric tons) one mile from her home, one has difficulty imagining who would have standing. Indeed, at oral argument, Holtec's counsel declined to speculate whether anyone might have standing to challenge its proposed storage facility under Holtec's demanding interpretation of the requirements.[62]

Beyond Nuclear has demonstrated standing. However, because Beyond Nuclear has not proffered an admissible contention, as discussed infra, its request for an evidentiary hearing must nonetheless be denied.

B. Sierra Club

Sierra Club claims to be the oldest and largest environmental organization in the United States, and to be especially concerned about the environmental consequences of nuclear power and nuclear waste.[63] Like Beyond Nuclear, Sierra Club submits supporting declarations from several members who live in the vicinity of the proposed facility.[64] One member—Danny

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[60] Id. at 17.

[61] N. States Power Co. (Pathfinder Atomic Plant), LBP-90-03, 31 NRC 40, 45 (1990); see also Calvert Cliffs, CLI-09-20, 70 NRC at 917 n.27.

[62] Tr. at 272–73.

[63] Tr. at 41.

[64] See Sierra Club Pet., Decl. of Danny Berry; id., Decl. of Danielle Marie Dyer; id., Decl. of Deanna Maria Dyer; id., Decl. of Gordon Wayne Dyer; id., Decl. of Martha A. Singleterry.

Berry—states that he lives less than 10 miles away and owns and operates a ranch just three miles away.[65]

As discussed supra, these distances are well within the limits that have been found to confer standing to challenge much smaller storage facilities, and the NRC Staff agrees that Sierra Club has established standing.[66] And again, we are not persuaded by Holtec's argument[67] that, even to commence a challenge, an individual who lives sufficiently close to a potentially massive facility for storing much of the nation's spent nuclear fuel must first demonstrate with specificity just how radiation might reach them.

Sierra Club has demonstrated standing. However, because Sierra Club has not proffered an admissible contention, as discussed infra, its request for an evidentiary hearing must nonetheless be denied.

C. Joint Petitioners

Joint Petitioners are comprised of seven different organizations, each presenting a similar standing issue.[68] Although Public Citizen, Inc. and the Nuclear Issues Study Group have each submitted a declaration from a member who lives in New Mexico, neither lives anywhere near the proposed facility.[69] The other five organizations rely entirely on declarations from

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[65] See Sierra Club. Pet., Decl. of Danny Berry ¶ 3. Because Mr. Berry submitted similar declarations on behalf of both Sierra Club and Beyond Nuclear, we consider his declaration only in connection with the standing of Sierra Club. See Big Rock Point ISFSI, CLI-07-19, 65 NRC at 426 (explaining that "multiple representations might lead to confusion").

[66] NRC Staff Consol. Answer at 8.

[67] Holtec Answer to Sierra Club at 14–15.

[68] The seven organizations are: Don't Waste Michigan; Citizens for Alternatives to Chemical Contamination; Public Citizen, Inc.; San Luis Obispo Mothers for Peace; Nuclear Energy Information Service; Citizens' Environmental Coalition; and Nuclear Issues Study Group.

[69] Joint Pet'rs Pet., Decl. of Petuuche Gilbert. The Declaration of Petuuche Gilbert asserts that he is a member of Public Citizen, Inc. who lives in Pueblo of Acoma, New Mexico. Id., Decl. of

members who live in other states. All seven organizations, therefore, base their standing claims not on their members' proximity to the proposed facility, but on their proximity to potential transportation routes by which spent nuclear fuel might travel to the proposed facility.

This is too remote and speculative an interest on which to establish standing. As the Commission stated in 2004: "[M]ere geographical proximity to potential transportation routes is insufficient to confer standing."[70] Even before 2004, licensing boards rejected standing arguments based on proximity to likely transportation routes.[71] As the Commission observed in 2001, licensing boards have regularly declined to find that a mere increase in the traffic of radioactive materials near a petitioner's residence, without more, constitutes an injury traceable to a licensing decision "that primarily affects a site hundreds of miles away."[72]

Although Joint Petitioners cite one licensing board decision for the proposition that standing may be based on proximity to transportation routes,[73] we decline to follow it. In our view, either the result in Duke Cogema was influenced by what that Board characterized as the

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Leona Morgan. The declaration of Leona Morgan asserts that she is a member of the Nuclear Issues Study Group who lives in Albuquerque, New Mexico.

[70] U.S. Dep't of Energy (Plutonium Export License), CLI-04-17, 59 NRC 357, 364 n.11 (2004) (quoting Diablo Canyon ISFSI, LBP-02-23, 56 NRC at 434). See also Energy Solutions, LLC (Radioactive Waste Import/Export Licenses), CLI-11-03, 73 NRC 613, 623 (2011) (denying petitioners' standing claim for failing to show there would be any impact from the transport of radioactive materials to be imported).

[71] See, e.g., Diablo Canyon ISFSI, LBP-02-23, 56 NRC at 433–34; Pathfinder, LBP-90-03, 31 NRC at 43–44 (denying standing to petitioner who resided one mile from a likely transportation route and merely claimed that an accident along that route would cause an increased radiological dose); accord Exxon Nuclear Co., Inc. (Nuclear Fuel Recovery and Recycling Center), LBP-77-59, 6 NRC 518, 520 (1977) (finding that assertion of injury from spent fuel that would travel on railway track very near property was insufficient to establish standing).

[72] Int'l Uranium (USA) Corp. (Source Material License Amend.), CLI-01-18, 54 NRC 27, 32 (2001).

[73] See Duke Cogema Stone & Webster (Savannah River Mixed Oxide Fuel Fabrication), LBP-01-35, 54 NRC 403 (2001), rev'd in part on other grounds, CLI-02-24, 56 NRC 335 (2002).

"unique circumstances"[74] surrounding transportation of mixed oxide fuel or, alternatively, the decision is simply an outlier that failed to anticipate the position of the Commission as expressed in later cases.[75] Regardless, it is not binding on this Board.

Moreover, other licensing boards have rejected petitioners' standing claims because the mere fact that additional radioactive waste will be transported if the NRC licenses a project "does not ipso facto establish that there is a reasonable opportunity for an accident to occur at [any location], or for the radioactive materials to escape because of accident or the nature of the substance being transported."[76] Here, although Joint Petitioners try to predict future transportation routes,[77] Holtec's proposed facility as yet has no customers, and the routes by which spent fuel might travel to Lea County, New Mexico from nuclear power plants around the country have not yet been established.[78] Joint Petitioners' standing claims are therefore even more speculative than the rejected claims of petitioners who could at least show a reasonable probability that the transportation routes they lived near would actually be used.[79]

None of the Joint Petitioners has demonstrated standing. Moreover, because Joint Petitioners have not proffered an admissible contention, as discussed infra, their request for an evidentiary hearing must be denied on that ground as well.

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[74] Id. at 417.

[75] See supra note 70.

[76] Pathfinder, LBP-90-03, 31 NRC at 43.

[77] Joint Pet'rs Pet. at 11–13.

[78] Holtec Answer to Joint Pet'rs at 20.

[79] Cf. Int'l Uranium (USA) Corp. (Source Material License Amendment), LBP-01-08, 53 NRC 204, aff'd, CLI-01-18, 54 NRC 27 (2001) (denying standing where petitioner resided merely one block from route over which applicant proposed to transport radioactive materials); Pathfinder, LBP-90-03, 31 NRC at 43–44 (denying standing to petitioner who resided one mile from transportation route established with "reasonable likelihood").

D. Fasken

As set forth in the Declarations of Tommy E. Taylor,[80] Mr. Taylor is Vice President of Fasken Management, LLC, which is the general partner of Fasken Land and Minerals, Ltd.[81] Fasken is a member of the Permian Basin Land and Royalty Organization, which is an association of oil and gas producers and royalty owners formed specifically in response to Holtec's proposed facility.[82]

As stated in Mr. Taylor's initial Declaration, Fasken owns and/or leases property related to its oil and gas activities that is approximately two miles from the proposed Holtec site.[83] Although Mr. Taylor's initial Declaration focused on Fasken's economic interests, his supplemental Declaration clarified that he and other Fasken employees "routinely" go to this area for work-related purposes, such as checking on oil and gas production equipment, regular inspection and maintenance, and repairs as needed.[84] Accordingly, he is "concerned that the close proximity of Fasken's oil and gas properties and the necessity for Fasken's employees and myself to regularly attend to such will expose them and myself to radiation from the proposed [CISF]."[85]

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[80] Mr. Taylor executed his initial Declaration on September 14, 2018. He executed a Supplemental Declaration on December 10, 2018, which was submitted with a motion of the same date, seeking permission to file it. The Commission allows a petitioner "some latitude to supplement or cure a standing showing in its reply pleading [so long as] any additional arguments [are] supported by . . . a supplemental affidavit." Strata Energy, Inc. (Ross In Situ Recovery Uranium Project), LBP-12-03, 75 NRC 164, 186 (2012) (citing S. Carolina Elec. & Gas Co. (Virgil C. Summer Nuclear Station, Units 2 & 3), CLI-10-1, 71 NRC 1, 7 (2010)). Accordingly, the Board grants the motion and accepts Mr. Taylor's Supplemental Declaration.

[81] Motion for Permission to File Supplemental Standing Declaration of Tommy E. Taylor, Suppl. Decl. of Tommy Taylor ¶ 1 (Dec. 10, 2018) [hereinafter Suppl. Decl. of Tommy Taylor].

[82] See Fasken Motion to Dismiss, Decl. of Tommy Taylor ¶ 3 (Sept. 14, 2018).

[83] Supp. Decl. of Tommy Taylor ¶ 3.

[84] Id. ¶ 4.

[85] Id. ¶ 5.

Although Mr. Taylor and other Fasken employees do not live two miles from the Holtec site, we conclude that the extreme closeness of the Fasken site, coupled with a reasonable expectation of regular visits for work-related activities, are sufficient to justify a presumption of standing. In Millstone, by way of comparison, that licensing board found standing based on part-time residence, even though the part-time residence was five times as distant (10 miles) from the storage facility, and the facility itself was a small fraction of the size to which Holtec hopes its facility will grow.[86]

Fasken has demonstrated standing. However, as discussed infra, because Fasken has not proffered any contention of its own, much less an admissible contention, its request for an evidentiary hearing must nonetheless be denied.

E. AFES

AFES describes itself as an environmental group whose members are principally located in the area of Holtec's proposed storage facility.[87] It states that its members are working to oppose "the small group of economic elites ('the one percent'), who have gone unchallenged, as they seek to impose their personal economic agendas on the backs of the economically vulnerable people of Southern New Mexico."[88] Of especial relevance, AFES is "concerned about environmental and health issues related to oil, gas, uranium mining, radioactive waste transportation, disposal or storage and nuclear enrichment and processing."[89]

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[86] Millstone, LBP-00-02, 51 NRC at 27–28.

[87] AFES Pet. at 1.

[88] Id. at 2.

[89] Id.

AFES submitted affidavits from four members, the closest of whom lives 35 miles from the proposed facility.[90] One member has worked for the past six months for an employer located 10 miles from the site, although it is unclear how much time she spends there, as she describes her job as including "driving around much of Eddy and Lea County."[91] All four members state that, on a regular basis, they use the main road between Hobbs and Carlsbad (US 62-180, which passes 0.52 miles from the Holtec site).[92]

We question whether these contacts are sufficient to establish standing. Although 35 miles is within the 50-mile proximity presumption that applies to licensing reactors, it is nearly twice the distance that any licensing board has found sufficient to support standing in a spent fuel storage case.[93] Having an employer located 10 miles from the site does suggest some similarity to the facts in Millstone, where a part-time residence at that distance from a storage facility was found sufficient.[94] However, the record suggests that the pertinent AFES member might not actually spend her work day at that location and does not reflect for how long she expects her six-month employment to continue.[95] Finally, we do not find that necessarily fleeting contacts with land near the proposed facility by using a highway that passes a half mile away are sufficient to qualify.

On the other hand, the proposed Holtec facility is envisioned as potentially much larger than any previous spent fuel storage facility. In this uncharted area, we are reluctant to rule

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[90] See AFES Pet., Ex. 5, Aff. of Nicholas R. Maxwell ¶ 5 (Sept. 12, 2018) [hereinafter Aff. of Nicholas R. Maxwell].

[91] Id., Ex. 3, Aff. of Lorraine Villegas ¶ 6 (Sept. 12, 2018) [hereinafter Aff. of Lorraine Villegas].

[92] Aff. of Nicholas R. Maxwell ¶ 6; Aff. of Lorraine Villegas ¶ 7; AFES Pet., Ex. 2, Aff. of Roase Gardner ¶ 9 (Sept. 12, 2018); id., Ex. 4, Aff. of Noel V. Marquez ¶ 9 (Sept. 12, 2018).

[93] See Diablo Canyon ISFSI, LBP-02-23, 56 NRC at 428–29 (ruling 17 miles sufficient for standing).

[94] See Millstone, LBP-00-02, 51 NRC at 27–28.

[95] Aff. of Lorraine Villegas, ¶ 6.

unnecessarily on what geographic distance might or might not be sufficient for a presumption of standing. Because AFES plainly has not submitted an admissible contention, as discussed infra, we deny its request for an evidentiary hearing on that ground alone and make no determination of its standing.

F. NAC

NAC describes itself as a "leading nuclear fuel cycle technology company that provides storage systems for [spent nuclear fuel]."[96] According to NAC, much of the design information for its canisters is proprietary, and because NAC has not licensed or authorized anyone to furnish its proprietary design information to Holtec this information is not available to Holtec.[97]

NAC therefore claims that it will be harmed if NAC's canisters are placed in Holtec's storage facility. Specifically, NAC claims that, lacking NAC's proprietary information, Holtec would be unable to adequately evaluate or respond to events that affect NAC canisters stored in Holtec's facility.[98] As a result, NAC alleges, it would likely (1) be urged to provide its proprietary information to Holtec; (2) be harmed in its reputation for safety and reliability; (3) be subject to harm to its proprietary interest in its own NRC Certificates of Compliance for spent fuel storage systems approved under Part 72; and/or (4) be subject to third-party claims of financial responsibility.[99]

NAC claims standing on the basis of these alleged injuries. Alternatively, NAC asks the Board to grant it discretionary intervention under 10 C.F.R. § 2.309(e).

The difficulty with NAC's standing claim is that it has nothing at stake at the present time. Holtec's present application, if granted, would not allow storage of NAC canisters at the

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[96] NAC Pet. at 4.

[97] Id.

[98] See id.

[99] Id. at 5.

proposed facility. On the contrary, the application's proposed License Condition 9 would authorize storage only in casks designated in accordance with the Certificate of Compliance for Holtec's HI-STORM UMAX storage system.[100] That Certificate, in turn, only allows storage of two specific type of Holtec canisters—not NAC's or anyone else's canisters.[101]

When and if, at some future time, Holtec wants NRC authorization to store NAC canisters at Holtec's facility, then both Holtec's Certificate of Compliance and facility license would need to be amended, and NAC could seek to participate in proceedings concerning those amendments. NAC's counsel creatively posits various reasons why NAC might find those alternatives less satisfactory,[102] but the unavoidable reality is that NAC has not suffered and cannot suffer any injury that entitles it to standing in the present proceeding.

NAC has not demonstrated standing. Moreover, because NAC has not proffered an admissible contention, as discussed infra, its request for an evidentiary hearing must be denied on that ground as well.

For similar reasons, the Board denies NAC's alternative request for discretionary intervention. NAC's further participation would significantly and improperly broaden the scope of this proceeding, contrary to 10 C.F.R. § 2.309(e)(2), because NAC seeks to address concerns that will not be affected by whether or not the NRC grants the license Holtec is seeking.

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[100] See Proposed License for Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste (ADAMS Accession No. ML17310A223) [hereinafter Holtec Proposed License].

[101] See HI-STORM UMAX Certificate of Compliance No. 1040, Appendix B, Amend. No. 2, Approved Contents and Design Features for the HI-STORM UMAX Canister Storage System (ADAMS Accession No. ML16341B107).

[102] Tr. at 179–209.

III. CONTENTION ADMISSIBILITY STANDARDS

A. Legal Standards Governing Contention Admissibility

For its hearing request to be granted, in addition to demonstrating standing, a petitioner must proffer at least one admissible contention.[103]

An admissible contention must: (1) state the specific legal or factual issue to be raised or controverted; (2) provide a brief explanation for the basis of the contention; (3) demonstrate that the issue raised in the contention is within the scope of the proceeding; (4) demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding; (5) concisely state the alleged facts or expert opinions that support the petitioner's position and on which the petitioner intends to rely at an evidentiary hearing, including references to the specific sources and documents on which the petitioner intends to rely; and (6) show that a genuine dispute exists on a material issue of law or fact by referring to specific portions of the application that the petitioner disputes or, if the application is alleged to be deficient, by identifying such deficiencies and the supporting reasons for this allegation.[104]

A further requirement applies to several contentions addressed infra. No NRC rule or regulation may be challenged in a contention unless the petitioner seeks and obtains a waiver from the Commission in accordance with 10 C.F.R. § 2.335. No petitioner in this proceeding has sought such a waiver.

The contention admissibility rules are "strict by design."[105] The Commission has observed that they "properly 'reserve our hearing process for genuine, material controversies

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[103] 10 C.F.R. § 2.309(a).

[104] Id. § 2.309(f)(i)–(vi).

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

between knowledgeable litigants.'"[106] Failure to satisfy even one of the requirements requires the Board to reject the contention.[107]

This six-factor standard resulted from the Commission's effort to "raise the threshold bar for an admissible contention."[108] Previously, licensing boards would sometimes admit contentions "that appeared to be based on little more than speculation[,]" and petitioners would try to "unearth" admissible contentions "through cross-examination."[109] Rather than expend agency time and resources on vague and unsupported claims,[110] the Commission strengthened the contention admissibility standards to what they are today—standards that afford evidentiary hearings only to those who "proffer at least some minimal factual and legal foundation in support of their contentions."[111]

Therefore, although a petitioner need not prove its contention at this stage, mere notice pleading of proffered contentions is insufficient.[112] Rather, the NRC requires a petitioner to read the pertinent portions of the license application, including the Safety Analysis Report and the Environmental Report, state the applicant's position and the petitioner's opposing view, and explain why it disagrees with the applicant.[113]

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[106] FirstEnergy Nuclear Operating Co. (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-08, 75 NRC 393, 396 (2012) (quoting Dominion Nuclear Conn., Inc. (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 219 (2003)).

[107] See Entergy Nuclear Operations, Inc. (Indian Point, Unit 2), CLI-16-05, 83 NRC 131, 136 (2016).

[108] Duke Energy Co. (Oconee Nuclear Station, Units 1, 2, & 3), CLI-99-11, 49 NRC 328, 334 (1999).

[109] Id.

[110] See Changes to the Adjudicatory Process, 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004).

[111] Oconee, CLI-99-11, 49 NRC at 334.

[112] Fansteel, Inc. (Muskogee, Okla. Site), CLI-03-13, 58 NRC 195, 203 (2003).

[113] Rules of Practice for Domestic Licensing Proceedings—Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,170–71 (Aug. 11, 1989).

B. Late-Filed Contentions

As some petitioners have filed motions to either amend their contentions or file new contentions, an explanation of the rules for amended or late-filed contentions is necessary.[114]

Because the initial deadline for filing contentions was September 14, 2018,[115] petitioners seeking to amend their original contentions or proffer new ones after that date must meet the "good cause" standard in 10 C.F.R. § 2.309(c)(1).[116] "Good cause" exists if the petitioner can show (1) the information upon which the amended or new contention is based was not previously available; (2) the information upon which the filing is based is materially different from information previously available;[117] and (3) the filing has been submitted in a timely fashion based on the availability of the subsequent information.[118] Previously available information that

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[114] Motion by [Joint Petitioners] to File a New Contention (Jan. 17, 2019); Sierra Club's Motion to File a New Late-Filed Contention (Jan. 17, 2019); Motion of [Joint Petitioners] to Amend Their Contentions 4 and 7 Regarding Holtec's Decision to Have No Dry Transfer System Capability and Holtec's Policy of Returning Leaking, Externally Contaminated or Defective Casks and/or Canisters to Originating Reactor Sites (Feb. 18, 2019) [hereinafter Joint Pet'rs Motion to Amend Contentions 4 & 7]; Sierra Club's Additional Contentions in Support of Petition to Intervene and Request for Adjudicatory Hearing (Feb. 25, 2019) [hereinafter Sierra Club Contentions 27, 28, 29]; Sierra Club's Motion to File New Late-Filed Contentions 27, 28, and 29 (Feb. 25, 2019) [hereinafter Sierra Club's Motion to File New Late-Filed Contentions 27, 28, and 29].

[115] See Notice of Opportunity to Request a Hearing, 83 Fed. Reg. at 32,919.

[116] See 10 C.F.R. § 2.309(b); see also id. § 2.309(f)(2).

[117] "Materially different" in this context concerns the "type or degree of difference between the new information and previously available information." Fla. Power & Light Co. (Turkey Point Units 6 & 7), LBP-17-6, 86 NRC 37, 48, aff'd, CLI-17-12, 86 NRC 215 (2017).

[118] 10 C.F.R. § 2.309(c)(1). See also Shaw AREVA MOX Servs. (Mixed Oxide Fuel Fabrication Facility), LBP-08-11, 67 NRC 460, 493 (2008) (observing that many licensing boards have found 30 days from a triggering event for proffering a new or amended contention to be timely).

is newly acquired by the petitioner does not constitute good cause,[119] as "new and amended contentions must be based on new facts not previously available."[120]

C. NEPA Legal Standards

NEPA mandates that federal agencies prepare an environmental impact statement (EIS) before undertaking any "major Federal actions significantly affecting the quality of the human environment."[121] The preparation of an EIS is meant to ensure that federal agencies "will not act on incomplete information, only to regret [their] decision after it is too late to correct."[122] NEPA requires agencies to take a "hard look at environmental consequences" of the proposed action,[123] and imposes a duty upon the agency to both "consider every significant aspect of the environmental impact of a proposed action" and "inform the public" of its analysis and conclusion.[124]

NEPA's "hard look" mandate notwithstanding, the agency is not obligated to analyze every conceivable aspect of the project before it.[125] Instead, this "hard look" is subject to a "rule of reason,"[126] meaning that the agency need not perform analyses concerning events that would

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[119] Kan. Gas & Elec. Co. (Wolf Creek Generating Station, Unit 1), LBP-84-17, 19 NRC 878, 886 (1984).

[120] Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-12-01, 75 NRC 479, 493 n.70 (2012) (emphasis in original).

[121] See 42 U.S.C. § 4332(2)(C); see also Nat. Res. Def. Council v. NRC, 823 F.3d 641, 643 (D.C. Cir. 2016).

[122] Marsh v. Or. Nat. Res. Council, 490 U.S. 360, 371 (1989).

[123] Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350 (1989) (quoting Kleppe v. Sierra Club, 427 U.S. 390, 410 n.21 (1976)).

[124] Balt. Gas & Elec. v. Nat. Res. Def. Council, Inc., 462 U.S. 87, 97, 103 (1983) (quoting Vermont Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, 435 U.S. 519, 553 (1978)).

[125] Private Fuel Storage, L.L.C. (Indep. Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 349 (2002).

[126] Nat. Res. Def. Council v. Morton, 458 F.2d 827, 834 (D.C. Cir. 1972).

be considered "worst case" scenarios involving the project,[127] or those considered "remote and highly speculative."[128] NEPA does not necessitate "certainty or precision" nor does it mandate particular results from the agency.[129] Rather, NEPA requires "an estimate of anticipated (not unduly speculative) impacts" from the agency.[130] The statutory obligations seek to "guarantee process, not specific outcomes."[131]

At this stage of the proceeding, the NRC Staff has not issued an EIS for the proposed Holtec facility. NRC regulations nonetheless require petitioners to file environmental contentions "based on documents or other information at the time the petition is to be filed," i.e., the applicant's Environmental Report.[132] Although it is the NRC Staff's responsibility to comply with NEPA in its later-issued EIS,[133] we analyze contentions challenging the Environmental Report now as if those contentions will migrate as challenges to the Staff's later-issued EIS.[134]

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[127] Private Fuel Storage, L.L.C., CLI-02-25, 56 NRC at 352.

[128] Limerick Ecology Action, Inc. v. NRC, 869 F.2d 719, 754–55 (3d Cir. 1989).

[129] La. Energy Servs., L.P. (Nat'l Enrichment Facility), CLI-05-20, 62 NRC 523, 536 (2005).

[130] Id. (emphasis in original).

[131] Massachusetts v. NRC, 708 F.3d 63, 67 (1st Cir. 2013).

[132] 10 C.F.R. § 2.309(f)(2). See also Powertech (USA), Inc. (Dewey-Burdock In Situ Uranium Recovery Facility), CLI-16-20, 84 NRC 219, 231 (2016).

[133] 42 U.S.C. §§ 4321 et seq.

[134] See Powertech, CLI-16-20, 84 NRC at 231; see also Crow Butte Res., Inc. (In Situ Leach Facility, Crawford, Neb.), CLI-15-17, 82 NRC 33, 42 n.58 (2015) ("[A] contention 'migrates' when a licensing board construes a contention challenging [an Environmental Report]…as a challenge to a subsequently issued Staff NEPA document without the petitioner amending the contention.").

IV. CONTENTION ANALYSIS

A. Beyond Nuclear

Understanding Beyond Nuclear's sole contention (as well as some of the contentions proffered by other petitioners[135]) requires further explanation of the statutory scheme that was established by the NWPA. As discussed supra, Congress contemplated that DOE would build a national nuclear waste repository, but that the nuclear power companies would help pay for it. Under section 302 of the NWPA, power reactor licensees were required to pay into a Nuclear Waste Fund for construction of the repository.[136] In exchange, section 302(a)(5)(B) committed DOE to begin disposing of the nuclear power plants' spent fuel no later than January 31, 1998. When a permanent repository failed to materialize, the power plant licensees sued and began to recover from the federal government substantial damages to cover the cost of continuing to store spent fuel at their reactor sites.[137] Contract damage lawsuits under the NWPA are now commonplace, and the federal government pays out damages to power reactor licensees on a regular basis.[138]

Thus, both DOE and the nuclear power plant owners potentially have an interest in contracting to use Holtec's proposed interim storage facility. DOE might want to take responsibility for the nuclear plants' spent fuel, pay Holtec to store it, and stop paying out damages. The nuclear plant owners, on the other hand, might be willing to apply their ongoing damage payments toward paying Holtec to store their spent fuel, so that it would be off their sites and no longer their responsibility to keep secure. Because the NWPA was drafted on the

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[135] See, e.g., Sierra Club Contention 1 and Joint Petitioners Contention 2, discussed infra.

[136] 42 U.S.C. § 10222.

[137] See, e.g., Nat'l Ass'n of Regulatory Util. Comm'rs v. U.S. Dep't of Energy, 736 F.3d 517, 520 (D.C. Cir. 2013); Me. Yankee Atomic Power Co. v. United States, 225 F.3d 1336, 1341–42 (Fed. Cir. 2000); Ind. Mich. Power Co. v. U.S. Dep't of Energy, 88 F.3d 1272, 1276–77 (D.C. Cir. 1996).

[138] See, e.g., Nat'l Ass'n of Regulatory Util. Comm'rs, 736 F.3d at 520.

assumption that DOE would not accept title to spent nuclear fuel until a permanent repository becomes operational, however, it appears (as discussed infra) that in general only the second possibility would be consistent with the terms of the statute.

Beyond Nuclear's contention, as originally proffered in its hearing petition, therefore stated:

> The NRC must dismiss Holtec's license application and terminate this proceeding because the application violates the NWPA. The proceeding must be dismissed because the central premise of Holtec's application—that the U.S. Department of Energy ("DOE") will be responsible for the spent fuel that is transported to and stored at the proposed interim facilities—violates the NWPA. Under the NWPA, the DOE is precluded from taking title to spent fuel unless and until a permanent repository has opened. 42 U.S.C. §§ 10222(a)(5)(A), 10143.[139]

In other words, initially Beyond Nuclear assumed that the "central premise" of Holtec's application was that Holtec would contract with DOE to store nuclear power companies' spent fuel. This would be unlawful under the NWPA, Beyond Nuclear contended.

After Holtec conceded that (with limited exceptions) such contracts would indeed be unlawful at the present time,[140] Beyond Nuclear moved to amend its contention to add the following statement:

> Language in Rev. 3 of Holtec's Environmental Report, which presents federal ownership as a possible alternative to private ownership of spent fuel, does not render the application lawful. As long as the federal government is listed as a potential owner of the spent fuel, the application violates the NWPA.[141]

As discussed infra, the Board grants Beyond Nuclear's motion to amend its contention, in order to allege that even presenting federal ownership as a possible alternative to private ownership of spent fuel violates the NWPA.

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[139] Beyond Nuclear Pet. at 10.

[140] Tr. at 250–52.

[141] Motion by Petitioners Beyond Nuclear and Fasken to Amend Their Contentions Regarding Federal Ownership of Spent Fuel to Address [Holtec's] Revised License Application (Feb. 6, 2019) at 8 [hereinafter Beyond Nuclear and Fasken Motion to Amend].

As events have unfolded, therefore, Beyond Nuclear's contention now raises this fundamental question: May the NRC license Holtec's storage facility to enter into lawful contracts with potential customers, including those that may later become lawful? Or, if Congress were to expand the category of lawful contracts (specifically, to include most contracts with DOE), would it be necessary (as Beyond Nuclear claims) for Holtec to re-submit its license application and for the NRC to re-notice a new opportunity for a hearing?[142] We conclude that, to implement the will of Congress in such circumstances, the NRC need not require Holtec to begin the licensing process all over again.

As explained supra, initially Beyond Nuclear filed with the Commission a motion to dismiss the Holtec licensing proceeding as violating the NWPA.[143] At the same time, out of an abundance of caution, Beyond Nuclear also filed essentially the same claim in the form of a hearing request and contention.[144] The Secretary of the Commission denied Beyond Nuclear's motion to dismiss on procedural grounds, without prejudice to its underlying arguments, and directed that the matter should proceed before a licensing board on the basis of Beyond Nuclear's hearing petition.[145]

In support of its contention, Beyond Nuclear incorporated by reference portions of its motion to dismiss.[146] Beyond Nuclear identified language in Holtec's Environmental Report that said Holtec would enter into a contract with DOE by which DOE will take title to spent fuel and be responsible for transporting it to the site.[147] It also identified language in Holtec's Safety

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[142] See id. at 11 n.5.

[143] Beyond Nuclear Motion to Dismiss at 1.

[144] Beyond Nuclear Pet.

[145] Order Denying Motions to Dismiss at 2.

[146] Beyond Nuclear Pet. at 10.

[147] Beyond Nuclear Motion to Dismiss at 16 (citing ER, rev. 0 at 1-1, 3-104).

Analysis Report that said Holtec might either contract with DOE or with nuclear plant owners themselves, leading to an inconsistency in the application documents.[148]

Beyond Nuclear contended that the first scenario (that is, Holtec's contracting with DOE) would be unlawful under the NWPA. As Beyond Nuclear pointed out, the NWPA provides that until a permanent waste repository (such as Yucca Mountain) opens, "the generators and owners of high-level radioactive waste and spent nuclear fuel have the primary responsibility to provide for, and the responsibility to pay the costs of, the interim storage of such waste and spent fuel."[149] For this reason, Beyond Nuclear argued, the NWPA states that DOE will take title to spent fuel only "following commencement of operation of a repository."[150] It is undisputed that no such repository has been licensed or constructed, much less become operational.

The NRC Staff agreed that Beyond Nuclear's contention should be admitted to the extent it challenged the inconsistency between Holtec's Environmental Report and its Safety Analysis Report.[151] The Staff, however, deemed it "premature to take a position on how the applicant will address the inconsistency."[152]

Holtec, for its part, contended that the inconsistencies were a mistake, that its actual intent is to contract either with DOE or with nuclear plant owners, and that the inconsistencies were "in the process of being revised to eliminate any confusion."[153] Holtec also suggested it "worth noting that Petitioner's claims of current NWPA restrictions may well be superseded by

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[148] Id. at 16 n.4 (emphasis added).

[149] 42 U.S.C. § 10131.

[150] Id. § 10222(a)(5)(A). See also id. § 10143 ("Delivery, and acceptance by the Secretary [of Energy], of any high-level radioactive waste or spent nuclear fuel for a repository . . . shall constitute a transfer to the Secretary of title to such waste or spent fuel.") (emphasis added).

[151] NRC Staff Consol. Answer at 66.

[152] Id. at 66 n.296.

[153] Holtec Answer to Beyond Nuclear at 20.

Congress."[154] But Holtec did not initially concede in its response that contracting for DOE to take title to nuclear power companies' spent fuel would necessarily be unlawful under the NWPA as currently in effect.

The Board, therefore, was inclined to agree with the NRC Staff that Beyond Nuclear's contention was admissible, but to admit it as a legal issue contention for a broader purpose: that is, to determine whether or not Holtec could lawfully contract directly with DOE to take title to power companies' spent nuclear fuel. At the very least, the Board tentatively concluded, Beyond Nuclear had set forth a plausible case that Holtec could not lawfully elect this option, consistent with the NWPA.[155]

At oral argument, however, Holtec's counsel conceded that, with very limited exceptions, it would violate the NWPA as currently in effect for DOE to take title to nuclear plant owners' spent fuel. He stated:

> I will agree with you that, on their current legislation, DOE cannot take title to spent nuclear fuel from commercial nuclear power plants, under the current statement of facts, but that could change, depending on what Congress does.[156]

Holtec's counsel committed, however, that Holtec has no intention of contracting with DOE to accept most nuclear power plants' spent fuel unless and until Congress amends the NWPA to make that lawful.[157] Meanwhile, Holtec represented, it has every intention of

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[154] Id. at 21 (citing proposed but unenacted amendments to the NWPA).

[155] A contention may state an "issue of law or fact." 10 U.S.C. § 2.309(f)(1)(i). As should be obvious, a legal issue contention need not necessarily address every requirement of section 2.309(f)(1), such as the requirement to provide "a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue." Id. § 2.309(f)(1)(v). See U.S. Dep't of Energy (High-Level Waste Repository), CLI-09-14, 69 NRC 580, 588–91 (2009) ("We agree, for example, with the Boards' view in this proceeding that requiring a petitioner to allege 'facts' under section 2.309(f)(1)(v) or to provide an affidavit that sets out the 'factual and/or technical bases' under section 51.109(a)(2) in support of a legal contention—as opposed to a factual contention—is not necessary.").

[156] Tr. at 250. See also Tr. at 251–52.

[157] Tr. at 248.

proceeding with the project on the assumption it will contract directly with the nuclear plant owners themselves.[158] Finally, Holtec has, in fact, revised its Environmental Report to say that the proposed facility's customers could be either DOE or the nuclear power plant owners.[159]

In the aftermath of these developments, Beyond Nuclear moved to amend its contention to add the statement set forth above. In essence, Beyond Nuclear now claims that reference to the mere possibility of contracting directly with DOE must be expunged from Holtec's application—regardless of Holtec's intentions and regardless of whether Congress might amend the NWPA.

Because Beyond Nuclear seeks to amend its contention after the deadline for filing petitions, we must first consider whether its motion to file the contention satisfies the three-prong test in 10 C.F.R. § 2.309(c)(1)(i)-(iii). Although Holtec argues to the contrary,[160] we conclude that it does. Holtec's revised Environmental Report (Rev. 3) was not available until January 17, 2019. Its revised Environmental Report is materially different from Holtec's original license application because it replaces unequivocal language regarding DOE ownership of spent fuel with language stating that either DOE or private entities will own the spent fuel. Beyond Nuclear's motion to amend was timely filed less than three weeks after the availability of Holtec's revised Report—well within the 30 days in which licensing boards have generally allowed petitioners to respond to new information.[161] We therefore grant Beyond Nuclear's motion to amend.

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[158] Id.

[159] See ER at 3-117.

[160] Holtec Opposition to Beyond Nuclear and Fasken Motion to Amend Their Contentions Regarding Federal Ownership of Spent Fuel to Address [Holtec's] Revised License Application (Feb. 19, 2019) at 2–6 [hereinafter Holtec Opposition to Beyond Nuclear and Fasken Motion]. The NRC Staff response addresses the admissibility of the amended contention without considering its timeliness. See NRC Staff Answer to Beyond Nuclear and Fasken Motion.

[161] See Shaw AREVA MOX Servs., LBP-08-11, 67 NRC at 493.

Turning to the amended contention itself, however, we conclude that Beyond Nuclear no longer identifies a genuine dispute with Holtec's license application. The inconsistency between Holtec's Environmental Report and its Safety Analysis Report has been fixed: Holtec's application now consistently says that its customers will be either DOE or the nuclear power plant owners. As Holtec's proposed License Condition 17 states, it will undertake construction only after it has established "a definitive agreement with the prospective user/payer for storing the used fuel (USDOE and/or a nuclear plant owner)."[162] At the same time, Beyond Nuclear, Holtec, and this Board all agree that, with limited exceptions, DOE may not lawfully take title to spent nuclear waste under the NWPA as currently in effect.[163]

Beyond Nuclear claims that the mere mention of DOE renders Holtec's license application unlawful. But that is not so. First, DOE does, in fact, already hold title to a relatively small amount of spent nuclear fuel from commercial reactors that could lawfully be stored at Holtec's facility in the future without violating the NWPA.[164] Second, the Board assumes Holtec will honor its commitment not to contract unlawfully with DOE to store any other spent nuclear fuel (that is, the vast majority of spent fuel from commercial reactors, which is currently owned

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[162] Holtec Proposed License at 2.

[163] Although Beyond Nuclear, Holtec, and the Board are all in agreement, the NRC Staff has not taken a position, despite having multiple opportunities to do so. See NRC Staff Answer to Beyond Nuclear and Fasken Motion. Accordingly, the Staff would find Beyond Nuclear's amended contention admissible "specifically as a challenge to whether the application may propose a license condition that includes the potential for DOE ownership of spent fuel to be stored at the Holtec facility." Id. at 2. The Staff cautions, however, that "in agreeing that the contention is admissible in part, the Staff takes no position on the underlying merits of the contention." Id. As best we can tell, the Staff would prefer the Board address the issue as a legal issue contention, precipitating yet another round of briefing and perhaps another oral argument. After thus far receiving well over a thousand pages of briefs and conducting two days of oral argument, the Board is prepared to address this legal issue in the context of deciding contention admissibility.

[164] Tr. at 237, 249–50.

by the nuclear power companies). Likewise, we assume DOE would not be complicit in any such unlawful contracts.

Holtec represents that it is committed to going forward with the project by contracting directly with nuclear plant owners that currently hold title to their spent fuel.[165] Whether Holtec will find that alternative commercially viable is not an issue before the Board, because the business decision of whether to use a license has no bearing on a licensee's ability to safely conduct the activities the license authorizes. As the Commission instructs us, "the NRC is not in the business of regulating the market strategies of licensees or determining whether market strategies warrant commencing operations."[166]

Holtec readily acknowledges that it hopes Congress will change the law and allow it in most instances to contract directly with DOE to store spent nuclear fuel.[167] Meanwhile, we assume that Holtec—having acknowledged on the record that (with limited exceptions) it would be unlawful to contract with DOE under the NWPA as currently in effect—will not try to do just that. Nor may we assume that DOE would be complicit in a violation of the NWPA.[168] On the contrary, DOE has also taken the position publicly that it may not take title to most private plant companies' spent nuclear fuel without violating the NWPA as currently in effect.[169]

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[165] Tr. at 248.

[166] La. Energy Servs. (Nat'l Enrichment Facility), CLI-05-28, 62 NRC 721, 726 (2005) (quoting Hydro Resources, Inc. (P.O. Box 15910, Rio Rancho, N.M. 87174), CLI-01-4, 53 NRC 31, 48–49 (2001)).

[167] Tr. at 248, 250.

[168] A presumption of regularity applies to federal agencies, which should be assumed to act properly in the absence of evidence to the contrary. See, e.g., United States v. Armstrong, 517 U.S. 456, 464 (1996); United States v. Chem. Found, Inc., 272 U.S. 1, 14–15 (1926).

[169] See, e.g., Final Interpretation of Nuclear Waste Acceptance Issues, 60 Fed. Reg. 21,793, 21,793–94, 21,797 (1995); N. States Power Co. v. U.S. Dep't of Energy, 128 F.3d 754, 756 (D.C. Cir. 1997) ("The Department also took the position that 'it lacks statutory authority under the Act to provide interim storage.'") (quoting 60 Fed. Reg. at 21,794); Ind. Mich. Power Co. v. U.S. Dep't of Energy, 88 F.3d 1272, 1274 (D.C. Cir. 1996) ("The [DOE] also determined that it

Neither the facts nor the law, therefore, remain in dispute. Holtec seeks a license that would allow it to enter into lawful customer contracts today, but also permit it to enter into additional customer contracts if and when they become lawful in the future. If Congress decides to amend the NWPA to allow DOE to take title to spent nuclear fuel before a national nuclear waste repository becomes operational, the only difference would be that DOE could then lawfully contract with Holtec to store the same spent fuel that presently belongs to the nuclear power plant owners. The NRC Staff assures us that it is reviewing Holtec's application in light of both possibilities: "[T]he Staff bases its safety and environmental reviews on the application as presented, which seeks a license on the basis that either DOE or private entities may hold title to the waste."[170]

We see no discernable purpose that would be served, in such circumstances, by requiring Holtec to file a new or amended license application for its storage facility or by the NRC entertaining a fresh opportunity to request a hearing. Beyond Nuclear correctly points out that the Administrative Procedure Act (APA) requires federal agencies to follow the law,[171] but we do not interpret either the APA or NWPA to require the NRC to perform a useless act.

Beyond Nuclear's contention, as amended, is not admitted.[172]

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had no authority under the NWPA to provide interim storage in the absence of a facility that has been authorized, constructed and licensed in accordance with the NWPA.").

[170] NRC Staff's Consolidated Response to [Joint Petitioner's] and Sierra Club's Motions to File New Contentions (Feb. 19, 2019) at 9 [hereinafter NRC Staff Response to Joint Pet'rs and Sierra Club Motions].

[171] Beyond Nuclear Motion to Dismiss at 12.

[172] Although Fasken purports to join in Beyond Nuclear's motion to amend, it may not properly do so. As explained infra, Fasken did not initially submit an admissible contention of its own, and its hearing request must therefore be denied. In any event, the procedural point is moot, because the Board rules that Beyond Nuclear's contention, as amended, is not admissible.

B. Sierra Club

1. Sierra Club Contention 1

Sierra Club's Contention 1 originally stated:

> The NRC has no authority to license the Holtec CIS facility under the NWPA nor the AEA. Holtec has said that DOE must take title to the waste, but the NWPA does not authorize DOE to take title to spent fuel in an interim storage facility. The AEA has no provision for licensing a CISF.[173]

On the same day Beyond Nuclear moved to amend its contention, Sierra Club moved to amend Sierra Club Contention 1 to add exactly the same statement:

> Language in Rev. 3 of Holtec's Environmental Report, which presents federal ownership as a possible alternative to private ownership of spent fuel, does not render the application lawful. As long as the federal government is listed as a potential owner of the spent fuel, the application violates the NWPA.[174]

Insofar as Sierra Club Contention 1 now asserts that reference to the mere possibility of contracting with DOE must be expunged from Holtec's application, it is substantially similar to Beyond Nuclear's amended contention, addressed supra. We therefore likewise grant Sierra Club's motion to amend Contention 1, but rule it is not admissible for the same reasons that Beyond Nuclear's amended contention is not admissible.

Insofar as Sierra Club Contention 1 also asserts that any away-from-reactor interim storage facility is necessarily unlawful under the AEA and/or the NWPA, it is not admissible for other reasons. NRC regulations expressly allow licensing of such facilities.[175] Therefore, this argument constitutes an impermissible challenge to NRC regulations that is precluded by 10 C.F.R. § 2.335. Moreover, the United States Court of Appeals for the District of Columbia

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[173] Sierra Club Pet. at 10–11.

[174] Sierra Club's Motion to Amend Contention 1 (Feb. 6, 2019) at 11 [hereinafter Sierra Club Motion to Amend Contention 1].

[175] See generally 10 C.F.R. Part 72; see also id. §§ 72.32(a) & 72.46(d) (referring to requirements pertaining to interim storage facilities not co-located with a power plant).

Circuit has rejected this aspect of Sierra Club Contention 1—ruling that the NRC has authority under the AEA to license such privately owned facilities, and that the NWPA did not repeal or supersede that authority.[176]

Sierra Club Contention 1, as amended, is not admitted.

2. Sierra Club Contention 2

Sierra Club Contention 2 states:

> The Holtec Environmental Report, in attempting to describe the purpose and need for this project, claims that [consolidated interim storage] is safer and more secure than storing the waste at the reactor site. However, the environmental report cites no evidence or data to support this assertion. An agency cannot rely on self-serving statements, especially ones with no supporting data, from the prime beneficiary of the project.[177]

Sierra Club relies on a 2003 report by Dr. Gordon Thompson, who is asserted to be an expert in technical and policy analyses in the fields of energy and environment.[178] According to Sierra Club, Dr. Thompson's report "documents the benefits of HOSS [hardened on-site storage]," and further claims that the "[Environmental Report] and subsequent EIS must examine the relative safety of HOSS at reactor sites."[179]

Although Sierra Club disputes one sentence, Holtec's Environmental Report's purpose and need statement lists multiple reasons to support licensing the proposed facility. For example, decommissioned plants may become greenfields rather than storage facilities, and utilities may eliminate costs and liability by relinquishing responsibility for spent fuel stored on-

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[176] Bullcreek v. NRC, 359 F.3d 536, 538, 543 (D.C. Cir. 2004).

[177] Sierra Club Pet. at 17.

[178] Id. at 19–20 (citing Gordon Thompson, Robust Storage of Spent Nuclear Fuel: A Neglected Issue of Homeland Security (2003)). For Dr. Thompson's credentials, see Sierra Club's Motion to Amend Contention 16, attach., Curriculum Vitae for Gordon R. Thompson (Feb. 18, 2019).

[179] Sierra Club Pet. at 19–20.

site.[180] Sierra Club only disputes the safety and security reason, and does not explain how Holtec's assertion of safety and security compromises the application in a material way.

Furthermore, as the NRC Staff points out,[181] Sierra Club fails to show that an analysis of HOSS at reactor sites is material to the environmental review required by NEPA or the Agency's corresponding regulations.

Sierra Club Contention 2 is not admitted.

3. Sierra Club Contention 3

Sierra Club Contention 3 states:

> The statement in the [Environmental Report] that [consolidated interim storage] is safer and more secure than storage at a reactor site contradicts the NRC's Continued Storage Rule, which concludes that spent radioactive fuel can be safely stored at a reactor site indefinitely. Therefore, there is no basis for accepting the statement in the [Environmental Report], and there is no purpose and need for the Holtec project.[182]

Similar to Sierra Club Contention 2, this contention also challenges the "safer and more secure" language in the purpose and need section of Holtec's Environmental Report. Here, Sierra Club disputes that there is a purpose or need for the proposed facility, because the NRC's Continued Storage Rule and Continued Storage Generic EIS (GEIS) determined that at-reactor storage for an indefinite period would generally result in only "small" environmental impacts.[183] Sierra Club further alleges that the proposed facility would cause increased risks "due to the risks of transporting the waste to the [consolidated interim storage] site and the

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[180] ER at 1-6.

[181] NRC Staff Consol. Answer at 70.

[182] Sierra Club Pet. at 21.

[183] Id. at 22. See 10 C.F.R. § 51.23 [hereinafter Continued Storage Rule]; see also 1 NMSS, [GEIS] for Continued Storage of Spent Nuclear Fuel, NUREG-2157, at 5-48 (Sept. 2014) (ADAMS Accession No. ML14196A105) [hereinafter Continued Storage GEIS].

increased risk of so much waste being stored in one place."[184] Finally, Sierra Club incorporates all of its allegations from Contention 2 in support of this contention.[185]

We agree with the NRC Staff[186] and Holtec[187] that Sierra Club fails to raise a genuine dispute with the application, because it does not show an actual contradiction between the Environmental Report and the Continued Storage Rule/GEIS. Although the Continued Storage GEIS did find that spent fuel may be stored on-site with minimal environmental impact, it did not endorse any particular storage method or perform any qualitative analysis of the safety benefits of at-reactor storage vs. away-from-reactor consolidated storage. It also found that any "additional accumulated impacts from transportation of the entire inventory of spent fuel from multiple reactors to an away-from-reactor ISFSI would be . . . minor."[188]

Regarding Sierra Club's assertion that there is no purpose and need "if spent fuel can be safely stored at the reactor site indefinitely," Sierra Club does not dispute or even acknowledge the separate reasons for the proposed facility listed in Holtec's Environmental Report. As explained in our discussion of Sierra Club Contention 2, the purpose and need statement also describes how decommissioned plants may become greenfields rather than storage facilities, as well as how utilities can eliminate costs and liability by relinquishing responsibility for spent fuel stored on-site.[189] Sierra Club only disputes the safety and security reason, and does not explain how Holtec's assertion of safety and security compromises the application in a material way.

Sierra Club Contention 3 is not admitted.

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[184] Sierra Club Pet. at 22.

[185] Id.

[186] NRC Staff Consol. Answer at 70–72.

[187] Holtec Answer to Sierra Club at 25–27.

[188] Continued Storage GEIS at 5-52.

[189] ER at 1-6.

4. Sierra Club Contention 4

Sierra Club Contention 4 states:

> Operation of the [consolidated interim storage] site as proposed by Holtec would necessitate the transportation of the radioactive waste from reactor sites to the [consolidated interim storage] facility. Transportation from the reactors to the [consolidated interim storage] site carries substantial risks. These risks must be evaluated in the [Environmental Report].[190]

On its face, Sierra Club Contention 4 appears to be a contention of omission—claiming that Holtec's Environmental Report does not evaluate transportation risks. In its basis for the contention, however, Sierra Club clarifies that its claim is actually that the Environmental Report "does not adequately address these risks."[191] Specifically, it asserts that the Environmental Report underestimates both (1) the consequences of severe rail accidents involving shipments of radioactive waste;[192] and (2) the likelihood of such accidents.[193] Sierra Club relies on the accompanying declaration of Dr. Marvin Resnikoff.[194]

Although the NRC Staff would admit the contention insofar as it addresses the potential consequences of rail accidents,[195] the Board disagrees. The centerpiece of Sierra Club's argument on this point is a 2001 report by Matthew Lamb and Dr. Resnikoff that evaluated the radiologic consequences of the 2001 Baltimore Tunnel Fire if it had involved spent nuclear fuel.[196] The Lamb and Resnikoff report provides a substantially higher estimate of the impacts of a transportation accident than does Holtec's Environmental Report.[197] However, Sierra Club

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[190] Sierra Club Pet. at 22.

[191] Id. at 23.

[192] Id. at 24–25.

[193] Id. at 25–27.

[194] See Sierra Club Pet. Decl. of Marvin Resnikoff (Sept. 14, 2018).

[195] NRC Staff Consol. Answer at 72–73.

[196] Sierra Club Pet. at 24–26.

[197] Sierra Club also alleges more generally that the Environmental Report must address risks of radiation emissions during shipment that may occur other than from accidents. But the impact

fails to acknowledge that Holtec's analysis took into account the Lamb and Resnikoff estimates, which were deemed unrealistic for reasons that Sierra Club does not address or dispute.

Specifically, the evaluation in Holtec's Environmental Report is based on the DOE's Final Supplemental Environmental Impact Statement (DOE FSEIS) for Yucca Mountain.[198] Although the State of Nevada had urged DOE to estimate the consequences of a rail accident in an urban area by using Lamb and Resnikoff's report, DOE declined to do so. On the contrary, DOE concluded that relying on the Lamb and Resnikoff report would result in using "parameters that would be at or near their maximum values," whereas "DOE guidance for the evaluation of accidents in environmental impact statements . . . specifically cautions against the evaluation of scenarios for which conservative (or bounding) values are selected for multiple parameters because the approach yields unrealistically high results."[199] Accordingly, DOE concluded that "the State of Nevada estimates [relying on the Lamb and Resnikoff estimates] are unrealistic and . . . do not represent the reasonably foreseeable consequences of severe transportation accidents."[200]

Holtec's Environmental Report relies on and prominently references the DOE FSEIS in its evaluation of the probable consequences of an accident.[201] Dr. Resnikoff is Sierra Club's expert on Contention 4, and surely can be charged with being familiar with DOE's criticism of his own work. By not addressing or disputing the criticisms of the Lamb and Resnikoff study contained in the DOE FSEIS (on which Holtec's Environmental Report relies), Sierra Club fails

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of dose along transportation routes from exposure from incident-free transportation is addressed in ER, Rev. 3, § 4.9.3.1 and Tbl. 4.9.1, which Sierra Club fails to acknowledge.

[198] DOE, [FSEIS] for a Geologic Repository for the Disposal of Spent Nuclear Waste at Yucca Mountain, Nye County, Nevada (2008) (ADAMS Accession No. ML081750191) [hereinafter DOE FSEIS].

[199] DOE FSEIS at Vol. III CR 271 (ADAMS Accession No. ML081750218).

[200] Id.

[201] ER, Rev. 3 at 4-34.

to demonstrate a genuine dispute with the application and Contention 4 is inadmissible under 10 C.F.R. § 2.309(f)(1)(vi) for that reason alone.

Moreover, at the very least the unanswered criticisms of Lamb and Resnikoff in the DOE FSEIS require us to conclude that Lamb and Resnikoff's estimates represent a "worst case" analysis. As Holtec's counsel emphasized at oral argument, the intensity of the 2001 Baltimore Tunnel Fire arose from the flammable contents of the railroad cars.[202] Because Holtec will ship spent fuel by dedicated trains, they will contain no such contents.[203] Furthermore, because the Federal Railway Administration (FRA) reviews such routes, Holtec would use a route that went through the Baltimore tunnel only if the FRA deemed it appropriate.[204] In short, a scenario similar to the 2001 Baltimore Tunnel Fire would be extraordinarily unlikely.

NEPA (and the NRC's implementing regulations[205]) require only a discussion of reasonably foreseeable impacts. NEPA does not require a "worst case" analysis, which "creates a distorted picture of a project's impacts and wastes agency resources."[206] Rather, the purpose of the NRC's environmental review "is to inform the decisionmaking agency and the public of a broad range of environmental impacts that will result, with a fair degree of likelihood, from a proposed project, rather than to speculate about 'worst case' scenarios and how to prevent them."[207]

As to the second prong of Sierra Club Contention 4—concerning the likelihood of rail accidents—we agree with both Holtec and the NRC Staff that it is not admissible. The Sierra

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[202] Tr. at 256.

[203] Id. at 256–57.

[204] Id. at 257.

[205] 10 C.F.R. §§ 51.45, 51.61.

[206] Private Fuel Storage, CLI-02-25, 56 NRC at 352.

[207] Id. at 347.

Club has proffered no facts or expert opinions to support its assertion that Holtec relies on data that "does not incorporate recent information about rail fires and expanded traffic of oil tankers,"[208] and therefore again fails to demonstrate a genuine dispute.

Sierra Club Contention 4 is not admitted.

5. Sierra Club Contention 5

Sierra Club Contention 5 states:

> The [Environmental Report] states that waste would be stored at the [consolidated interim storage] facility for up to 120 years until a permanent repository is found. The [Environmental Report] and the subsequent EIS must address the purpose and need and the environmental impacts if a permanent repository is not found, and the Holtec facility becomes a de facto permanent repository.[209]

Sierra Club relies on New York v. NRC, 681 F.3d 471, 478 (D.C. Cir. 2012) to support its conclusion that an agency "must address the alternative of a permanent repository never being developed."[210]

As Holtec[211] and the NRC Staff[212] explain in their responses, Sierra Club is incorrect as a matter of law. Although New York v. NRC did hold that the NRC inadequately performed its NEPA evaluation by not considering the "environmental effects of failing to secure permanent storage," the NRC developed its Continued Storage Rule and Generic Environmental Impact Statement (GEIS) as a response to the ruling.[213] The Continued Storage Rule addresses Sierra Club's concern directly: "The Environmental Reports . . . are not required to discuss the environmental impacts of spent nuclear fuel storage in . . . an [Independent Spent Fuel Storage

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[208] Sierra Club Pet. at 25–26.

[209] Id. at 27.

[210] Id. at 28.

[211] Holtec Answer to Sierra Club at 35–37.

[212] NRC Staff Consol. Answer at 74–75.

[213] New York v. NRC, 681 F.3d 471, 473 (D.C. Cir. 2012). See Final Rule, Continued Storage of Spent Nuclear Fuel, 79 Fed. Reg. 56,238, 56,241 (Sept. 19, 2014).

Installation (ISFSI)] for the period following the term of the . . . ISFSI license."[214] The Continued Storage Rule incorporates the impact determinations from the Continued Storage GEIS, which considers the environmental impacts of short-term storage (60 years beyond license), long-term storage (100 years beyond license), and indefinite storage.[215] NRC regulations bar challenges to the Continued Storage Rule, unless the petitioner obtains a waiver from the Commission.[216] Sierra Club has not petitioned for a waiver, and therefore this contention is outside the scope of this proceeding.

Sierra Club Contention 5 is not admitted.

6. Sierra Club Contention 6

Sierra Club Contention 6 states:

> An [Environmental Report] is required to discuss alternatives to the proposed action. Pursuant to NEPA, this includes an examination of the no-action alternative. The discussion of the no-action alternative in the Holtec [Environmental Report] is deficient because it does not discuss safer storage methods at the reactor sites, such as HOSS, nor does it acknowledge the NRC's Continued Storage Rule that concludes that waste can be safely stored at the reactor site indefinitely. Furthermore, the [Environmental Report] states that the no-action alternative is a reasonable alternative that would satisfy the purpose and need for the project.[217]

Sierra Club asserts that NEPA requires "substantial treatment of each alternative," rather than what it characterizes as a "no-action alternative . . . blandly dismissed with unsupportive statements."[218] Framed as a contention of omission, Sierra Club challenges the no-action alternative analysis in section 2.1 of Holtec's Environmental Report as deficient because it

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[214] 10 C.F.R. § 51.23(b).

[215] Continued Storage GEIS at 1-13 to -15, 5-4 to -5.

[216] See 10 C.F.R. § 2.335(a), (b).

[217] Sierra Club Pet. at 29–30.

[218] Id. at 31.

provides "no discussion of the relative benefits and costs of leaving the waste at the reactor site compared to the benefits and costs of sending waste from many reactors to the Holtec site."[219]

Contrary to Sierra Club's assertions, Holtec's Environmental Report does discuss the relative benefits and costs of maintaining the status quo (leaving the waste at the reactor site) and implementing the proposed action. As Holtec[220] and the NRC Staff[221] explain, table 2.5 and section 4.14 of the Environmental Report compare the environmental impacts of the project with those of the no-action alternative. Likewise section 9.2.1, section 9.2.2, and tables 9.2.1 through 9.2.5 of the Environmental Report compare the no-action alternative's costs to those of the proposed action. Sierra Club's contention does not demonstrate a genuine dispute with the application, because it challenges section 2.1 without acknowledging that other sections of the Environmental Report contain the allegedly missing analysis.

Regarding Sierra Club's concern that the no-action alternative discussion in the Environmental Report does not acknowledge the NRC's Continued Storage Rule, section 2.1 specifically says that the "No Action Alternative would not be supportive of the [NRC's] rulemaking on the Continued Storage of [spent nuclear fuel]."[222] Additionally, table 2.5.1 and section 4.14 summarize the short and long-term impacts of at-reactor storage, as adopted from the Continued Storage GEIS.[223] Not only does Sierra Club ignore this discussion, but it incorrectly states that the Continued Storage Rule "concludes that waste can be safely stored at the reactor site indefinitely."[224] The Continued Storage Rule incorporates the impact

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[219] Id.

[220] Holtec Answer to Sierra Club at 40.

[221] NRC Staff Consol. Answer at 76.

[222] ER at 2-1.

[223] Id. at 2-21 to -24, 4-63 to -65.

[224] Sierra Club Pet. at 30, 32. See also Sierra Club Reply at 25 ("[T]he Continued Storage Rule determined that storage at the reactor site is safe.").

determinations from the Continued Storage GEIS, which merely analyzes the environmental impacts of storing waste at the reactor site after the end of a license. It did not include an analysis of safety benefits nor advocate for a particular storage method. This part of the contention does not raise a genuine dispute with the application.

Regarding Sierra Club's assertion that the Environmental Report is deficient because it lacks a discussion of "safer storage methods . . . such as HOSS," we agree with the NRC Staff[225] and Holtec[226] that Sierra Club fails to demonstrate how such a discussion would be material to the no-action alternative analysis. HOSS is a method of storage that has not been licensed, must less implemented at any reactor site. The Environmental Report is only required to analyze a no-action alternative of maintaining the status quo. Sierra Club does not explain why analyzing the unused HOSS method is necessary to analyzing the status quo.

Sierra Club Contention 6 is not admitted.

7. Sierra Club Contention 7

Sierra Club Contention 7 states:

> Holtec relies heavily on the assertion that the Blue Ribbon Commission on America's Nuclear Future (BRC) has recommended [consolidated interim storage] as the answer to the country's nuclear waste problem. On the contrary, the BRC report should not be viewed uncritically and does not necessarily deserve blind support in assessing the Holtec application. Holtec's [Environmental Report] therefore mischaracterizes both the BRC report's conclusions and the relative risks of [consolidated interim storage] versus onsite storage. The EIS must therefore independently and fully address the relative risks and benefits of both storage options.[227]

Sierra Club asserts that Holtec's proposed storage facility "is dictated to a great extent by the BRC report."[228] Sierra Club then further alleges that Holtec's Environmental Report

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[225] NRC Staff Consol. Answer at 77.

[226] Holtec Answer to Sierra Club at 38.

[227] Sierra Club Pet. at 32.

[228] Id.

mischaracterizes "both the BRC report's conclusions and the relative risks of [consolidated interim storage] versus onsite storage."[229] Sierra Club claims that Holtec's Environmental Report and the NRC's subsequent EIS must independently compare the risks and benefits of Holtec's proposed interim storage facility with the risks and benefits of storing spent fuel at the reactor sites where it was generated.

Sierra Club Contention 7 fails to raise a genuine dispute with Holtec's application, as required by 10 C.F.R. § 2.309(f)(1)(vi). Holtec's Environmental Report contains precisely the risk/benefit analysis that Sierra Club seeks,[230] and Sierra Club does not challenge it.

Section 1.1 of Holtec's Environmental Report does discuss the history and background of the nation's spent fuel dilemma, including enactment of the NWPA, suspension of the Yucca Mountain project, and the 2012 BRC report. And both Sections 1 and 2 suggest that Holtec's proposed facility would better advance the preference in the BRC report for a consent-based approach to siting spent nuclear fuel. But, regardless of whether that is correct, Sierra Club fails to show how that position at all affects the analysis of options that is actually undertaken in Holtec's Environmental Report.

Sierra Club Contention 7 is not admitted.

8. Sierra Club Contention 8

Sierra Club Contention 8 states:

> 10 C.F.R. § 72.30 establishes requirements for decommissioning interim storage facilities. An application for licensing a [consolidated interim storage] facility must contain a decommissioning plan explaining how the plan will satisfy the requirements in the regulation. The application for the Holtec [consolidated interim storage] facility does not comply with these requirements because the amount of funds Holtec says it will collect over the anticipated life of the project fall way short of what Holtec says are necessary for decommissioning.[231]

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[229] Id. at 34–35.

[230] ER Ch. 9; id. Tbl. 2.5.1.

[231] Sierra Club Pet. at 35.

Sierra Club Contention 8 challenges whether Holtec's decommissioning plan provides reasonable assurance that funds will be available to decommission the proposed facility, as required by 10 C.F.R. § 72.30. Initially, the contention appeared admissible insofar as it identified an inconsistency in Holtec's calculation of how a decommissioning fund would be established.

Specifically, in its application Holtec commits that a "decommissioning fund will be established by setting aside $840 per MTU stored at the HI-STORE facility."[232] Holtec then calculates its initial fund contribution by multiplying $840 by the maximum amount that may be possessed under its proposed license: 8,680 MTUs (500 loaded canisters).[233] As Sierra Club pointed out, however, section 1.3 of Holtec's Environmental Report initially estimated storing only 5,000 MTUs during the first year of operation.[234]

Acknowledging the disparity to be a mistake, Holtec has corrected its Environmental Report to conform to the 8,680 MTU figure used in its application.[235] As Holtec has explained, its Environmental Report "used an early, approximate value."[236] Holtec represents that "[w]hile this may have misled the Sierra Club, the decommissioning funding calculation is, and should be, based on the limits of licensed material that will be permitted under the initial license."[237]

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[232] [Holtec] & [ELEA] Underground CISF – Financial Assurance & Project Life Cycle Cost Estimates at 5 (ADAMS Accession No. ML18058A608) [hereinafter Holtec Financial Assurance Estimates].

[233] Holtec Proposed License at 1 (Item 8 of the proposed license) and App. A (Technical Specifications), § 4.2.2 at 4-1. See also SAR at 1-4 ("Each stage is envisaged to have 8,680 MTUs.").

[234] Sierra Club Pet. at 36 (citing [Holtec] HI-STORE CIS Facility Environmental Report, at 1-6 (rev. 1 Dec. 2017)).

[235] HI-STORE CIS Facility Environmental Report, at 1-7 (rev. 3 Nov. 2018).

[236] Holtec Answer to Sierra Club at 45 n.93.

[237] Id.

Accordingly, the Board determines that Sierra Club Contention 8 no longer raises a genuine dispute that warrants an evidentiary hearing.[238]

Additionally, Sierra Club Contention 8 is not admissible insofar as it attempts to challenge other aspects of Holtec's decommissioning plan. For example, Sierra Club's claim that the fund would be "completely inadequate"[239] is premised on an analysis that simply overlooks Holtec's assumption that its annual payments would earn a reasonable rate of return: "These funds, plus earnings on such funds calculated at not greater than a 3 percent real rate of return over the 40-year license life of the facility, will cover the estimated cost to complete decommissioning."[240] Likewise, Sierra Club's charge that "the decommissioning costs are calculated for only the first phase of the project,"[241] overlooks the fact that the pending application only covers the first phase of the project. Holtec will be required to update its decommissioning plan in response to any "changes in the authorized possession limits."[242]

Finally, we find unpersuasive two arguments that Sierra Club advances belatedly in its reply. First, having initially overlooked Holtec's stated intention to rely in part on projected earnings on decommissioning fund assets, Sierra Club now dismisses Holtec's reliance on "the magic of compound interest" and claims "there is no assurance that the fund would earn 3% interest."[243] But, other than its own speculation, Sierra Club offers no evidence that a 3 percent annual rate of return over 40 years is unrealistic. Second, having likewise initially overlooked

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[238] The NRC Staff initially deemed the contention admissible in part. See NRC Staff Consol. Answer at 79. However, in light of the amended Environmental Report, the Staff stated at oral argument that it no longer takes a position on the admissibility of Sierra Club Contention 8. Tr. at 334–35.

[239] Sierra Club Pet. at 36.

[240] Holtec Financial Assurance Estimates at 5.

[241] Sierra Club Pet. at 36.

[242] 10 C.F.R. § 72.30(c)(3).

[243] Sierra Club Reply at 28.

the reference to a surety method in Holtec's application,[244] Sierra Club now challenges Holtec's failure to provide more specificity.[245] Again, Sierra Club merely speculates that "it is doubtful that a surety company would issue a bond for this project" because "[s]urety companies only issue surety bonds when there is no possibility of risk."[246] Even if these two arguments were not impermissibly late, we would reject them as lacking any supporting facts or expert opinions.[247]

Sierra Club Contention 8 is not admitted.

9. Sierra Club Contention 9

Sierra Club Contention 9 states:

> The containers in which the waste will be transported to and stored at the Holtec [consolidated interim storage] site are designated for a design life of 60 years and a service life of 100 years and may present an unacceptable danger of radioactive release if they are required to remain after the end of their designated service life. Therefore, the [Environmental Report] must examine the environmental impact of the containers being used beyond their approved service life.[248]

Citing New York v. NRC, Sierra Club asserts that the Environmental Report "must consider all potential impacts if the [consolidated interim storage] ultimately continues to operate beyond the design life and service life."[249] Sierra Club also would have Holtec's Safety Analysis Report (SAR) "analyze and evaluate the design and performance of structures, systems, and components important to safety from operation of the . . . facility. . . [p]ursuant to 10 C.F.R. § 72.45(d)."[250]

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[244] Holtec Financial Assurance Estimates at 5.

[245] Sierra Club Reply at 29–30.

[246] Id. at 29.

[247] As set forth infra, the Board therefore denies as moot Holtec's motion to strike these arguments from Sierra Club's reply. See [Holtec's] Motion to Strike Portions of Replies of [AFES], [Joint Petitioners], [NAC], and Sierra Club (Oct. 26, 2018) at 10–11 [hereinafter Holtec Motion to Strike].

[248] Sierra Club Pet. at 38.

[249] Id. at 40 (citing New York v. NRC, 681 F.3d 471 (D.C. Cir. 2012)).

[250] Id. (internal quotations omitted).

In addition to concerns about the impacts of container use beyond certified service life, Sierra Club also expresses the safety concern that "[n]either Holtec nor the source of the waste has a plan in place to deal with leaking or cracking containers."[251] Sierra Club references a video of Holtec's chief executive saying that he believes it is impractical to repair a canister, as support for its claim that "Holtec canisters cannot be inspected, repaired or repackaged."[252] According to Sierra Club, this presents a problem not addressed by the Continued Storage GEIS, which "assumes that there will be a dry transfer system (DTS) that would retrieve waste from the casks for inspection and repackaging in new containers."[253] Sierra Club also describes Holtec's "return to sender" proposal as one that "must be evaluated," in light of an NRC Staff public meeting summary in which, Sierra Club claims, the NRC Staff "admitted that once a crack starts in a canister, it can grow through the wall in 16 years,"[254] and a Nuclear Waste Technical Review Board study about geologic repositories.[255]

Regarding the environmental aspects of this contention, the Continued Storage Rule explicitly states that an applicant's Environmental Report is not required to discuss impacts following the proposed license term.[256] Holtec's application seeks a license for 40 years. It is not relevant to this proceeding that the HI-STORM UMAX system has a 60-year design life and a 100-year service life, or that subsequent license extensions are possible. Therefore, we

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[251] Id. at 41–42.

[252] Id. at 41.

[253] Id. at 40–41.

[254] Id. at 40 (citing Memorandum to Anthony Hsia, Deputy Director, Division of Spent Fuel Storage and Transportation, NMSS, Summary of August 5, 2014, Public Meeting with the Nuclear Energy Institute on Chloride Induced Stress Corrosion Cracking Regulatory Issue Resolution Protocol (Sept. 9, 2014)).

[255] Id. at 42 (citing Nuclear Waste Technical Review Board, Geologic Repositories: Performance Monitoring and Retrievability of Emplaced High-Level Radioactive Waste and Spent Nuclear Fuel (May 2018)).

[256] 10 C.F.R. § 51.23(b).

agree with Holtec[257] and the NRC Staff[258] that Sierra Club impermissibly challenges the Continued Storage Rule and the impact evaluations contained in the Continued Storage GEIS. Because Sierra Club has not requested a waiver to challenge the GEIS, the environmental aspects of Sierra Club Contention 9 are outside the scope of this proceeding.

Regarding the safety aspects of this contention, Sierra Club has not pointed to deficient parts of the SAR and thus has not demonstrated a genuine dispute with Holtec's application. Rather, Sierra Club ignores the SAR's discussion of retrievability, inspection, and maintenance activities,[259] and instead challenges statements made by other sources outside of the application.[260]

Sierra Club Contention 9 is not admitted.

10. Sierra Club Contention 10

Sierra Club Contention 10 states:

> The proposed Holtec [consolidated interim storage] facility will accept Greater Than Class C (GTCC) waste. NRC regulations specify that GTCC waste must be disposed of in a geologic repository licensed by the NRC, unless the Commission approves an alternative land-based disposal. The Holtec facility will not be a geologic repository. The NRC has not established regulations for approving land-based disposal of GTCC waste. The proposed Holtec [consolidated interim storage] facility does not comply with the requirement for a geologic repository or land-based disposal for GTCC waste. Therefore, a license cannot be issued for this facility.[261]

To support its contention, Sierra Club cites 10 C.F.R. § 61.55(a)(2)(iv), which it contends "specifies that GTCC waste must be disposed of in a geologic repository licensed by the NRC

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[257] See Holtec Answer to Sierra Club at 47–48.

[258] See NRC Staff Consol. Answer at 80.

[259] SAR at 1-39, 10-18 to -19, 15-3, 18-29 to -30.

[260] For example, Sierra Club invokes statements allegedly made by NRC Staff members at an unrelated Nuclear Energy Institute public meeting in 2014—several years before Holtec's application was filed. Sierra Club Pet. at 41.

[261] Sierra Club Pet. at 42.

unless the Commission approves an alternative land disposal proposal."[262] According to Sierra Club, the fact that the NRC initiated a rulemaking to develop regulations for land disposal amounts to an admission that the NRC "has no legal or technical basis for approving a land-based disposal alternative for GTCC waste."[263]

We agree with the NRC Staff[264] and Holtec[265] that Sierra Club Contention 10 fundamentally misconstrues the nature of Holtec's application. Rather than disposing of GTCC waste under 10 C.F.R. Part 61, Holtec seeks to temporarily store reactor-related GTCC waste under Part 72.[266] Specifically, Holtec seeks a license for "a complex designed and constructed for the interim storage of spent nuclear fuel."[267] Sierra Club, therefore, fails to raise a dispute that is material to the license Holtec seeks.

Sierra Club Contention 10 is not admitted.

11. Sierra Club Contention 11

Sierra Club Contention 11 states:

> The [Environmental Report] and the subsequent EIS must evaluate the potential for earthquakes at the Holtec site and the environmental impact of earthquakes. Likewise, the Safety Analysis Report (SAR) must adequately evaluate the earthquake potential of the proposed site. Both the [Environmental Report] and SAR are inadequate in this respect.[268]

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[262] Id. at 43.

[263] Id. at 44.

[264] See NRC Staff Consol. Answer at 82.

[265] See Holtec Answer to Sierra Club at 55–56.

[266] See Notice of Opportunity to Request a Hearing, 83 Fed. Reg. at 32,920 ("The NRC received an application from Holtec for a specific license pursuant to part 72 of title 10 of the Code of Federal Regulations (10 CFR), 'Licensing Requirements for the Independent Storage of Spent Nuclear Fuel, High-Level Radioactive Waste, and Reactor-Related Greater Than Class C Waste.'").

[267] 10 C.F.R. § 72.3 (defining "independent spent fuel storage installation or ISFSI").

[268] Sierra Club Pet. at 44.

Sierra Club submits a map to purportedly support its allegation of "intense drilling in the area" around the proposed Holtec facility that would possibly cause earthquakes.[269] Sierra Club also points to a 2018 geology article[270] (the Stanford report) that Sierra Club alleges stands for the proposition that "researchers [have] documented the existence of prior earthquakes in southeast New Mexico, and more importantly, the existence of numerous faults in the area in and around the proposed Holtec site."[271] Sierra Club's Contention 11 therefore asserts both a challenge to the Environmental Report and a challenge to the SAR.

Sierra Club challenges Environmental Report section 3.3.2 by stating that the Environmental Report gives "fairly short shrift" to earthquake analysis around the proposed project site[272] and "essentially dismisses the likelihood of earthquakes in the area and does not mention any environmental impacts from earthquakes."[273] Sierra Club's "main problem" with the Environmental Report's earthquake data is that it is "historical" and allegedly does not take into account recent fracking activity around the proposed project site.[274]

Sierra Club similarly challenges SAR section 2.6, claiming that its seismic information "is historical data that does not take into account the recent increase in drilling for oil and natural gas in the area," which allegedly induces regional earthquakes.[275] Citing 10 C.F.R. § 72.103(f) (which, among other things, provides seismic rules for ISFSIs built west of the Rocky Mountains) and to the Stanford report, Sierra Club again argues that (1) the SAR relies on faulty

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[269] Id.; id. at Ex. 5.

[270] Id. at Ex. 6, Jens-Erik Lund Snee & Mark D. Zoback, State of Stress in the Permian Basin, Texas and New Mexico: Implications for Induced Seismicity, The Leading Edge (Feb. 2018) [hereinafter Stanford Report].

[271] Id. at 44–45.

[272] Id. at 47.

[273] Id. at 45.

[274] Id. at 47, 48.

[275] Id. at 45–46.

earthquake data because the data is historical and does not account for recent fracking;[276] and (2) the Stanford report directly contradicts section 2.6.3 of the SAR's assertion "that there are no surface faults at the Holtec site."[277]

We agree with Holtec and the NRC Staff that this contention is inadmissible because Sierra Club fails to show a genuine dispute with the application on a material issue of fact, contrary to 10 C.F.R. § 2.309(f)(1)(vi).[278] Regarding the use of "historical" seismic data from 2016, Sierra Club fails to explain how or where the use of 2016 United States Geologic Survey (USGS) data in the Environmental Report section 3.3.2.1[279] and figure 3.3.4 does not account for recent fracking activity around the proposed storage facility.[280] Section 3.3.2.1 specifically discusses the seismic events southeast of the site in west Texas that may be due to "fluid pressure build-up from fluid injection" (i.e., fracking) as well as recent seismic activity from the late 1990s to the mid-2000s fifty miles west of the site from DOE's Waste Isolation Pilot Plant due to "injection of waste water from natural gas production" (i.e., fracking).[281]

In other words, Holtec used the most current information available when it filed its application in 2017, and its analysis did evaluate seismic events related to fracking. Sierra Club has not put forth any information that fracking has caused significant seismic events around the proposed project site in the years since the 2016 USGS report. Therefore, Sierra Club's claim

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[276] Id. at 47–48 (citing id. Ex. 7, Letter from Tommy E. Taylor, Director of [Fasken] Oil and Gas Development, to Michael Layton, Director, NMSS (July 30, 2018) (PBRLO Scoping Comments)).

[277] Id. at 47.

[278] Holtec Answer to Sierra Club at 56; NRC Staff Consol. Answer at 86.

[279] ER at 3-17.

[280] Id. at 3-24.

[281] Id. at 3-17.

challenging the Environmental Report fails.[282] And Sierra Club's challenge to SAR Section 2.6.2's use of USGS 2016 "historical" data and its claims of noncompliance with 10 C.F.R. § 72.103(f)(1) fails for the same reason.[283]

Finally, Sierra Club's claim that the Stanford Report contradicts the SAR's assertion "that there are no surface faults at the Holtec site" is also without merit. We agree with Holtec that there is no dispute between the Stanford Report and the SAR's seismic analyses.[284] When identifying the proposed storage facility's location on Figure 1 of the Stanford Report, it shows that the nearest Quaternary fault is approximately 75 miles from the project site.[285] Moreover, Figure 3 of the Stanford Report shows that the nearest fault of any kind is approximately 40 miles from the site. Although the petitioner need not prove its case at the contention admissibility stage, it must present a genuine dispute with the application on a material fact. Sierra Club has not.[286]

Sierra Club Contention 11 is not admitted.

12. Sierra Club Contention 12

Sierra Club Contention 12 states:

> The dunes sagebrush lizard, a/k/a sand dune lizard, is an endangered species pursuant to New Mexico state law and regulation. The lizard has a limited range and is specifically adapted to sand dune areas with shinnery oak. The site of the

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[282] As to the claim that Holtec does not address "environmental impacts from earthquakes" in the Environmental Report, Sierra Club Pet. at 45, Holtec's Environmental Report does analyze the HI-STORM UMAX system against credible seismic activity in the region, see ER at 4-61 to -65, and concludes that the environmental impact of an earthquake involving storage of spent fuel is small. Id. at 4-65, 6-6.

[283] SAR at 2-108 to -109.

[284] Holtec Answer to Sierra Club at 63.

[285] Compare Stanford Report Fig. 1, with Holtec Answer to Sierra Club at 65 (republishing Stanford Report Fig. 1 but marking location of Holtec CISF).

[286] Sierra Club's reference to Sierra Club Ex. 7 (PBRLO Scoping Comments) does not raise a genuine dispute with the application on a material issue of fact, because the comments constitute only speculation that fracking will be allowed near and/or immediately beneath the HI-STORE interim storage site.

> Holtec project is within the lizard's habitat range. The [Environmental Report] submitted by Holtec claims that the lizard is not present in the area of the Holtec site, but that assertion is contrary to the scientific evidence. The [Environmental Report] and the subsequent EIS must evaluate the impact of the Holtec project on the dunes sagebrush lizard and its habitat.[287]

Sierra Club challenges sections 3.4.3, 4.4.3, and 4.4.4 of the Environmental Report, questioning the result of surveys that "make no mention of the impact of the project on the lizard or its habitat."[288] Sierra Club also questions the results of a 2016 survey, which refers to a 2007 survey of the same area, both finding "no reptiles in the area of the Holtec site."[289] Sierra Club questions the 2016 survey's methodology, asserting that the length of the 2016 survey was too short (one day), completed at the wrong time (the time of year the lizard allegedly hibernates),[290] and that the survey was based on "casual observation."[291] Sierra Club also states that the 2007 survey results are suspect, as the Eddy-Lea Energy Alliance (ELEA), a vocal supporter of the Holtec project, paid for the 2007 survey, from which Sierra Club infers a conflict of interest.[292] Sierra Club summarizes that Contention 12's "point is that the Holtec site is within the general range of the dunes sagebrush lizard such that the [Environmental Report] should have made a more thorough evaluation of the lizard's presence and the impacts to [it] from the Holtec project."[293] Sierra Club submits two maps in support of Contention 12, which purport to show that the proposed fuel storage facility "is likely habitat for the dunes sagebrush lizard."[294]

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[287] Sierra Club Pet. at 48.

[288] Id. at 49.

[289] Id.

[290] Id. at 51.

[291] Id. at 50.

[292] Id.

[293] Sierra Club Reply at 33–34.

[294] Sierra Club Pet. at 51; id. Exs. 8 (Dunes Sagebrush Lizard Habitat Map), 9 (Dunes Sagebrush Lizard Suitable Habitat Expanded Map).

We agree with Holtec[295] and the NRC Staff[296] that Sierra Club's two maps offered to support Sierra Club Contention 12 do not in fact support Sierra Club's assertion that the sagebrush lizard's habitat is located at the proposed HI-STORE interim storage site. Although the maps roughly show the lizard's habitat in the greater southwestern United States, the maps lack sufficient detail to demonstrate that the sagebrush lizard makes its home at the site of the proposed facility. As Sierra Club's maps do not support what Sierra Club asserts,[297] this aspect of the contention is inadmissible.

Sierra Club's challenges to the methodology of the 2007 and 2016 surveys are not supported by any information that genuinely disputes their sufficiency. Sierra Club's broad, unsupported speculations do not meet the Commission's contention admissibility criteria.[298]

Sierra Club Contention 12 is not admitted.

13. Sierra Club Contention 13

Sierra Club Contention 13 states:

> As shown in previous contentions, the Holtec [Environmental Report] is replete with errors, omissions, and blatantly incorrect statements and information. Further, Chapter 12 of the [Environmental Report] shows that a company called Tetra Tech, was the primary preparer of the [Environmental Report]. The only other preparer listed was a subcontracting company that conducted the cultural resource evaluation. Tetra Tech was accused of engaging in widespread fraud with respect to its contract with the United States Navy to clean up radioactive materials at the Hunter's Point Naval Shipyard in San Francisco, California. As such, Tetra Tech's credibility is in question and the credibility of the [Environmental Report] prepared by Tetra Tech likewise is in question.[299]

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[295] Holtec Answer to Sierra Club at 66.

[296] NRC Staff Consol. Answer at 89–90.

[297] Yankee Atomic Elec. Co. (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90, rev'd in part on other grounds, CLI-96-7, 43 NRC 235 (1996).

[298] 10 C.F.R. § 2.309(f)(1)(v).

[299] Sierra Club Pet. at 51–52.

Sierra Club Contention 13 challenges the credibility of Tetra Tech, the firm that Holtec used to prepare its Environmental Report. In support, Sierra Club submits an affidavit from an attorney who filed a 10 C.F.R. § 2.206 enforcement petition alleging Tetra Tech's malperformance at Hunter's Point Naval Yard,[300] and also cites its challenges to specific aspects of Holtec's Environmental Report that are proffered as other contentions in this proceeding, viz. Sierra Club Contentions 2, 3, 5, 7, 9, 10, 11, and 12.[301]

The proffered contention is inadmissible as it fails to show a genuine dispute with the licensee on a material issue of law or fact.[302] The Commission expects that a dispute regarding character or integrity must raise issues "directly germane to the challenged licensing action."[303] Sierra Club has not put forth any information that suggests impropriety regarding Tetra Tech's work on the Holtec Environmental Report. Nor has Sierra Club asserted that any Tetra Tech employees involved in the Hunter's Point case were also involved in compiling Holtec's Environmental Report.

Contention 13 is not admitted.

14. Sierra Club Contention 14

Sierra Club Contention 14 states:

> An accurate thermal evaluation of the HI-STORM UMAX system is imperative to ensure that temperatures within the system will not be conducive to corrosion, cladding and other conditions that would adversely impact the safety of the system. The HI-STORM UMAX system is unique, with both air intake and exhaust vents at the top of the containment cask. The SAR for the Holtec [consolidated interim storage] facility does not provide adequate information to determine if the thermal

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[300] See id. Ex. 10, Decl. of Steven J. Castleman (June 26, 2018). See also 10 C.F.R. § 2.206 Petition to Revoke Materials License No. 29-31396-01, Greenaction for Health & Envtl. Justice v. Tetra Tech EC, Inc. (June 28, 2018) (ADAMS Accession No. ML18178A067).

[301] As to those issues cited by Sierra Club, we analyze those separately supra.

[302] 10 C.F.R. § 2.309(f)(1)(vi).

[303] Millstone, CLI-01-24, 54 NRC at 366–67 (emphasis added).

> parameters for the HI-STORM system at the Holtec [consolidated interim storage] facility will provide for adequate safety.[304]

Sierra Club claims that, although SAR Chapter 6 purports to discuss thermal evaluations for the UMAX system, it "does not address the problems presented by the fact that the UMAX cask is unique, in that the air intake and exhaust vents are at the top of the cask."[305] Sierra Club claims there is no assurance that "entering and exiting air flows [will] not mix" such that the canister would heat up and degrade the canister's internal cladding.[306] Sierra Club further questions the safety of Holtec's redesign of the UMAX canister shims; the SAR's reliance on the computer code in its thermal calculations; the amount of high burnup fuel that would be stored at the facility and its impact on canister cladding; and Holtec's "recent announcement" that it can place spent fuel in a UMAX canister after being cooled in a spent fuel pool "for only 2.5 years."[307]

The contention is inadmissible as it does not show a genuine dispute exists with the Holtec application on a material issue of law or fact.[308] First, even with Sierra Club's clarification that it seeks to challenge "the discussion in the SAR to determine if the thermal parameters for the HI-STORM system at the Holtec facility will provide for adequate safety,"[309] it is barred from doing so by Commission rules.[310] SAR Chapter 6 fully incorporates by reference the HI-STORM UMAX design and thermal analyses conducted in the HI-STORM UMAX's own Final Safety

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[304] Sierra Club Pet. at 56.

[305] Id. at 57.

[306] Id. at 57–58.

[307] Id. at 58–60.

[308] 10 C.F.R. § 2.309(f)(1)(vi).

[309] Sierra Club Reply at 37.

[310] See 10 C.F.R. § 2.335(a); id. § 72.46(e).

Analysis Report (FSAR).[311] The HI-STORM UMAX system was added to the list of approved spent fuel storage casks in a March 2015 final rule,[312] and has been subsequently amended by further rulemaking.[313] Therefore, any challenge to the HI-STORM UMAX system design characteristics that are already deemed compliant with Part 72, including those Sierra Club designates in its Contention 14 (i.e., cooling system, thermal evaluations through use of software, and canister shim designs) are barred in this proceeding by sections 2.335 and 72.46(e).

Sierra Club's assertion regarding high burnup fuel also does not raise a genuine dispute with the application, as the SAR clearly states that the multi-purpose canisters to be "stored at [the facility] are limited to those included in the HI-STORM UMAX FSAR."[314] The HI-STORM UMAX FSAR Chapter 4, in turn, prescribes the permissible heat load per storage cell for the allowed canisters at the UMAX (the MPC-37 and MPC-89).[315]

Finally, Sierra Club's passing reference that Holtec will be storing fuel in UMAX canisters that have been cooled less than three years also does not establish a genuine dispute with the application. First, Sierra Club does not offer any evidence of this statement by Holtec. Second, UMAX FSAR table 2.1.1, which is incorporated by reference into the proposed facility's SAR,

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[311] See SAR Ch. 6 (incorporating by reference Docket 72-1040, Certificate of Compliance No. 1040, "[FSAR] on The HI-STORM UMAX Canister Storage System" (June 2018) (ADAMS Accession No. ML16193A336)).

[312] List of Approved Spent Fuel Storage Casks: [Holtec] HI-STORM [UMAX] Canister Storage System, Certificate of Compliance No. 1040, 80 Fed. Reg. 12,073, 12,073–78 (Mar. 6, 2015).

[313] 10 C.F.R. § 72.214 Certificate Number 1040. See Direct Final Rule, List of Approved Spent Fuel Storage Casks: Holtec International HI-STORM UMAX Canister Storage System, Certificate of Compliance No. 1040, Amendment No. 1, 80 Fed. Reg. 53,691 (Sept. 8, 2015); Direct Final Rule, List of Approved Spent Fuel Storage Casks: Holtec International HI-STORM UMAX Canister Storage System; Certificate of Compliance No. 1040, Amendment No. 2, 82 Fed. Reg. 8805 (Jan. 31, 2017).

[314] SAR at 4-5.

[315] See, e.g., FSAR on the HI-STORM UMAX Canister Storage System, Rev. 3 at 4-31 (June 29, 2016) (ADAMS Accession No. ML16193A339) [hereinafter UMAX FSAR].

states a minimum cooling time of three years for both MPC-37 and MPC-89 canisters.[316] Finally, any change to its three year cooling requirements would require Holtec to request an amendment to the Certificate of Compliance, which Holtec has not done.[317] Thus, there is no genuine dispute with the application.[318]

Sierra Club Contention 14 is not admitted.

15. Sierra Club Contention 15

Sierra Club Contention 15 states:

> The [Environmental Report] fails to adequately determine whether shallow groundwater exists at the site of the proposed [consolidated interim storage] facility. It is important to make this determination in order to assess the impact of a radioactive leak from the [consolidated interim storage] facility on the groundwater.[319]

Sierra Club bases this contention on the first of five comments in the declaration of George Rice, a groundwater hydrologist.[320] His comment disputes Holtec's finding that no shallow groundwater exists at the proposed site. Mr. Rice explains that Holtec installed five wells on the site: four in the Dockum (the shale, siltstone, and sandstone layer of earth) and one in the alluvial/Dockum interface (where the alluvial layer of earth meets the lower Dockum layer).[321] Although no water or saturated conditions were encountered at the alluvium/Dockum

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316 See UMAX FSAR Tbl. 2.1.1 at 2-25.

317 See 10 C.F.R. § 72.244 (application for amendment of a certificate of compliance).

318 Sierra Club also asserted that it should be "allowed to intervene and conduct discovery," Sierra Club Pet. at 59, because the Commission's "SUNSI procedure is onerous, burdensome, lengthy and expensive." Sierra Club Reply at 37. All petitioners in this proceeding were afforded extra time to request the SUNSI (sensitive unclassified non-safeguards) information. See Notice of Opportunity to Request a Hearing, 83 Fed. Reg. at 32,922; Order Denying Motions to Dismiss. If counsel for Sierra Club seeks to change the Commission's SUNSI rules, this proceeding is not the forum in which to do so.

319 Sierra Club Pet. at 60.

320 See id., Decl. of George Rice, Comments on Proposed Facility (Sept. 6, 2018) [hereinafter Rice Decl.].

321 Id. at 2–3.

well, Mr. Rice claims that well "represents only one point in the 1040 acre site" and that groundwater could still be present despite the materials appearing unsaturated.[322] He asserts that the alluvium/Dockum well "has not been checked for the presence of water since 2007," which is "significant since shallow aquifers may be intermittently saturated."[323] Mr. Rice explains Sierra Club's main concern: "If contaminants leak from the facility, they could be transported by shallow groundwater underlying the site."[324]

Holtec's Environmental Report concludes that "[i]mpacts to groundwater would not be expected, due to the depth of groundwater and the fact that the CIS Facility would not release pollutants, including radionuclides, during normal operations."[325] Nor would a release of radioactive material occur, Holtec's Environmental Report asserts, during any credible off-normal event[326] or accident.[327] Sierra Club disputes the first conclusion—that impacts to groundwater would not be expected due to depth. However, Sierra Club offers no support for its challenge to Holtec's second conclusion—that, in any event, the facility would not release pollutants into groundwater during any credible event.

In its reply, Sierra Club points to its Contentions 9, 14, 20, and 23 as examples of "issues that create a risk of leaks during storage."[328] As discussed elsewhere, we do not admit those contentions, and do not find them to be adequate support for Sierra Club Contention 15.

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[322] Id.

[323] Id. at 2.

[324] Id. at 1.

[325] ER at 4-13.

[326] Id. at 4-56.

[327] Id. at 4-57. Additionally, the HI-STORM UMAX FSAR concludes in section 2.0.6 that "[t]he MPC provides for confinement of all radioactive materials for all design basis normal, off-normal, and postulated accident conditions. As discussed in Chapter 7 of the HI-STORM [flood and wind], [multi-purpose canister] design meets the guidance in the Interim Staff Guidance (ISG)-18 so that leakage of radiological matter from the confinement boundary is non-credible."

[328] Sierra Club Reply at 38.

Sierra Club fails to explain why the Environmental Report is wrong to conclude that "[t]here is no potential for a liquid pathway because the [spent nuclear fuel] contains no liquid component and the casks are sealed to prevent any liquids from contacting the [spent nuclear fuel] assemblies"[329] and the interim storage facility's HI-STORM UMAX system would not release any radioactive material even when subjected to "the effects of all credible and hypothetical accident conditions and natural phenomena."[330] As the Commission explained in Private Fuel Storage, "[t]o show a genuine material dispute, [a petitioner's] contention would have to give the Board reason to believe that contamination from a defective canister could find its way outside of the cask."[331] Sierra Club has not done this.

Sierra Club Contention 15 is not admitted.

16. Sierra Club Contention 16

Sierra Club's originally-filed Contention 16 stated:

> The [Environmental Report] does not contain any information as to whether brine continues to flow in the subsurface under the Holtec site.[332]

On February 18, 2019, Sierra Club filed a motion to amend Contention 16 to address Requests for Additional Information (RAI) submitted by NRC Staff to Holtec and Holtec's Responses.[333] Sierra Club's amended contention would add two more sentences:

> Holtec has not properly accounted for mechanisms that could allow corrosive material to reach cavity enclosure containers (CECs) and/or spent fuel canisters. Holtec's Aging Management Program would be insufficient to address the problem of groundwater impacting the integrity of the spent fuel containers.[334]

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[329] ER at 1-8.

[330] Id. at 4-62.

[331] Private Fuel Storage (Indep. Spent Fuel Storage Facility), CLI-04-22, 60 NRC 125, 138–39 (2004).

[332] Sierra Club Pet. at 62.

[333] Sierra Club's Motion to Amend Contention 16 (Feb. 18, 2019) [hereinafter Sierra Club Motion to Amend Contention 16].

[334] Id. at 9.

On March 11 and 15, 2019, Holtec and the NRC Staff, respectively, filed responses in opposition to Sierra Club's motion to amend Contention 16.[335] In its motion, Sierra Club claims that "NRC Staff perspective set forth in RAIs 17-12 and 17-14 presents a context for the Holtec documentation that is materially different than the context in which Holtec had previously presented the discussion of groundwater and its effect on the containers in the CIS facility."[336] Sierra Club points to Holtec's response about brine in RAI 17-12 and about CEC wall thinning in RAI 17-14.[337] According to Sierra Club, because Holtec did not provide this information in its answers to Sierra Club's petition, the information qualifies as new.[338] Sierra Club bases its amended contention on Holtec's responses to the RAIs and on the declaration of Dr. Gordon Thompson, who also supports Sierra Club Contention 2.[339]

For both its original and amended contention, Sierra Club also relies on the second of five comments in George Rice's declaration. This comment explains that "[t]wo brine disposal facilities once operated in the northeast portion of the [proposed] site" and in 2007 a water sample from a spring flowing in that area tested as brine.[340] Mr. Rice then asks the applicant: "Do the springs/seeps that were flowing in 2007 continue to flow? Is brine moving along perched zones in the alluvial materials, or along the alluvium/Dockum interface? Could the brine come into contact with the canisters?"[341]

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[335] See [Holtec's] Opposition to Motion by Sierra Club to Amend Contention 16 (Mar. 11, 2019); NRC Staff Response to Sierra Club Motion to Amend Contention 16 (Mar. 15, 2019).

[336] Sierra Club Motion to Amend Contention 16, at 6.

[337] Id. at 6–7.

[338] Id.

[339] Id. at 9.

[340] Rice Decl. at 6.

[341] Id.

As described supra, the Board will consider an amended contention filed after the original deadline only if the petitioner demonstrates good cause under the three-pronged test of 10 C.F.R. § 2.309(c)(1). Here, we agree with the NRC Staff and Holtec that Joint Petitioners have failed to demonstrate good cause, because the information upon which they base their amended contention was previously available. As the NRC Staff correctly argues: "The legal standard is not whether Holtec's RAI responses differ from the arguments it raised in its Answer to the Petition, but whether the factual information underpinning Holtec's RAI responses was previously available—for example, in the SAR or [Environmental Report]."[342]

We conclude that Sierra Club has not shown any materially different or new information in Holtec's RAI responses. Dr. Thompson's report primarily restates Holtec's RAI responses verbatim. His substantive comments do not engage with the responses, other than to claim that they "exhibit unwarranted optimism."[343] Rather, he focuses on Holtec's alleged failure to analyze climate change[344] and alleged lack of capability to perform credible inspections of spent fuel canisters or CECs.[345] Both of these critiques could have been made at the outset of this proceeding based solely on the SAR. The same is true for Mr. Rice's second comment, because Sierra Club cites the exact same comment as a basis for its originally-filed Contention 16.[346] And pointing to the RAI responses, without more, will rarely provide sufficient support for an admissible contention.[347]

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[342] NRC Staff Response to Sierra Club Motion to Amend Contention 16, at 6.

[343] Dr. Gordon R. Thompson Decl. for Sierra Club (Feb. 12, 2019) at 22, 23, 25.

[344] Id. at 22–23.

[345] Id. at 25.

[346] Sierra Club Pet. at 63.

[347] See PPL Susquehanna, LLC (Susquehanna Steam Elec. Station, Units 1 & 2), CLI-15-8, 81 NRC 500, 506 (2015).

Because Sierra Club has failed to meet the good cause standard under 10 C.F.R. § 2.309(c)(1), we deny Sierra Club's motion to amend Contention 16. Accordingly, we consider Sierra Club Contention 16 as originally filed.

We conclude that Sierra Club does not provide an adequate basis for its single-sentence Contention 16. As Holtec points out, Mr. Rice's Figure 1 and detailed subsurface profiles in the Environmental Report show that the proposed facility would be located above the interface between the alluvium/Dockum, where Mr. Rice suggests that shallow groundwater may exist.[348] Furthermore, the SAR describes how the spent nuclear fuel will be contained in a steel canister within a steel CEC and concludes that "the CEC is a closed bottom, open top, thick walled cylindrical vessel that has no penetrations or openings. Thus, groundwater has no path for intrusion into the interior space of the CEC."[349] Sierra Club does not dispute these conclusions or provide any other reason for how brine could affect the canisters. "[N]either mere speculation nor bare or conclusory assertions, even by an expert, alleging that a matter should be considered will suffice to allow the admission of a proffered contention."[350]

Sierra Club Contention 16 is not admitted.

17. Sierra Club Contention 17

Sierra Club Contention 17 states:

> The [Environmental Report] and SAR do not discuss the presence and implications of fractured rock beneath the Holtec site. These fractures could allow radioactive leaks from the [consolidated interim storage] facility to enter groundwater or for the brine described in Contention 16 to corrode the containers contain[ing] the radioactive material.[351]

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[348] Holtec Answer to Sierra Club at 85–86.

[349] SAR at 1-14; id. at 1-24 (Fig. 1.2.2(a)).

[350] S. Nuclear Operating Co. (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 253 (2007) (citing Fansteel, CLI-03-13, 58 NRC at 203).

[351] Sierra Club Pet. at 63–64.

Sierra Club bases this contention on the third of five comments in the declaration of George Rice.[352] Mr. Rice claims that "[f]ractures are common at the site" and that "[s]ome portions of both [the Santa Rosa and Chinle] formations are described as highly fractured[] . . . in the logs of monitor wells."[353] He asserts that these fractures "could rapidly convey contaminants to underlying groundwater."[354]

As in its Contentions 15 and 16, Sierra Club does not provide adequate support for its contention. Holtec's Environmental Report concludes: "Impacts to groundwater would not be expected, due to the depth of groundwater and the fact that the CIS Facility would not release pollutants, including radionuclides, during normal operations."[355] Nor would a release of radioactive material occur, Holtec's Environmental Report asserts, during any credible off-normal event[356] or accident.[357]

It also states that "[t]here is no potential for a liquid pathway because the spent fuel contains no liquid component and the casks are sealed to prevent any liquids from contacting the spent fuel assemblies."[358] Holtec's SAR concludes that "the CEC is a closed bottom, open top, thick walled cylindrical vessel that has no penetrations or openings. Thus, groundwater has

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[352] See Rice Decl. at 6.

[353] Id.

[354] Id.

[355] ER at 4-13.

[356] Id. at 4-56.

[357] Id. at 4-57. Additionally, as discussed supra, the HI-STORM UMAX FSAR concludes in section 2.0.6 that "[t]he MPC provides for confinement of all radioactive materials for all design basis normal, off-normal, and postulated accident conditions. As discussed in Chapter 7 of the HI-STORM [flood and wind], [multi-purpose canister] design meets the guidance in the Interim Staff Guidance (ISG)-18 so that leakage of radiological matter from the confinement boundary is non-credible."

[358] Id. at 7-1.

no path for intrusion into the interior space of the CEC."[359] Sierra Club does not explain why these conclusions are false or questionable, such that contaminants could be conveyed to underlying groundwater. In its reply, Sierra Club does not elaborate on a rationale for its contention except to offer the conclusory statement that "[t]here is sufficient information to raise the specter of leaks from the casks into the groundwater."[360] "[N]either mere speculation nor bare or conclusory assertions, even by an expert, alleging that a matter should be considered will suffice to allow the admission of a proffered contention."[361]

Sierra Club Contention 17 is not admitted.

18. Sierra Club Contention 18

Sierra Club Contention 18 states:

> The Santa Rosa Formation is an important aquifer in the area of the Holtec site. It is used for domestic water supply, stock watering and irrigation. The Holtec [Environmental Report] has not adequately determined and discussed the possibility that waste-contaminated groundwater could reach the Santa Rosa Formation.[362]

Sierra Club bases this contention on the fourth comment in the declaration of George Rice.[363] His fourth comment states that "the top of the Santa Rosa [Formation] is approximately 215 feet below land surface."[364] It also describes how Holtec's monitor well B101 is located in the Santa Rosa Formation, and "the depth to water in the well is about 250 feet. The quality of

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[359] SAR at 1-14; id. at 1-24 (Fig. 1.2.2(a)).

[360] Sierra Club Reply at 39.

[361] Vogtle, LBP-07-3, 65 NRC at 253 (citing Fansteel, CLI-03-13, 58 NRC at 203).

[362] Sierra Club Pet. at 65.

[363] Rice Decl. at 7.

[364] Id. (citing GEI Consultants, HI-STORE CISF Phase 1 Site Characterization, Lea County, New Mexico at 80 (Dec. 2017) [hereinafter GEI]).

this water has not been determined."[365] Mr. Rice claims that "the possibility that waste-contaminated groundwater could reach the Santa Rosa Formation cannot be dismissed."[366]

We agree with Holtec that Sierra Club has put "forth an unsupported hypothetical and demand[ed] that the applicant prove the negative."[367] While it may be true that the Santa Rosa Formation is an important source of groundwater located in Lea County,[368] Sierra Club has not demonstrated any support for its claim that waste-contaminated groundwater from the proposed facility could reach that formation. As explained supra, Holtec's Environmental Report concludes: "Impacts to groundwater would not be expected, due to the depth of groundwater and the fact that the CIS Facility would not release pollutants, including radionuclides, during normal operations"[369] or during any credible off-normal event[370] or accident.[371]

Sierra Club appears to implicitly dispute the second conclusion—that the proposed facility would not release pollutants into groundwater. However, Sierra Club does not provide any rationale to support its expert's conclusory statements or explain why the Environmental Report is wrong to conclude that "[t]here is no potential for a liquid pathway because the spent fuel contains no liquid component and the casks are sealed to prevent any liquids from contacting the spent fuel assemblies."[372]

Sierra Club Contention 18 is not admitted.

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[365] Id. (citing GEI at 36).

[366] Id.

[367] Holtec Answer to Sierra Club at 89.

[368] ER at 3-59 to -60.

[369] Id. at 4-13.

[370] Id. at 4-56.

[371] Id. at 4-57.

[372] Id. at 7-1.

19. Sierra Club Contention 19

Sierra Club Contention 19 states:

> Holtec performed two sets of packer tests in the Santa Rosa Formation to estimate the hydraulic conductivity (permeability) of the formation. These tests were conducted in conjunction with the preparation of the [Environmental Report]. It does not appear from the report of Holtec's consultant that these tests were conducted properly. Therefore, the [Environmental Report] has not presented an adequate evaluation of the affected environment.[373]

Sierra Club bases this contention on the fifth and final comment in the declaration of George Rice. His comment describes how Holtec performed two sets of packer tests in the Santa Rosa.[374] He claims that Holtec allegedly did not follow three of the recommendations in the U.S. Bureau of Reclamation's Field Manual: (1) "the applicant does not appear to have cleaned the hole before conducting packer tests;" (2) "there is no description of the water used in the tests;" and (3) "the test duration appears to be too short."[375] Accordingly, Sierra Club claims that "the results of the packer tests are unreliable and do not satisfy the requirements of 10 C.F.R. § 51.45."[376]

We agree with the NRC Staff[377] and Holtec[378] that Sierra Club fails to show how this contention is material, because it has failed to show how the results of the packer tests would make a difference in the outcome of the licensing proceeding. Mr. Rice admitted in his declaration that "even when the tests are done properly, the values obtained are only semi-quantitative—within an order of magnitude of the actual value."[379] Although Sierra Club asserts

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[373] Sierra Club Pet. at 66.

[374] Rice Decl. at 8.

[375] Id. (citing 2 U.S. Bureau of Reclamation, Engineering Geology Field Manual, Ch. 17 (2d ed. 2001)).

[376] Sierra Club Pet. at 67.

[377] NRC Staff Consol. Answer at 106–07.

[378] Holtec Answer to Sierra Club at 90–91.

[379] Rice Decl. at 8.

that "[t]he permeability of the site is certainly important to assessing whether the site is appropriate for the proposed CIS facility,"[380] Sierra Club does not describe how the permeability is material or how the asserted departures from the U.S. Bureau of Reclamation's recommendations would have significance for any analysis or conclusion in the Environmental Report. Presumably, Sierra Club is implicitly expressing the same concern as Contentions 15 through 18—that groundwater may become contaminated—but, as we explained supra, Sierra Club never links its concern about groundwater with an explanation for how groundwater could possibly come into contact with any contaminant from the storage facility. Mr. Rice merely speculates that the acceptable guidance may not have been followed.[381] Again, speculation, even by an expert, fails to provide the requisite support for an admissible contention.[382]

Sierra Club Contention 19 is not admitted.

20. Sierra Club Contention 20

Sierra Club Contention 20 states:

> Since the 1990's almost all spent nuclear fuel being generated is high burnup fuel (HBF). HBF causes the cladding to become thinner, creating a higher risk of release of radioactive material. The cladding also becomes more brittle, with additional cracks. This situation causes risks to short-term and long-term dry storage. This issue is not adequately addressed in the SAR and high burnup fuel does not appear to be addressed in the [Environmental Report] at all. Cladding failure due to high burnup fuel is an issue that must be adequately addressed.[383]

Sierra Club's Contentions 20 through 24 concerning high burnup fuel are supported by Dr. Marvin Resnikoff, who asserts expertise in radioactive waste.[384]

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[380] Sierra Club Pet. at 66.

[381] Rice Decl. at 8 ("[T]he applicant does not appear to have followed several of the recommendations in the manual.") (emphasis added).

[382] Vogtle, LBP-07-3, 65 NRC at 253 (citing Fansteel, CLI-03-13, 58 NRC at 203).

[383] Sierra Club Pet. at 67.

[384] See id., Resnikoff Aff. at ¶ 3.

Sierra Club proffers Contention 20 based on the assertion that, because "[h]igh burnup fuel causes the cladding around the fuel to become thinner and more brittle, inducing cracking," high burnup fuel containers are "more likely to leak radioactive material."[385] Arguing that high burnup fuel is "dangerously unpredictable and unstable in storage," Sierra Club cites a 2013 DOE report that suggests outstanding issues regarding cladding and high burnup fuel should be resolved before this fuel type can be safely loaded, transported, and stored.[386] Citing a 2010 study by the U.S. Nuclear Waste Technical Review Board,[387] Sierra Club claims that zirconium cladding experiences a twelve percent thinning due to the effects of high burnup, and "the likelihood of cladding defects increase" when storing high burnup fuel.[388] In sum, Sierra Club argues the Environmental Report and SAR must "discuss and evaluate the risks of transporting and storing [high burnup fuel]."[389]

To the extent Sierra Club Contention 20 raises safety claims concerning transportation and storage, it is inadmissible because it fails to raise a genuine dispute with the application on a material issue of law or fact. First, Part 71 and U.S. Department of Transportation regulations establish the standards for transporting spent nuclear fuel—not for storing fuel at an interim storage facility. This aspect of the contention does not raise a genuine dispute with Holtec's Part 72 license application. Moreover, regarding storage of high burnup fuel (and consistent with our conclusion in connection with Sierra Club's related Contention 14 supra), the analyses and bounding technical specifications are contained in HI-STORM UMAX's FSAR and

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[385] Sierra Club Pet. at 67–68.

[386] Id. at 68–69 (citing DOE, A Project Concept for Nuclear Fuels Storage and Transportation, Fuel Cycle Research & Development, (rev. 1 June 2013)).

[387] U.S. Nuclear Waste Transp. Review Bd., Evaluation of the Technical Basis for Extended Dry Storage and Transportation of Used Nuclear Fuel (Dec. 2010).

[388] Sierra Club Pet. at 70.

[389] Id.

Certificate of Compliance, which is incorporated by reference into the HI-STORE facility's SAR.[390] As Commission regulation bars any admitted contention based on an NRC-approved storage cask design incorporated by reference in an ISFSI application,[391] this facet of Sierra Club Contention 20 is inadmissible.

The claim that Holtec's Environmental Report fails to address high burnup fuel in transport also does not raise a genuine dispute because it ignores the application. Environmental Report section 4.9[392] provides the results of a RADTRAN analysis that evaluated the incident-free radiological transportation impacts assuming the maximum dose rate allowed for exclusive use shipments under NRC regulation 10 C.F.R. § 71.47(b)(3). This would encompass spent fuel of any burnup, including high burnup fuel. With respect to potential impacts to transportation workers and the radiological transportation impacts that could potentially occur during accidents, ER section 4.9 bases its analyses on DOE calculations concerning incident-free and accident radiological impacts in the Yucca Mountain final supplemental EIS,[393] which in turn addresses the transportation of high burnup fuel.

Finally, the claim that storage of high burnup fuel is omitted from Holtec's Environmental Report also raises no genuine dispute. Sections 4.12 and 4.13 of the Environmental Report, which concern public and occupational health from normal operations and off-normal operations and accidents, speak to the storage of high burnup fuel.[394] As there are no separate regulatory requirements regarding high burnup fuel, section 4.12 relies on the Continued Storage GEIS in

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[390] See, e.g., SAR at 16-1.

[391] See 10 C.F.R. § 72.46(e).

[392] ER at 4-30.

[393] DOE, Final Supplemental EIS for a Geological Repository for the Disposal of Spent Nuclear Fuel and High-Level Radioactive Waste at Yucca Mountain, Nye County, Nevada, DOE/EIS-0250F-S-1, at G-34 (June 2008).

[394] ER 4-16 to -17, 4-46 to -48.

its analyses of dose to the public and its workers.[395] Section 4.13 specifically incorporates by reference the UMAX FSAR, which addresses credible accidents and high burnup fuel.[396] Therefore, to the extent the contention asserts that Holtec omitted discussion of high burnup fuel storage, it is inaccurate. A contention of omission must be summarily rejected if "the topic that allegedly is omitted is, in fact, included with the application."[397]

Sierra Club Contention 20 is not admitted.

21. Sierra Club Contention 21

Sierra Club Contention 21 states:

> There is no experimental support for the safe transportation and storage of [High Burnup Fuel]. Holtec must show that safety is assured not only for hypothetical accident conditions, but also for real life accident conditions. Holtec has not done that in this case.[398]

Sierra Club argues that, under section 72.108, "the transportation of [high burnup fuel] especially must be addressed in the [Environmental Report]."[399] Sierra Club's basis for the contention is that there is a lack of data concerning high burnup fuel transportation guidance for applicants to meet certain Part 71 requirements.[400] Citing NRC Interim Staff Guidance 11 (ISG-11)[401] in which the NRC Staff sets a "case-by-case" standard for the transportation of high burnup fuel, Sierra Club broadly claims that Holtec "has not met this test."[402] Sierra Club then points out issues with the ISG-11 document itself, stating that, although the Staff is still

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[395] Id. at 4-48.

[396] Id. at 4-61.

[397] USEC, Inc. (Am. Centerfuge Plant), CLI-06-10, 63 NRC 451, 456 (2006).

[398] Sierra Club Pet. at 70.

[399] Id. at 71.

[400] Id. at 70.

[401] Spent Fuel Project Office, NMSS, Interim Staff Guidance, Cladding Considerations for the Storage and Transportation of Spent Fuel (Nov. 17, 2003).

[402] Sierra Club Pet. at 71–72.

reviewing data on high burnup fuel and cladding issues vis-à-vis transportation, there is a question concerning what exactly the Staff's methodology is.[403] Ultimately, Sierra Club wants Holtec's Environmental Report to "address real life accident conditions based on the specific facts of this case."[404]

Although the wording of Contention 21 mentions "safe transportation and storage," none of the supporting bases or facts on which Sierra Club relies address storage at all. Thus, the storage portion of Contention 21 is inadmissible for failure to cite any alleged facts or expert opinion on which Sierra Club would rely at an evidentiary hearing.[405]

The remainder of the contention is inadmissible because it fails to raise a genuine dispute on a material issue with Holtec's application for a consolidated interim storage facility. Again, Sierra Club declines to grapple with the application at hand—Holtec's HI-STORE application to store spent fuel under Part 72—and instead it broadly asserts that Holtec does not meet a "case-by-case" transportation standard for high burnup fuel transportation (as set forth in an NRC non-binding guidance document). Sierra Club also fails to specifically explain how Holtec fails to meet this standard. Bald assertions that an application is insufficient or inadequate, without more, do not meet the Commission's contention admissibility standard.[406]

Sierra Club Contention 21 is not admitted.

22. Sierra Club Contention 22

Sierra Club Contention 22 states:

> With high burnup fuel hydrogen absorption into the Zircaloy metal can lead to hydrogen embrittlement (loss of cladding ductility) of the cladding. Vibrations

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[403] Id. at 71.

[404] Id. at 72.

[405] 10 C.F.R. § 2.309(f)(1)(v).

[406] Nuclear Mgmt. Co. (Palisades Nuclear Plant), LBP-06-10, 63 NRC 314, 341, aff'd, CLI-06-17, 63 NRC 727 (2006)).

> during transport will lead to further degradation of the cladding. Nothing in the Holtec documentation shows that Holtec has addressed this issue in this case.[407]

Reflecting its continuing concern with the transport of high burnup fuel, Sierra Club alleges that Holtec's Environmental Report "has not adequately made the evaluation of the loss of ductility on the fuel rods due to the [high burnup fuel] and the likelihood of material strength and a release of radioactive material" in accordance with 10 C.F.R. § 72.108.[408] Arguing that hydrogen absorption into the zircaloy cladding (hydrides) can lead to cladding embrittlement, Sierra Club claims that this ultimately could "lead to delayed hydride cracking."[409] Finally, Sierra Club reasserts its claim from Contention 21 that Holtec does not meet the spent fuel transportation "case-by-case" test set forth in ISG-11, and that the Environmental Report must address "real life accident conditions."[410]

As with Contention 21, Sierra Club Contention 22 is inadmissible for failure to raise a genuine dispute with the application on a material issue of law or fact. We agree with the NRC Staff's assessment that, while section 72.108 requires the applicant to consider impacts from transportation in the Environmental Report, "it does not require that the environmental report prove the safety of transportation packages."[411] Moreover, the Commission's Part 71 regulations already address and preempt the issues Sierra Club seeks to litigate in this contention.[412] And Sierra Club's identical argument concerning the "case-by-case" test in ISG-11 is inadmissible for the same reason we found it inadmissible in Contention 21.

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[407] Sierra Club Pet. at 72.

[408] Id. at 72–73.

[409] Id. at 73 (quoting Chan, An Assessment of Delayed Hydride Cracking in Zirconium Alloy Cladding Tubes Under Stress Transients (2006)).

[410] Id.

[411] NRC Staff Consol. Answer at 116.

[412] See 10 C.F.R. § 71.71(c)(1)(5) (vibration incident to transport of spent fuel); id. § 71.73 (analyses of required transport accident conditions).

Sierra Club Contention 22 is not admitted.

23. Sierra Club Contention 23

Sierra Club Contention 23 states:

> Spent fuel cladding must be protected during storage against degradation that leads to gross ruptures in the fuel or the fuel must be otherwise confined such that the degradation of the fuel during storage will not pose operational safety problems with respect to its removal from storage. It is the responsibility of the licensee to ensure that fuel placed in dry storage meets the design-basis conditions. If [high burnup fuel] develops gross cladding defects during transportation, Holtec has not described how such defects could be detected. If [high burnup fuel] develops gross cladding defects and the fuel cannot be accepted at a waste repository, the fuel will remain at the proposed [consolidated interim storage] facility indefinitely.[413]

Citing 10 C.F.R. § 72.122(h)(1), Sierra Club argues that Holtec must protect the spent fuel cladding "against degradation that leads to gross ruptures in the fuel or the fuel must be otherwise confined such that the degradation of the fuel during storage will not pose operational safety problems" when the fuel is retrieved from storage.[414] Sierra Club then asserts that Holtec "has not specified how it will address the safety issues inherent in the gross cladding defects due to [high burnup fuel]."[415] Sierra Club also claims that Holtec has not described how either of these defects will be detected if they occur during transportation or how the high burnup fuel will be managed once that fuel is "transported to a repository."[416]

Contention 23 cannot be admitted because it fails to show that a genuine dispute exists with the Holtec application on a material issue of law or fact. First, Sierra Club does not identify which part of the application it disputes, as specifically required.[417] Second, Sierra Club does not address the analyses that support Holtec's claim that it does comply with section

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[413] Sierra Club Pet. at 73–74.

[414] Id. at 74.

[415] Id.

[416] Id. at 75.

[417] 10 C.F.R. § 2.309(f)(1)(vi).

72.122(h)(1), which are provided in the FSAR for the HI-STORM UMAX system and incorporated by reference in Holtec's SAR.[418] And as Holtec points out, the HI-STORM UMAX system has already been certified by the NRC through its independent analyses and publication of its own Safety Evaluation Report (SER).[419] Indeed, the NRC Staff in 2015 concluded that fuel stored in the UMAX system would be maintained at a temperature below ISG-11 Revision 3 standards (i.e., below 400° C) and accordingly determined that the system complied with section 72.122(h)(1) as it relates "to thermal analysis, fuel cladding integrity and fuel retrievability."[420] As the HI-STORE UMAX canister system has already been certified compliant by the NRC,[421] a petitioner is barred by regulation from challenging either the Staff's SER or the UMAX SAR analyses in an adjudication.[422]

Sierra Club Contention 23 is not admitted.

24. Sierra Club Contention 24

Sierra Club Contention 24 states:

> Because of the high heat output of fuel within MPC-37 canisters, there is a long decay time before shipments to the Holtec [consolidated interim storage] facility can occur. The loading of the MPC-37 is quite complicated. It is unclear when reactors will be allowed to ship the MPC-37 to the Holtec facility. There is a serious risk of radioactive contamination if the radioactive waste is shipped too soon. Information that would inform the public and analysts has been withheld as being proprietary information. Neither the Holtec [Environmental Report] or SAR contain sufficient information to assess the risk of shipping the MPC-37 canisters.[423]

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[418] See, e.g., SAR Ch. 6 (incorporating by reference Docket No. 72-1040, Certificate of Compliance No. 1040, "[FSAR] on The HI-STORM UMAX Canister Storage System" (June 2018) (ADAMS Accession No. ML16193A336)).

[419] Holtec Answer to Sierra Club at 113–14 (citing SER, Docket No. 72-1040, HI-STORM UMAX Canister Storage System, Holtec, Certificate of Compliance No. 1040, at 15 (Apr. 2015) (ADAMS Accession No. ML15093A510) [hereinafter HI-STORM UMAX SER]).

[420] HI-STORM UMAX SER at 4-5, -19, -22 to -23, -37.

[421] 10 C.F.R. § 72.214 (Certificate Number 1040).

[422] Id. § 72.46(e).

[423] Sierra Club Pet. at 75–76.

Sierra Club claims that "Holtec has not provided sufficient information in the [Environmental Report] or SAR to make an accurate assessment of the safety of the [MPC-37 canisters for high burnup fuel]."[424] Sierra Club also contends that it was not permitted to access information about the MPC-37 canister or the HI-TRAC CS cask because Holtec withheld the information as proprietary.[425]

As emphasized throughout this Memorandum and Order, Holtec has applied for a license to construct and operate a Holtec HI-STORE UMAX spent fuel storage installation—not a license for it to transport canisters or casks. Nor is Holtec applying for permission to use or certify Holtec canisters or casks for transport, as those proposed for use at the HI-STORE facility have already been reviewed by the NRC and have been issued certificates of compliance. Thus, a contention challenging any aspect of an NRC-approved canister or cask is outside the scope of this proceeding under 10 C.F.R. § 2.309(f)(1)(iii), and would be an impermissible attack on the Commission's regulations absent a waiver under section 2.335.

As to Sierra Club's claim that proprietary information was withheld that prejudiced petitioners, the claim is not an admissible contention under any standard. We again observe that the Federal Register notice announcing the opportunity to petition for a hearing in this proceeding set forth a procedure for petitioners to obtain proprietary information.[426] The Secretary of the Commission also granted an extension of time for petitioners to do so,[427] but Sierra Club still did not avail itself of the procedure.

Sierra Club Contention 24 is not admitted.

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[424] Id. at 76.

[425] Id. at 76, 80.

[426] See Notice of Opportunity to Request a Hearing, 83 Fed. Reg. at 32,919.

[427] See Order of the Secretary (Aug. 20, 2018) (extending petitioners' requests to access SUNSI to August 30, 2018).

25. Sierra Club Contention 25

Sierra Club's Contention 25 states:

> Sierra Club adopts all contentions presented by Don't Waste Michigan, Citizens Against Chemical Contamination, Public Citizen, San Luis Obispo Mothers for Peace, Nuclear Energy Information Service, Citizens' Environmental Coalition, and Environmentalists, Inc. in their Petition to Intervene in this proceeding.[428]

To adopt a contention, a participant must (1) have demonstrated standing in their own right; and (2) have proffered an admissible contention itself.[429] Because Sierra Club has not proffered an admissible contention itself, it cannot adopt any of Joint Petitioners' contentions.

Sierra Club Contention 25 is not admitted.

26. Sierra Club Contention 26

Sierra Club Contention 26 states:

> Section 186 of the Atomic Energy Act (AEA) (42 U.S.C. § 2236) provides that a license issued by the NRC may be revoked for any material false statement in the license application. Holtec has made a material false statement in its license application in this case by stating repeatedly that title to the waste to be stored at the [consolidated interim storage] facility would be held by DOE and/or the nuclear plant owners. This false statement was repeated in Holtec's Answers to Sierra Club's Contention 1 and [Joint Petitioners'] Contention 2.
>
> The statement that nuclear plant owners might retain title to the waste is shown to be false by a January 2, 2019, e-mail message from Holtec to the public titled "Reprising 2018[.]" "Reprising 2018" states, "While we endeavor to create a national monitored retrievable storage location for aggregating used nuclear fuel at reactor sites across the U.S. into one (HI-STORE CISF) to maximize safety and security, its deployment will ultimately depend on the DOE and the U.S. Congress."
>
> Thus, if a false statement such as Holtec has made in its filing in this case is grounds for revoking a license, it is grounds for not issuing the license in the first instance.[430]

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[428] Sierra Club Pet. at 82.

[429] See Consol. Edison Co. of N.Y. (Indian Point, Units 1 & 2), CLI-01-19, 54 NRC 109, 132–33 (2001).

[430] Sierra Club's Motion to File a New Late-Filed Contention (Jan. 17, 2019) [hereinafter Sierra Club's Late-Filed Contention 26 Motion]; Sierra Club Contention 26 (Jan. 17, 2019) [hereinafter Sierra Club Contention 26].

On January 17, 2019, Sierra Club filed a motion to submit this new contention.[431] Because Sierra Club Contention 26 was submitted after the deadline for filing petitions,[432] we must first consider whether Sierra Club's motion to file the contention satisfies the three-prong test in 10 C.F.R. § 2.309(c)(1)(i)–(iii). Although Holtec argues to the contrary,[433] the contention clearly satisfies two of them. It is undisputed that the e-mail on which the contention relies was not publicly available until January 2, 2019.[434] Likewise there is no dispute that Sierra Club timely submitted Contention 26 on January 17, 2019—just 15 days later.[435]

Less clear is whether Contention 26 relies on information that is "materially different from information previously available."[436] Both Holtec and the NRC Staff argue it is not.[437] Holtec goes one step further and asks us to refuse even to consider the admissibility of Sierra Club Contention 26 because, Holtec argues, "Petitioners['] gross mischaracterizations of the statement in the Holtec article belie any finding of good cause under the late-filing requirements in 10 C.F.R. § 2.309(c)."[438]

Both Holtec and the NRC Staff, in our view, wrongly conflate the "materially different" requirement of 10 C.F.R. § 2.309(c)(1)(ii) (necessary to file a contention after the initial

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[431] Sierra Club's Late-Filed Contention 26 Motion; see Sierra Club Contention 26.

[432] See Notice of Opportunity to Request a Hearing, 83 Fed. Reg. at 32,919 (establishing September 14, 2018 as the deadline for hearing requests and petitions to intervene).

[433] See Holtec Opposition to Late-Filed Sierra Club Contention 26 and [Joint Petitioners] Contention 14 (Feb. 19, 2019) at 2–6 [hereinafter Holtec Opp. to Late-Filed Contentions].

[434] See Sierra Club's Motion to File a New Late-Filed Contention (Jan. 17, 2019), attach. Ex. 11, Holtec Highlights, Holtec Reprising 2018 (Jan. 2, 2019) [hereinafter Reprising 2018 E-mail].

[435] See Shaw AREVA MOX Servs., LBP-08-11, 67 NRC at 493 (30 days deemed timely).

[436] 10 C.F.R. § 2.309(c)(1)(ii).

[437] Holtec Opp. to Late-Filed Contentions at 4–6; NRC Staff's Consolidated Response to [Joint Petitioners], and the Sierra Club's Motions to File New Contentions (Feb. 19, 2019) at 7–8 [hereinafter NRC Staff Response to Late-Filed Contentions].

[438] Holtec Opp. to Late-Filed Contentions at 4.

deadline) with the "material to the findings the NRC must make" requirement of 10 C.F.R. § 2.309(f)(1)(iv) (necessary to admit a contention). As frequently stated, the NRC's pleading requirements differ markedly from those in most courts because "notice pleadings" are not permitted.[439] Rather, the scope of a contention is limited to issues of law and fact pled with particularity,[440] unless the contention is properly amended in accordance with the NRC's rules.

A corollary to the NRC's strict pleading requirements, however, is that the Agency may place petitioners in a quandary: What new information requires amending a contention or pleading a new one, on the one hand, and what merely constitutes new evidence that may be introduced in support of an existing contention? A petitioner who guesses wrong may find its evidence or its line of argument excluded from an evidentiary hearing.

Accordingly, in deciding whether to permit a contention to be filed after the initial deadline, we interpret "materially different" new information from the standpoint of a reasonable petitioner. Holtec's statement in "Reprising 2018" concerning the role of DOE and the Congress in deployment of the proposed facility meets this standard because it appears to contradict information in the application. We do not demand that a petitioner establish the admissibility (much less the merits) of a contention before allowing it to be filed. Sierra Club's motion to file Contention 26 is granted for cause.

That said, we agree with Holtec and the NRC Staff that Sierra Club Contention 26 is not admissible.[441]

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[439] N. Atlantic Energy Serv. Corp. (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 219 (1999).

[440] Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-10-15, 71 NRC 479, 482 (2010).

[441] See Holtec Opp. to Late-Filed Contentions at 6–13; NRC Staff Response to Late-Filed Contentions at 8–11.

Holtec's "Reprising 2018" e-mail message stated that deployment of the planned facility "will ultimately depend on the DOE and the U.S. Congress."[442] Contention 26, therefore, claims Holtec made a material false statement in its license application when it said title to the spent fuel stored in the facility would be held either by DOE or by the nuclear plant owners.[443] Holtec's statement in "Reprising 2018," Sierra Club contends, is an admission that Holtec really has no intention of contracting with nuclear plant owners. Rather, Sierra Club asserts, Holtec intends to go forward with the project only if it can contract with DOE (which, both Holtec and Sierra Club agree, with limited exceptions would currently be unlawful).[444]

Consequently, Contention 26 asserts, Holtec's license application should be denied. Because section 186 of the AEA[445] provides that an NRC license may be revoked for a material false statement in the license application, Sierra Club argues, it likewise should be grounds for not issuing a license in the first place.

Assuming section 186 of the AEA applies,[446] however, Contention 26 does not set out a possible violation. Contrary to Sierra Club's arguments, a violation of section 186 requires a willful misrepresentation.[447] Nothing in "Reprising 2018" demonstrates a misrepresentation in Holtec's license application, willful or otherwise.

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[442] Reprising 2018 E-mail at 1.

[443] See Sierra Club Contention 26 at unnumbered p. 1.

[444] See supra discussion at Sierra Club Contention 1.

[445] 42 U.S.C. § 2236.

[446] Holtec contends that, prior to the issuance of a license, only section 182 of the AEA (42 U.S.C. § 2232) should apply, rather than section 186. See Holtec Opp. to Late-Filed Contentions at 12–13. The NRC Staff's response does not address the issue. For purposes of determining whether Contention 26 is admissible, we assume arguendo that Sierra Club properly invokes section 186.

[447] Before 1987, the Commission used the standard set forth in the pre-1987 cases on which the Sierra Club relies. See Sierra Club Contention 26 at unnumbered pp. 7–8. But, in a 1987 rulemaking, the Commission reversed its prior policy. Whereas previously a material false statement under section 186 could be "unintended and inadvertent," the Commission

On the contrary, Holtec's revised application unambiguously states that construction will be undertaken only after it has established "a definitive agreement with the prospective user/payer for storing the used fuel (USDOE and/or a nuclear plant owner)."[448] Sierra Club claims, and Holtec agrees, that with certain limited exceptions DOE may not lawfully take title to spent nuclear fuel under current law.[449] Therefore, Holtec's application describes two alternative types of customers: DOE and the nuclear plant owners themselves.

Holtec readily acknowledges that it hopes Congress will change the law, and allow it in most instances to contract directly with DOE to store spent fuel.[450] Additionally, as Holtec points out, the eventual development of a permanent national nuclear waste repository, as contemplated by the NWPA, might eliminate the need for some or all of the planned stages of Holtec's proposed interim storage facility.[451] Nothing in "Reprising 2018" is inconsistent with this state of affairs.

Meanwhile, Holtec represents that it is committed to going forward with the project by contracting directly with nuclear plant owners that currently hold title to their spent fuel.[452] We have no reason to assume that, having acknowledged on the record that (with limited exceptions) it would be unlawful to contract directly with DOE under the NWPA as currently in

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determined in 1987 to limit the term to "egregious situations" involving an element of intent. Completeness and Accuracy of Information, 52 Fed. Reg. 49,362, 49,363–65 (Dec. 31, 1987).

[448] SAR at 1-6. (As discussed supra, Holtec has corrected an erroneous inconsistency that initially appeared in Revision 1 of its Environmental Report).

[449] See supra IV.B.1.

[450] Tr. at 250.

[451] Tr. at 246.

[452] Tr. at 248.

effect, Holtec will nonetheless try to do just that.[453] Nor may we assume that DOE would be complicit in a violation of the NWPA.[454]

Whether Holtec will find the alternative of contracting with the nuclear plant owners to be commercially viable is not an issue before the Board, because the business decision of whether to use a license has no bearing on a licensee's ability to safely conduct the activities the license authorizes. As the Commission instructs us, "the NRC is not in the business of regulating the market strategies of licensees or determining whether market conditions warrant commencing operations."[455]

Sierra Club Contention 26 is not admitted.

27. Sierra Club Contention 27

Sierra Club Contention 27 states:

> During the hearing before the ASLB in this case that occurred on January 23 and 24, 2019, Holtec relied on its purported Aging Management Program, SAR Chapter 18, to support its claim that there is no issue with high burnup fuel, as set forth in Sierra Club Contentions 14 and 20–23. Holtec had not replied upon, or even mentioned, the Aging Management Program in its Answer to Contentions 14 and 20–23, which raise issues regarding high burnup fuel. This is new information that was not available to Sierra Club until Holtec relied upon the Aging Management Program at the ASLB hearing.
>
> Holtec's Aging Management Program, SAR Chapter 18, only mentions high burnup fuel once, in Section 18.3. The Aging Management Program does not explain how the impact to the containers from high burnup fuel will be addressed. The reference simply refers to Appendix D of NUREG-1927, which provides a process for experimental demonstration for time periods beyond a 20-year licensing period.
>
> The ER does not mention the Aging Management Program at all.
>
> Since the Holtec [consolidated interim storage] facility is expected to be in operation well beyond the 40-year licensing period, the Aging Management

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[453] See, e.g., Private Fuel Storage, L.L.C. (Indep. Spent Fuel Storage Installation), CLI-01-9, 53 NRC 232, 235 (2001) ("Further, in the absence of evidence to the contrary, the NRC does not presume that a licensee will violate agency regulations wherever the opportunity arises.").

[454] See, e.g., Chemical Foundation, 272 U.S. at 14–15; Armstrong, 517 U.S. at 464.

[455] Nat'l Enrichment Facility, CLI-05-28, 62 NRC at 726 (internal quotation marks omitted).

> Program in the SAR, if it proposes to comply with Appendix D, must set out in detail how it will do so.[456]

Sierra Club relies on three documents to support its point that an "aging management program must be based on more tha[n] hope and a promise."[457] First is DOE guidance entitled "Managing Aging Effects on Dry Cask Storage Systems for Extended Long-Term Storage and Transportation of Used Fuel-Revision 2," which refers to four types of aging management programs and ten elements that should be included in the programs.[458] Second is a portion of NRC guidance document, NUREG-1748, which describes what mitigation measures an applicant should describe in an environmental report.[459] Third is a report by Robert Alvarez that describes the alleged difficulty of monitoring decay heat from high burnup fuel.[460] Sierra Club also disputes Holtec's assertion at oral argument that its aging management program is not voluntary, since Holtec "apparently gets to fashion its own program" and "there is no indication that there will be any NRC oversight of Holtec's execution of the program."[461]

Because this contention was submitted after the original deadline, we first determine whether the contention satisfies 10 C.F.R. § 2.309(c). As explained supra, the Board will consider a new or amended contention filed after the deadline only if the petitioner demonstrates good cause under the three-pronged test of 10 C.F.R. § 2.309(c)(1). We agree

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[456] Sierra Club's Additional Contentions in Support of Petition to Intervene and Request for Adjudicatory Hearing (Feb. 25, 2019) at 1 [hereinafter Sierra Club Additional Contentions]; see also Sierra Club's Motion to File New Late-Filed Contentions 27, 28, and 29.

[457] Sierra Club Additional Contentions at 4.

[458] Id.

[459] Id. at 7.

[460] Id.; see also id., attach., Expert Report and Curriculum Vitae of Robert Alvarez (Feb. 25, 2019). As noted infra, Mr. Alvarez purports to have significant experience in the areas of nuclear materials and policy development.

[461] Sierra Club Additional Contentions at 6.

with the NRC Staff and Holtec that Sierra Club's Contention 27 fails to meet the first prong,[462] and conclude that Sierra Club could have made this challenge to the aging management program in its initial petition. Sierra Club does not assert that the information about Holtec's aging management program is new or materially different than the information in Holtec's application, only that it has been used in a new way that Sierra Club did not anticipate. The DOE and NRC guidance documents upon which Sierra Club relies as the basis for this contention were available at the time that Sierra Club filed its initial petition. We agree with the NRC Staff's comment that this contention is "solely related to the adequacy of the [aging management program] as it already existed in the application."[463] As explained supra, previously available information that is newly interpreted by the petitioner does not constitute good cause to file a new contention.[464]

Sierra Club Contention 27 is not admitted.

28. Sierra Club Contention 28

Sierra Club Contention 28 states:

> During the hearing before the ASLB in this case that occurred on January 23 and 24, 2019, Holtec relied on its purported Aging Management Program, SAR Chapter 18, to support its claim that there is no issue with impacts to or from the groundwater, as set forth in Sierra Club Contentions 15-19. Holtec had not relied upon, or even mentioned, the Aging Management Program in its Answer to Contentions 15-19, which raise issues regarding the presence and location of and impacts from groundwater. This is new information that was not available to Sierra Club until Holtec relied upon the Aging Management Program at the ASLB hearing.

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[462] See NRC Staff Response to Sierra Club's Motion to Admit Contentions 27, 28, and 29 (Mar. 22, 2019) at 6–9 [hereinafter NRC Staff Answer to Sierra Club New Contentions]; Holtec Opposition to Late-Filed Sierra Club Contentions 27, 28, and 29 (Mar. 21, 2019) at 5–11 [hereinafter Holtec Opp. to Sierra Club New Contentions].

[463] NRC Staff Response to Sierra Club New Contentions at 8.

[464] Fla. Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 & 4), LBP-90-5, 31 NRC 73, 79 (1990) (finding no "good cause" exists for late-filed safety concerns when petitioner "had yet to put the pieces of [the] safety puzzle together" despite previous availability of the information).

> Holtec's Aging Management Program, SAR Chapter 18, only mentions groundwater testing or monitoring in connection with concrete structures, in Section 18.8. The Aging Management Program does not explain how the impact to the containers from groundwater or impacts to the groundwater from leaking containers will be addressed. The reference simply refers to Appendix D of NUREG-1927, which provides a process for experimental demonstration for time periods beyond a 20-year licensing period.
>
> The ER does not mention the aging management program at all.
>
> Since the Holtec [consolidated interim storage] facility is expected to be in operation well beyond the 40-year licensing period, the Aging Management Program in the SAR, if it proposes to comply with accepted guidance, must set out in detail how it will do so.[465]

This proposed contention is the same as Contention 27, except "high burnup fuel" has been substituted with the term "groundwater." Sierra Club relies on the same documents as the basis for Contentions 27 and 28. Sierra Club also uses the same language to dispute Holtec's assertion at the oral argument that the aging management program is voluntary.

As with Contention 27, because this contention was submitted after the deadline, we first determine whether it meets the good cause standard of 10 C.F.R. § 2.309(c). We agree with the NRC Staff and Holtec that Sierra Club's Contention 28 fails to meet the first prong of section 2.309(c)(1),[466] and conclude that Sierra Club could have made this challenge in its initial petition. Again, Sierra Club does not assert that the information quoted from the oral argument or the documents underlying this contention are new or materially different than the information in Holtec's application, only that Sierra Club's interpretation is new. As explained supra, previously available information that is newly interpreted by the petitioner does not constitute good cause to file a new contention.[467]

Sierra Club Contention 28 is not admitted.

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[465] Sierra Club Additional Contentions at 8.

[466] NRC Staff Answer to Sierra Club New Contentions at 7; Holtec Opp. to Sierra Club New Contentions at 17–20.

[467] Turkey Point, LBP-90-5, 31 NRC at 79.

29. Sierra Club Contention 29

Sierra Club Contention 29 states:

> The [Environmental Report], Rev. 3, has now added "utilities," in addition to DOE, as possible entities that might take title to the radioactive waste in the [consolidated interim storage] facility. The [Environmental Report] provides no hint, however, as to whether a private utility that owns a nuclear reactor would agree to retain title to the waste. In fact, the costs to a private utility would be so great that the utility would not want to retain title to the waste. And Holtec is still presenting DOE as a possible titleholder in the [Environmental Report], even though Holtec's counsel admitted at the ASLB hearing on January 24, 2019, that DOE cannot legally take title to the waste. Thus, Holtec has failed to show reasonable assurance of funding for the project, as required by 10 C.F.R. § 72.22(e).[468]

Sierra Club relies on a report by Robert Alvarez that "describes the financial implications to reactor owners" as support for the assertion that it "is highly unlikely—in fact, probably a fanciful dream—that private reactor owners would agree to incur that kind of expense"[469] to retain title to the nuclear waste. Sierra Club also cites the Louisiana Energy Services and Private Fuel Storage Commission decisions for a discussion of "what constitutes reasonable assurance of adequate funding."[470] In its motion to file Contention 29, Sierra Club claims that the information forming the basis for this challenge is materially different than information previously available because "Sierra Club had no reason to believe the option of the reactor owners' involvement was a serious proposal."[471]

As with Contentions 27 and 28, because this contention was submitted after the initial deadline, we first determine if it meets the good cause standard of 10 C.F.R. § 2.309(c). We

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[468] Sierra Club Additional Contentions at 14.

[469] Id. at 15. Mr. Alvarez has significant experience in nuclear materials and policy development.

[470] Id. at 17–18 (citing La. Energy Servs., L.P. (Claiborne Enrichment Center), CLI-97-15, 46 NRC 294 (1997) and Private Fuel Storage, L.L.C. (Indep. Spent Fuel Storage Installation), CLI-00-13, 52 NRC 23 (2000)).

[471] Sierra Club's Motion to File New Late-Filed Contentions 27, 28, and 29 at unnumbered p. 3.

agree with the NRC Staff[472] and Holtec[473] that Sierra Club's Contention 29 fails to meet that standard, because Sierra Club could have made this challenge in its original petition. Sierra Club admits that Holtec's application always contained a private funding option, but it had not taken that option seriously.[474] We agree with the NRC Staff that "[w]hether or not Sierra Club believed the private funding option was 'a serious proposal', it was unquestionably . . . previously available."[475]

Sierra Club Contention 29 is not admitted.

C. Joint Petitioners

1. Joint Petitioners Contention 1[476]

Joint Petitioners Contention 1 states:

> The redaction of some 144 pages from Appendix C of the Holtec Environmental Report violates [NEPA] and National Historic Preservation Act.[477]

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[472] NRC Staff Answer to Sierra Club New Contentions at 11–13.

[473] Holtec Opp. to Sierra Club New Contentions at 22–26.

[474] See Sierra Club's Motion to File New Late-Filed Contentions 27, 28, and 29 at unnumbered pp.1–2 ("As Sierra Club had said previously, Holtec's documentation appeared to present the option of the reactor owners' involvement as a fig leaf to hide the real intent for DOE to take title to the waste.").

[475] NRC Staff Answer to Sierra Club New Contentions at 11 (quoting Sierra Club's Motion to File New Late-Filed Contentions 27, 28, and 29 at unnumbered p. 3).

[476] Joint Petitioners also include an "objection" in their initial petition and move "for the dismissal and termination of this licensing proceeding." Joint Pet'rs Pet. at 24–25. They allege that "there is no federal authorization for the Holtec CISF" because "neither Part 72 nor the NWPA authorize" it, and the proposed facility does not fall under the NRC's definition of an independent spent fuel storage installation under 10 C.F.R. § 72.3. Id.

The Board overrules the objection. As explained in the Commission Secretary's Order denying Beyond Nuclear and Fasken's substantially similar motions to dismiss, the NRC's regulations do not provide for the filing of threshold motions or objections. See Order Denying Motions to Dismiss. Even if Joint Petitioners had made this argument in the form of a contention, we would not admit it for the same reasons we do not admit Beyond Nuclear's contention and Sierra Club Contention 1.

[477] Joint Pet'rs Pet. at 26.

Joint Petitioners allege that "Holtec has violated § 106 of the [National Historic Preservation Act (NHPA)] by redacting extensive details about two historic or cultural properties referenced elsewhere in the Environmental Report."[478] Joint Petitioners point to the Environmental Report's Appendix C, which describes the two historic or cultural properties in question but which has been wholly redacted. Joint Petitioners therefore allege that "[t]he redaction of 144 pages of Appendix C as being security-related has precluded Holtec's precise identification of the resources, and further has made public involvement in mitigation advocacy impossible."[479]

As the NRC Staff stated in its reply, it was the Staff—not Holtec—who redacted Appendix C in accordance with the NHPA.[480] Specifically, the NRC Staff made a preliminary conclusion that public disclosure of this information might risk harm to a potential historic resource.[481] Upon completion of the Staff's consultation with the Keeper of the National Register of Historic Places and a final determination of eligibility, the Staff will make available to the public any information that would not harm any potential historic properties.[482]

Moreover, if Joint Petitioners wanted access to the sensitive information in Appendix C, they had two opportunities to request it: once when the opportunity to request a hearing was published in the Federal Register,[483] and again when the Commission offered Joint Petitioners another 10-day opportunity to request access to such information.[484] Joint Petitioners did not

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[478] Id.

[479] Id. at 27.

[480] NRC Staff Consol. Answer at 29 (citing 54 U.S.C. § 307103(a)).

[481] Id. at 30.

[482] Id.

[483] Notice of Opportunity to Request a Hearing, 83 Fed. Reg. at 32,919, 32,922–24.

[484] See Order Denying Motions to Dismiss.

take either opportunity to request access. In any event, because Joint Petitioners Contention 1 does not raise a dispute with Holtec's application, it is inadmissible.[485]

Joint Petitioners Contention 1 is not admitted.

2. Joint Petitioners Contention 2

Joint Petitioners Contention 2 has evolved. As initially proffered, it stated:

> Holtec cannot provide reasonable assurances that it can obtain the necessary funds to cover the costs of construction, operation, maintenance, and decommissioning of the CISF.[486]

Although not articulated in the contention itself, Joint Petitioners' original basis for Contention 2 explained that their challenge to Holtec's financial plan arose from their conviction that Holtec would not construct its proposed storage facility "without financial guarantees from the U.S. Department of Energy."[487] However, Joint Petitioners contended, if Holtec contracted with DOE to store the nuclear power companies' spent fuel, it would violate the NWPA.[488] Thus, insofar as it relied on the assertion that Holtec's contracting with DOE would violate the NWPA, Joint Petitioners Contention 2 was substantially similar to Beyond Nuclear's sole contention and to Sierra Club Contention 1, discussed supra.

Indeed, after Holtec's counsel conceded that, with limited exceptions, it would violate the NWPA as currently in effect for DOE to take title to nuclear plant owners' spent fuel,[489] Joint Petitioners did just what Beyond Nuclear and the Sierra Club did. On the same day Beyond Nuclear moved to amend its contention and the Sierra Club moved to amend Sierra Club

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[485] 10 C.F.R. § 2.309(f)(1)(vi).

[486] Joint Pet'rs Pet. at 31.

[487] Id. at 32.

[488] Id. at 32–33.

[489] Tr. at 250–52.

Contention 1, Joint Petitioners moved to amend the basis for their Contention 2 to add exactly the same statement:

> Language in Rev. 3 of Holtec's Environmental Report, which presents federal ownership as a possible alternative to private ownership of spent fuel, does not render Holtec's financial assurance plan lawful. As long as Holtec includes the federal government as a potential guarantor or financer of the project, which in turn requires federal ownership of spent fuel, the application violates the NWPA.[490]

Insofar as Joint Petitioners Contention 2 now asserts that reference to the mere possibility of contracting with DOE must be expunged from Holtec's application, it remains substantially similar to both Beyond Nuclear's amended contention and Sierra Club's amended Contention 1. We therefore likewise grant Joint Petitioners' February 6, 2019 motion to amend their Contention 2, but rule that portion is not admissible for the same reasons that Beyond Nuclear's amended contention and Sierra Club's amended Contention 1 are not admissible.

But Joint Petitioners did not stop there. While leaving the text of their original Contention 2 unchanged, on February 25, 2019 Joint Petitioners moved to further amend the basis for the contention.[491] More than five months after timely filing their original petition, Joint Petitioners ask to replace their five-page basis statement for Contention 2 with a fifteen-page statement accompanied by a fourteen-page expert report.

Because Joint Petitioners seek to amend their contention after the deadline for filing petitions, we must first consider whether its second motion satisfies the three-prong test in 10 C.F.R. § 2.309(c)(1)(i)-(iii). It does not.

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[490] Motion of [Joint Petitioners] to Amend Their Contention 2 Regarding Federal Ownership of Spent Fuel in the Holtec International Revised License Application (Feb. 6, 2019) at 8.

[491] Motion of [Joint Petitioners] to Amend Their Contention 2 Regarding Holtec's Proposed Means of Financing the Proposed [CISF] (Feb. 25, 2019) [hereinafter Joint Pet'rs Feb. 25 Motion to Amend].

Although Holtec and the NRC Staff argue to the contrary,[492] we agree that the new information on which Joint Petitioners purport to base their filing is materially different from information previously available, and that Joint Petitioners timely filed their motion within 30 days of when that information became available. However, Joint Petitioners' second motion to amend seeks to add material that is not in fact "based" upon that new information, as required by 10 C.F.R. § 2.309(c). Rather, their motion seeks to add arguments and supporting opinions that could have been submitted with their original petition.

Specifically, Joint Petitioners allege the new information triggering their second motion to amend the basis statement for Contention 2 is Holtec counsel's concession, during oral argument on January 24, 2019, that in nearly all instances DOE may not lawfully contract with Holtec to store nuclear power companies' spent fuel under the NWPA as currently in effect.[493] Joint Petitioners correctly assert that this was the first time Holtec unequivocally conceded that it cannot presently contract with DOE to store most spent nuclear fuel.[494] Joint Petitioners' response to this development, however, was not to address Holtec's concession, but rather to seize the chance to try to further amend their basis statement for Contention 2 so as to visit or revisit a wide range of issues that were, or should have been, addressed in their original petition.

The centerpiece of Joint Petitioners' second motion to amend their basis statement for Contention 2 is the accompanying sworn declaration of Robert Alvarez, dated February 23,

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[492] Holtec Opposition to [Joint Petitioners'] Motion to Amend Contention 2 (Mar. 22, 2019) at 4–12; NRC Staff Response to [Joint Petitioners'] Motion to Amend Contention 2 (Mar. 22, 2019) at 5–7.

[493] Joint Pet'rs Feb. 25 Motion to Amend at 8.

[494] Id.

2019, which is summarized and repeated in part in the basis statement itself.[495] Mr. Alvarez has significant experience in the areas of nuclear materials and policy development.[496]

Mr. Alvarez's declaration asserts that he reviewed Holtec's license application "in light of Holtec's admission that the only lawful way to finance the project was from the licensee owners of the waste using [Holtec's facility] for interim storage."[497] What follows in his declaration, however, is a statement that fails to analyze any specific provision in Holtec's application, and that contains 34 footnoted references all dating (apart from Holtec counsel's concession) from earlier than 2018. There is nothing new in Mr. Alvarez's declaration, and virtually nothing that purports to relate directly to Holtec counsel's January 24, 2019 concession.

This is confirmed by Mr. Alvarez's own summary of his declaration, in which he sets forth six conclusions.

First, Mr. Alvarez states: "Holtec's license application relies heavily on illegal, nonexistent conditions and contract terms. Large amounts of spent fuel from commercial nuclear power fleet require very long term management and storage."[498]

This statement appears to be a throwback to Joint Petitioners' original Contention 2, which assumed that Holtec would rely on contracts with DOE that both Holtec and Joint Petitioners now agree would currently be unlawful. No one disputes that spent nuclear fuel requires long term management and storage. Mr. Alvarez's first conclusion presents no new information.

Second, Mr. Alvarez states:

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[495] Joint Pet'rs Feb. 25 Motion to Amend, attach., Expert Report and Curriculum Vitae of Robert Alvarez (Feb. 23, 2019) [hereinafter Joint Pet'rs Alvarez Report].

[496] Id., Curriculum Vitae at 1, 4.

[497] Id., Alvarez Decl. at 1.

[498] Id. at 14.

> By assuming DOE would take title, the cost basis for the Holtec [facility] relies on DOE bearing costs. Since this option is not legal, the nuclear licensees must pay all costs. Management costs are more for the licensees when they must pay all costs of onsite storage, transport to and from a CISF and all [facility] operating and closure costs.[499]

Insofar as this statement challenges Holtec's financial plan as being unlawfully premised on contracts with DOE, it ignores Holtec's October 9, 2018 Answer to Joint Petitioners' original Contention 2, in which Holtec clarified that it "is not relying on DOE contracts to demonstrate its financial qualifications."[500] Insofar as this statement is intended to suggest that Holtec's pricing structure will discourage power companies from contracting for spent fuel storage, it simply repeats Joint Petitioners' claim that private financing is "improbable," as set forth in Joint Petitioners' October 16, 2018 reply in support of their original Contention 2.[501] Either way, Mr. Alvarez's second conclusion presents no new information.

Third, Mr. Alvarez states: "These costs of continued licensee ownership at a [consolidated interim storage facility] have not been fully explored or revealed by Holtec and appear, based on existing information, to be significantly higher than management at the reactor sites."[502]

Insofar as this statement suggests that private financing is improbable because nuclear power plant owners might conclude they are financially better off by retaining their spent fuel, rather than by paying Holtec to store the fuel, it again repeats the same argument that Joint Petitioners raised more than four months earlier, in their reply in support of their original Contention 2.[503] Mr. Alvarez's third conclusion presents no new information.

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[499] Id.

[500] Holtec Answer to Joint Pet'rs at 31.

[501] Joint Pet'rs Reply at 18.

[502] Joint Pet'rs Alvarez Report, Alvarez Decl. at 14.

[503] Joint Pet'rs Reply at 18.

Fourth, Mr. Alvarez states:

> High burnup fuel, an increasingly large portion of the wasted inventory, needs longer cooling in wet storage and its cladding could have less integrity than that of lower burnup fuel, thus the long term impacts of repeated transport must be considered before permitting routine massive shipments to a temporary location.[504]

The likelihood that high burnup fuel might present special concerns was the subject of several contentions that were proffered in Sierra Club's original petition[505]—contentions in which Joint Petitioners sought to join.[506] Mr. Alvarez's fourth conclusion presents no new information related to Holtec counsel's concession that Holtec may not lawfully contract with DOE to store most spent nuclear fuel under the NWPA, as currently in effect.

Fifth, Mr. Alvarez states: "High burnup fuel could need more protective storage such as double containerization to be moved and these costs have not been included."[507]

Again, as stated above, the considerations applicable to high burnup fuel have been previously addressed in this proceeding, and Joint Petitioners themselves have sought to join in contentions that address this issue. Mr. Alvarez's fifth conclusion presents no new information, and does not appear related to Holtec counsel's concession that Holtec may not lawfully contract with DOE to store most spent nuclear fuel under the NWPA, as currently in effect.

Sixth, Mr. Alvarez states: "Holtec does not include a dry transfer facility in its operations for at least the first century, but it will be needed well before that to repackage [spent nuclear fuel] for disposal and for the remediation of leaking, cracked or otherwise flawed and/or dangerous canisters."[508]

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[504] Joint Pet'rs Alvarez Report, Alvarez Decl. at 14.

[505] See Sierra Club Pet. at 67–75.

[506] Joint Pet'rs Pet. at 88.

[507] Joint Pet'rs Alvarez Report, Alvarez Decl. at 14.

[508] Id.

Likewise, the absence of a dry transfer facility has always been apparent from Holtec's license application. It was, in fact, addressed in Joint Petitioners Contentions 4 and 7, as submitted with their original petition on September 14, 2018.[509] Mr. Alvarez's sixth and final conclusion presents no new information, and does not appear connected to Holtec counsel's concession that Holtec may not lawfully contract with DOE to store most spent fuel under the NWPA as currently in effect.

Because the new information on which Joint Petitioners purport to rely (Holtec counsel's concession) is not, in fact, "[t]he information upon which the filing is based," they fail to satisfy 10 C.F.R § 2.309(c). We therefore deny Joint Petitioners' second motion to amend the basis statement for Joint Petitioners Contention 2.

Moreover, if we did allow Joint Petitioners to file their second amended basis for Contention 2, the contention still would not be admissible. As explained above, Mr. Alvarez's declaration is devoid of a single specific reference to Holtec's application and fails to raise a genuine dispute. Nor do the arguments advanced in Joint Petitioners' proffered amended basis itself warrant further proceedings.

For example, Joint Petitioners ignore the fact that Holtec's license application seeks approval of only the first of twenty potential phases. Joint Petitioners' claims about financial assurances for later phases or for storage beyond the licensed term are therefore outside the scope of this proceeding, and fail to satisfy 10 C.F.R. § 2.309(f)(1)(iii).

Nor do Joint Petitioners demonstrate how any information in Mr. Alvarez's declaration controverts Holtec's financial plan for the first phase or renders it deficient. General speculation about potential future costs, without specifying how they make incorrect the financial analysis for the only phase covered by the application, does not raise a genuine dispute with the application as required by 10 C.F.R. § 2.309(f)(1)(vi).

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[509] Joint Pet'rs Pet. at 46–49, 61–64.

Insofar as Joint Petitioners contend that Holtec's application is deficient for failure to address liability coverage and the scope of Price-Anderson Act protection, they misapprehend the requirements of 10 C.F.R. § 72.22(e). That provision requires that an applicant either possesses, or demonstrates reasonable assurance of obtaining the necessary funds to cover (1) estimated construction costs; (2) estimated operating costs; and (3) estimated decommissioning costs.[510] It says nothing about liability coverage. Regardless of whether the Price-Anderson Act will cover Holtec's activities, contrary to 10 C.F.R. § 2.309(f)(1)(iv) Joint Petitioners have not demonstrated why this issue is material to the NRC's review of Holtec's application or relates to their concern with its financial qualifications.

Likewise, although Joint Petitioners challenge as inadequate both Holtec's environmental cost-benefit analysis and its analysis of alternatives, they do not discuss or address, much less controvert, these sections of Holtec's Environmental Report. Thus, they fail to demonstrate a genuine material dispute with Holtec's license application, as required by 10 C.F.R. § 2.309(f)(1)(vi).

Neither Mr. Alvarez's declaration nor Joint Petitioners' second amended basis for their Contention 2 therefore supports a contention that satisfies 10 C.F.R. § 2.309(f)(1).

Finally, insofar as Joint Petitioners Contention 2 continues to assert that Holtec intends to go forward with the project only if it is able to contract with DOE,[511] it is likewise not admissible for failure to raise a genuine dispute with the application. Holtec readily admits that it would prefer if Congress would change the law and permit it to contract with DOE.[512] But both Holtec's license application and the statements of counsel at oral argument assure us that

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[510] 10 C.F.R. § 72.22(e).

[511] Joint Pet'rs Pet. at 34.

[512] Tr. at 250.

Holtec intends to proceed by attempting to negotiate storage contracts with the nuclear power plant owners themselves, at least unless and until another option is available.[513]

If Holtec is not successful, then the facility will not be built, as Holtec's license application makes clear it has no intention of beginning construction until it has sufficient contracts in hand.[514] No purpose would be served by convening an evidentiary hearing to further explore Holtec's intent, based either upon company documents that preceded its application or upon one sentence in a single more recent company publication that is arguably ambiguous.[515] None of these documents raises a genuine material dispute with Holtec's license application, as required by 10 C.F.R. § 2.309(f)(1)(vi).

Joint Petitioners Contention 2, as amended, is not admitted.

3. Joint Petitioners Contention 3

Joint Petitioners Contention 3 states:

> The Environmental Report contains a gross underestimation of the volume of low-level radioactive waste ("LLRW") that will be generated by the use of concrete and other materials for bunkering of the [spent nuclear fuel] canisters, and by replacement of the canisters themselves during the operational life of the CISF. Besides providing a distorted view of the waste management obligations the project will create, the financial burdens arising from creation, oversight and disposition of millions of additional tons of LLRW causes a seriously inaccurate picture of the true costs of constructing, operating and decommissioning the Holtec [facility].[516]

Taking issue with Holtec's estimate that it will only generate "small quantities of hazardous and non-hazardous waste . . . includ[ing] [LLRW],"[517] Joint Petitioners allege that

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[513] Tr. at 248.

[514] Holtec Proposed License at 2.

[515] See Joint Pet'rs Feb. 25 Motion to Amend at 3; Motion by [Joint Petitioners] For Leave to File a New Contention (Jan. 17, 2019); [Joint Petitioners] Contention 14 (Jan. 17, 2019).

[516] Joint Pet'rs Pet. at 36–37.

[517] Id. at 37 (citing ER at 3-108).

"Holtec omits to mention that millions of tons of concrete will be mixed and poured onsite," which upon the facility's decommissioning "will have been transformed into a large quantity of radioactively activated waste."[518] For support, Joint Petitioners rely upon "common sense" that the storage facility's concrete and subsoils will become activated, and upon the inferences that allegedly can be drawn from Holtec's narrow reply rebutting the volume of LLRW generated, not the generation of LLRW itself.[519] Joint Petitioners also challenge Holtec's reliance on the Continued Storage GEIS (and therefore section 51.23), as the Continued Storage GEIS "does not contemplate a storage facility that uses 8,000,000 tons of concrete" for housing spent fuel canisters[520] nor does it "account for the large, and escalating cost item of repackaging spent fuel to be moved from reactor sites to a consolidated storage facility, and thence ultimately to a geological repository," and thus Holtec may not rely upon it in its application.[521]

Holtec and the NRC Staff argue that Joint Petitioners have not met their burden in proffering facts or expert opinion supporting their allegations.[522] The Board agrees. Joint Petitioners only speculate that all "8,000,000 tons" of concrete used at the facility will become LLRW, despite conceding that the facility's concrete can be decontaminated by Holtec[523] and notwithstanding that the design of the proposed facility includes a "liner that serves to protect [the concrete] from contamination from its resident canister."[524] The Continued Storage GEIS concerning ISFSI decommissioning concludes:

> Although the exact amount of LLW and nonradioactive waste depends on the level of contamination, the quantity of waste generated from the replacement of the

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[518] Id.

[519] See Tr. at 161–62.

[520] Joint Pet'rs Pet. at 40, 41.

[521] Id. at 41.

[522] See NRC Staff Consol. Answer at 34; Holtec Answer to Joint Pet'rs at 36.

[523] See Tr. at 162.

[524] Holtec Answer to Joint Pet'rs at 43 (citing Decommissioning Plan at 9).

> canisters, storage casks, concrete storage pads, DTS, and canister transfer building is still expected to be comparable to the LLW generated during reactor decommissioning, which was previously determined to have a SMALL impact in the Generic Environmental Impact Statement for License Renewal of Nuclear Plants (NRC 2013a).[525]

As to Joint Petitioners' complaint regarding the Continued Storage GEIS, including the alleged omission of the topics of repackaging of spent fuel and disposal of the spent fuel casks after repackaging, Holtec's Environmental Report appropriately relies on the Continued Storage GEIS. We therefore agree with Holtec that Joint Petitioners' complaint amounts to an impermissible attack on the NRC's regulations.[526]

Joint Petitioners Contention 3 is not admitted.

4. Joint Petitioners Contention 4

Joint Petitioners Contention 4 states:

> Holtec has defined a site-specific spent nuclear storage facility that does not qualify for the exclusions from NEPA scrutiny conferred by the Waste Storage GEIS. Consequently, severe accident mitigation during transportation to and from the Holtec CISF and at the CISF, and SNF and GTCC storage and management operations at the CISF site, may not be treated as generic issues and excused from consideration within the EIS.[527]

On February 18, 2019, Joint Petitioners moved to amend Contention 4 based on allegedly new information revealed in Holtec's January 17, 2019 responses to the NRC Staff's requests for additional information (RAIs).[528] The amended contention would add the following paragraph:

> Holtec has created an issue of fact by claiming that its over-optimistic conclusion that there are no credible challenges to canister confinement integrity capable of causing radioactivity release is consistent with the GEIS.[529]

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[525] Continued Storage GEIS at 5-48.

[526] See 10 C.F.R. § 2.335.

[527] Joint Pet'rs Pet. at 46.

[528] Joint Pet'rs Motion to Amend Contentions 4 & 7, at 6–7.

[529] See Joint Petitioners' Amended Contentions 4 & 7 (Feb. 18, 2019) [hereinafter Joint Pet'rs Amended Contentions 4 & 7]. The NRC Staff and Holtec timely filed responses in opposition to

In their motion, Joint Petitioners rely on Dr. Gordon Thompson's declaration to try to show that Holtec's RAI 9-3 response about accident conditions is "seriously inconsistent" with the GEIS.[530] Joint Petitioners also claim that Holtec's "insistence that there is zero potential accident or attack scenario that would result in a release of hazardous radioactivity lacks credibility and undermines . . . Holtec's decisions to not have an on-site emergency response plan for radiological accidents and its determination not to have [dry transfer system (DTS)] capability."[531]

As explained supra, the Board will consider an amended contention filed after the original deadline only if petitioner demonstrates good cause under the three-pronged test of 10 C.F.R. § 2.309(c)(1). Here, we agree with the NRC Staff and Holtec that Joint Petitioners have failed to demonstrate good cause, because the information upon which they base their amended contention was previously available. The difference between Holtec's original SAR section 9.2.2 and its answer in RAI 9-3 is three words. Holtec changed "there is no credible normal or accident situation" to "there is no credible normal, off-normal, or accident conditions." This revision is consistent with the same conclusions made by Holtec in SAR 9.2.1. Joint Petitioners do not show how those three words in RAI 9-3 change Holtec's answer in a way that provides new or materially different information. In fact, Dr. Thompson's declaration acknowledges that Holtec's RAI response is an "equivalent assertion" to one made in its

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the Joint Petitioners' motion. See NRC Staff's Response to [Joint Petitioners] Motion to Amend Contentions 4 and 7 (Mar. 14, 2019) [hereinafter NRC Staff's Response to Joint Pet'rs Motion to Amend Contentions 4 & 7]; Holtec Opposition to [Joint Petitioners'] Motion to Amend Contentions 4 and 7 (Mar. 15, 2019).

[530] Joint Pet'rs Amended Contentions 4 & 7, at 6–7.

[531] Id. at 7.

Environmental Report at section 4.13.2.[532] Because Joint Petitioners have failed to meet the first prong under 10 C.F.R. § 2.309(c)(1), we deny their motion to amend Contention 4.

Accordingly, we analyze Joint Petitioners Contention 4 as originally filed. In their original filing, Joint Petitioners cite four bases for their contention: (1) the proposed facility is not legally authorized; (2) the proposed facility departs from assumptions in the GEIS; (3) Holtec agrees that its project is site-specific; and (4) the proposed facility is not covered by the GEIS exemption.[533]

We have previously rejected the first basis in addressing Beyond Nuclear's contention and Sierra Club's Contention 1, supra. As to the remaining bases, we agree with Holtec[534] and the NRC Staff[535] that Joint Petitioners' challenges to the lack of dry transfer system capability at the proposed facility and to Holtec's "return to sender" policy do not demonstrate a genuine dispute with the application on a material issue of law or fact. The Continued Storage GEIS acknowledges that not all storage facilities will necessarily match the "assumed generic facility," and therefore when it comes to "size, operational characteristics, and location of the facility, the NRC will evaluate the site-specific impacts of the construction and operation of any proposed facility as part of that facility's licensing process."[536] The site-specific evaluation would not "reanalyze the impacts of continued storage," because that is already covered by the GEIS and requires a waiver to challenge.[537] Accordingly, Holtec's Environmental Report contains a site-specific impact analysis for the period of the proposed activity. Neither the Continued Storage

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[532] Joint Pet'rs Amended Contentions 4 & 7, at 7.

[533] Joint Pet'rs Pet. at 46–49.

[534] See Holtec Answer to Joint Pet'rs at 44–46

[535] See NRC Staff Consol. Answer at 36–37.

[536] Continued Storage GEIS at 5-2.

[537] Id.

GEIS nor NRC regulations require an analysis of a dry transfer system at this time; rather, because Holtec does not intend to build a dry transfer system during the initial license term, the analysis will not be required until Holtec pursues a dry transfer system as a separate action.[538]

Joint Petitioners Contention 4 is not admitted.

5. Joint Petitioners Contention 5

Joint Petitioners Contention 5 states:

> Horizontal hydraulic fracturing ("fracking") is certain to occur underneath the Holtec site. Holtec has acquired mineral rights to a depth of 5,000 feet to part of its site from Intrepid, a potash mining firm. However, within the boundaries of the Holtec site there are mineral leases held by at least half a dozen oil and gas drilling firms and Mosaic Potash, a mining firm. There is no indication in the Environmental Report of any control over present or potential potash mining or oil and gas drilling. And the very area where the concrete bunkers containing [spent nuclear fuel] casks will be located, fracking activity can be carried on below 5,000 feet. Typical oil and gas wells in the Permian Basin region in which Holtec is located are 8,000 or more feet deep. The mineral interests are inadequately disclosed, and the realistic prospects for mineral development immediately surrounding and underneath the Holtec site, and their implications for inducing or expediting geological problems and groundwater movement beneath the site, are inadequately disclosed in the ER.[539]

Joint Petitioners Contention 5 concerns potential mining and fracking at and underneath the site. Joint Petitioners first claim that "fracking is certain to occur"[540] at the Holtec site, and further claim that the Environmental Report reveals that Holtec does not in fact control any of the mineral rights at the proposed storage facility's boundary except those belonging to Intrepid Potash-New Mexico, LLC (Intrepid).[541] They contend that there are 12 abandoned hydrocarbon wells, "many on that part of the site where the concrete bunkers are to be built," and assert that, in light of the "long history of underground potash mining" at the site, the Environmental Report

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[538] Id.

[539] Joint Pet'rs Pet. at 49.

[540] Id.

[541] Id. at 50.

"does not faithfully report the true story of land ownership and mineral rights interests" at the site.[542] Second, Joint Petitioners allege that the Environment Report "fails to connect the considerable history of oil and gas brine disposal at the Holtec site" which in turn causes a "possible relationship to poor quality and corrosive groundwater," soil, and "wind-blown dust."[543] Joint Petitioners allege that these phenomena could thus corrode the "steel or alloy canisters nosed into concrete bunkers down to about 23 feet of depth, for a century or more," as well as the concrete UMAX canister system itself.[544] Third, Joint Petitioners assert that Holtec failed to comply with 10 C.F.R. § 72.103(f), alleging that Holtec did not investigate the "geological and seismic implications of mining and fracking . . . inside the site boundaries."[545] Finally, Joint Petitioners posit that the Environmental Report fails to satisfy 10 C.F.R. § 72.90 and 10 C.F.R. § 72.94, because it is missing analyses of "site characteristics that may directly affect the safety or environmental impact of the ISFSI" and "past and present man-made facilities and activities that might endanger the proposed ISFSI."[546]

Regarding fracking and potash mining, Joint Petitioners' proffered exhibit, an ELEA Mineral Conflict Analysis map from 2015, does not set forth a genuine dispute with the Holtec application on a material issue of fact. According to Holtec's Environmental Report, its proposed facility would be built on grid 13 of coordinate 020S, 032E, the western half of grid 18 and the south-western corner of grid 17.[547] Comparing these coordinates to Joint Petitioners' proffered 2015 Map, it is clear that (1) although COG Operating LLC appears to own mineral

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[542] Id. at 51–52.

[543] Id. at 52.

[544] Id.

[545] Id. at 54.

[546] Id. at 54–55.

[547] ER at 3-5 to -6.

rights at grid 13, the proposed facility's footprint does not show any active or abandoned gas or oil zones inside the footprint of the facility; and (2) only Intrepid's rights exist at the site pursuant to its New Mexico potash mining lease.[548] Moreover, the Environmental Report states that Holtec controls the mineral rights at the site down to 5,000 feet pursuant to an agreement with Intrepid, and Intrepid will not mine at the site.[549] Additionally "any future oil drilling or fracking beneath the site would occur at greater than 5,000 feet depth," which would ensure that no subsidence would occur at the site.[550] The discussion of land use and maps in Chapter 3 of Holtec's Environmental Report reports the status of mineral rights and land ownership at the proposed HI-STORE site.

Regarding possible brine, contaminated groundwater, soil, and wind-blown dust that could potentially degrade the HI-STORE vault and spent fuel storage canisters stored therein, we agree with the NRC Staff that this aspect of the contention concerns safety,[551] yet Joint Petitioners do not cite to or even mention the SAR. Holtec did address issues regarding soil chemistry analysis and groundwater flow at the site both in its Environmental Report and SAR.[552] Joint Petitioners do not proffer any explanation of how this alleged caustic brine, groundwater, or soil could enter into the HI-STORE UMAX system and corrode the canisters. Nor do they proffer facts or expert opinion discussing how the alleged wind-blown caustic dust could get to the UMAX and degrade the UMAX concrete. Therefore, this aspect of the

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[548] 2015 Map at 3–4.

[549] ER at 3-2.

[550] Id.

[551] NRC Staff Consol. Answer at 43–44.

[552] See ER at 3-15 (soil); id. at 3-39 to -41, 3-54 (Fig. 3.5.1), 3-56 (Fig. 3.5.3) (groundwater); SAR at 2-3 to -9, 2-26 (soil); id. at 1-5, 1-14; 2-78 to -79, 2-81, 2-90, 2-96 to -99 (groundwater).

contention is inadmissible for failing to raise a genuine dispute with Holtec's license application.[553]

Finally, as to the alleged lack of discussion of seismology inside the site boundary pursuant to section 73.103(f), the Environmental Report and the SAR do discuss geological and seismic issues as they relate to mining and fracking inside the site boundary.[554] As discussed supra in connection with Sierra Club Contention 14, no faults of any kind were found at the proposed site (i.e., inside the site boundary[555]). Joint Petitioners' other allegations are impermissibly vague.[556]

Joint Petitioners Contention 5 is not admitted.

6. Joint Petitioners Contention 6

Joint Petitioners Contention 6 states:

> The Holtec [facility] is a major component of a large plan to aggregate [spent nuclear fuel] in southeastern New Mexico for purposes of reprocessing. A radioactively 'dirty' industrial activity, reprocessing has been omitted from analysis and disclosure of cumulative environmental impacts.[557]

Joint Petitioners rely on "a 2015 slide show given by a Holtec representative to the New Mexico State Legislature" that stated that the proposed facility may provide "flexibility for recycling, research, and disposal" and also listed "reprocessing [spent nuclear fuel]" as an option under "waste solutions."[558] Joint Petitioners also cite a 2017 Los Angeles Times article that quoted a voting member of the Eddy-Lea Energy Alliance as saying, "We believe if we have

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[553] 10 C.F.R. § 2.309(f)(1)(v), (vi).

[554] See ER at 3-17 to -18; SAR at 2-107 to -108.

[555] See ER at 3-13 to -14.

[556] See S. Nuclear Operating Co. (Vogtle Elec. Generating Plant, Units 3 & 4), LBP-16-5, 83 NRC 259, 281 (2016) (citing Palisades, LBP-06-10, 63 NRC 341, aff'd, CLI-06-17, 63 NRC 727 (2006)).

[557] Joint Pet'rs Pet. at 55.

[558] Id.

an interim storage site, we will be the center for future nuclear fuel reprocessing."[559] Joint Petitioners claim that NEPA requires a cumulative impacts analysis of reprocessing spent nuclear fuel at the proposed facility, because such an action "falls within the realm of 'cumulative actions' delineated in the [Council on Environmental Quality (CEQ)] regulations."[560]

Joint Petitioners fail to raise a genuine dispute with the application on an issue of material fact or law, because the application does not seek authorization for, or even mention, reprocessing at the proposed facility. Neither NEPA nor NRC regulations require an environmental analysis of potential actions that are "merely contemplated" and have not been proposed.[561] We agree with the NRC Staff that the cited sources, at most, "suggest a political appetite for such a project in the area," without creating any proposed plans for reprocessing spent fuel.[562]

Because reprocessing is not material to Holtec's license application, Joint Petitioners' claims about the safety of reprocessing are not relevant. In addition, their claims are unsupported by any facts or expert opinion, and do not raise a genuine issue with the application for that reason as well.

Joint Petitioners Contention 6 is not admitted.

7. Joint Petitioners Contention 7

Joint Petitioners original Contention 7 states:

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[559] Id. at 55–56.

[560] Id. at 59. The CEQ regulations do not bind the NRC as an agency, but the Commission has chosen to follow them in some instances. See Pac. Gas & Elec. Co. (Diablo Canyon Nuclear Power Plant, Units 1 & 2), CLI-11-11, 74 NRC 427, 443–44 (2011).

[561] Duke Energy Corp. (McGuire Nuclear Station, Units 1 & 2; Catawba Nuclear Station, Units 1 & 2), CLI-02-14, 55 NRC 278, 295 (2002). See also Kleppe v. Sierra Club, 427 U.S. 390, 410 (1976); Strata Energy, Inc. (Ross In Situ Recovery Uranium Project), CLI-16-13, 83 NRC 566, 577 (2016), petition for rev. denied sub nom., Nat. Res. Defense Council v. NRC, 879 F.3d 1202 (D.C. Cir. 2018).

[562] NRC Staff Consol. Answer at 47.

> Holtec's "HI-STORE philosophy" of "Start Clean/Stay Clean," whereby incoming shipments of canisters that are contaminated, leaking, or otherwise compromised will be returned to the originating power plant for dispositioning, is illegal under NRC regulations and the Atomic Energy Act. It is unlawful to knowingly ship containers with radiation on exposed or external surfaces. Once delivered to the site, leaky and/or contaminated canisters must remain at Holtec—but Holtec expressly intends to return such canisters to their points of origin. Leaking or otherwise compromised shipping containers would likewise present an immediate danger to the corridor communities through which they would travel back to their nuclear power plant site of origin, likely violating numerous additional NRC and DOT regulations[.][563]

On February 18, 2019, Joint Petitioners moved to amend Contention 7, seeking to add the following paragraph:

> Holtec's refusal to publicize emergency and contingency plans, as well as its insistence that there is zero potential accident or attack scenario that would result in a radiation release (and hence no need for dry transfer storage capability) reflects a lack of a national policy for handling and disposal of [spent nuclear fuel] and Holtec's misperception as to the role of a CISF in national policy. The applicant's non-credible positions on these matters takes them outside the coverage and shield of the Continued Storage GEIS and requires them to be scrutinized under NEPA and addressed in the Environmental Impact Statement.[564]

Joint Petitioners base the motion on (1) Holtec's RAI Response 9-3 and (2) Holtec's RAI Response LA-1, both dated January 16, 2019 and released in the NRC's Agencywide Documents Access and Management System (ADAMS) on January 17, 2019. Joint Petitioners specifically cite the portion of RAI Response 9-3 that references SAR 9.2.2, "Operational Activities," addressing the NRC Staff's request for clarification about off-normal conditions "in addition to the normal, off-normal and accident conditions while on-site prior to, or during receipt inspection."[565] Joint Petitioners also cite RAI Response LA-1, which addressed the NRC Staff's questions regarding "the absence of a time limit for a canister to be returned to the nuclear plant

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[563] Joint Pet'rs Pet. at 61.

[564] Joint Pet'rs Amended Contentions 4 & 7, at 6.

[565] RAI Response 9-3 at 4.

of origin or other facility licensed to perform fuel loading procedures" in the HI-STORE storage facility's Technical Specifications.[566]

We first consider whether Joint Petitioners' motion to amend Contention 7 meets the three-pronged standard for good cause under 10 C.F.R. § 2.309(c). It does not. RAI Response 9-3 did not reveal any materially new information.[567] Joint Petitioners previously had the chance to challenge the statement in Holtec's SAR section 9.2.2 that identified "no credible events . . . that would result in a release of any radioactive materials into the work areas or the environment."[568] And essentially they did just that in Contention 7, as originally filed. In the absence of new information, Joint Petitioners are not entitled to a second chance to support a claim that was identified in their original pleadings by proffering the statement of Dr. Gordon Thompson at this late date.

As to RAI Response LA-1, the Board also concludes that it presents no materially different new information under 10 C.F.R. § 2.309(c)(1). The NRC Staff merely sought details concerning the time limit during which a canister would be returned to the site of origin or licensed fuel loading site, and Holtec responded by amending its SAR at section 10.3.3.1 and section 5.5.5.b.3 to its proposed materials license.[569] Although these sections now detail that the amount of time Holtec would have to return a leaky canister to its point of origin or fuel loading facility is based on the NRC's maximum annual dose rate limits, Joint Petitioners' overarching "start clean/stay clean" challenge is the same as in their original petition.[570] And

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[566] RAI Response LA-1 at 1.

[567] See discussion of RAI Response 9-3 under Joint Petitioners Contention 4, supra.

[568] SAR at 9-7.

[569] See SAR at 10-12 to -14; Revised Appx. A to Materials License No. SNM-1051, Tech. Specs. for the HI-STORE [CISF] at 5-6 (Nov. 30, 2018) (ADAMS Accession No. ML18345A138).

[570] See Joint Pet'rs Pet. at 61.

Holtec's procedure is in accord with Joint Petitioners' originally-disputed portion of the SAR (Rev. 0A), section 3.1.4.6.[571] This new information is therefore not materially different.

Joint Petitioners' witness, Dr. Thompson, opines that the potential use of a "sequestration canister with a gasketed lid," without an articulated plan for its use, "suggests that Holtec is not serious about contingency planning."[572] RAI Response LA-1 does not create a basis for the sequestration canister aspect of the proposed amended Contention 7, as that information was readily available before the deadline for petitions in this proceeding.[573] Finally, even if we were to find that the information in RAI Response LA-1 is new and material, Joint Petitioners do not provide a sufficient nexus to the amended Contention 7. RAI Response LA-1 simply does not support Joint Petitioners' new challenges concerning Holtec's alleged "refusal to publicize emergency and contingency plans," the "lack of a national policy for handling and disposal of [spent nuclear fuel]," and Holtec's "misperception as to the role of a CISF in national policy."[574]

We deny the motion to amend Contention 7, and therefore analyze Contention 7 as originally pled. Joint Petitioners assert that Holtec's "policy of rejecting and returning canisters that have unacceptable external radioactive or structural damage[] . . . will create potential exposure routes that pose radioactive contamination threats to the public, nuclear workers, and the environment.[575] Joint Petitioners also take issue with the lack of a dry transfer system at the

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[571] Id. at 62.

[572] Joint Pet'rs Motion to Amend 4 & 7, at 8.

[573] See SAR rev. 0C at 604 (May 31, 2018).

[574] Joint Pet'rs Amended Contentions 4 & 7, at 6. Even if we accepted that this alleged new information supported these assertions, Holtec's Emergency Plans were available at the commencement of the proceeding, SAR at 6-45, 10-29, 15-10, 15-11, 15-16, and challenges to the national spent fuel management policy go well beyond the permissible scope of this proceeding. 10 C.F.R. § 2.309(f)(1)(iii).

[575] Joint Pet'rs Pet. at 61–62.

proposed storage facility, claiming that such a transfer system could potentially ameliorate their concerns regarding casks that arrive damaged to the facility.[576]

Joint Petitioners Contention 7 is inadmissible because it fails to cite facts or expert opinions that support Joint Petitioners' position on the issue of the "start clean/stay clean" philosophy. Although Joint Petitioners claim that a canister could arrive to the facility damaged and emitting "significant radioactive materials" that could "migrate off-site,"[577] they offer no facts or expert opinion supporting that position. Specifically, Joint Petitioners fail to submit facts or expert opinion that show (1) how the spent fuel, when packaged at the reactor site, would leave the site leaking or damaged notwithstanding NRC-approved quality assurance programs; (2) how the spent fuel canister, within its transport overpack cask, would become credibly damaged in an accident scenario that results in an exceedance of dose rates while in transit; and (3) how the sequestration sleeve, as outlined in Holtec's SAR at the time petitions were due in this proceeding, is an inadequate remedy should the cask and canister somehow become damaged.

Indeed, the Commission has already spoken to this issue in a similar proposed facility proceeding, Private Fuel Storage.[578] In that proceeding, the State of Utah proffered a contention where a canister "improperly constructed or improperly sealed, could be loaded and shipped" to the spent fuel storage facility, which in turn could harm the environment.[579] Similar to Holtec's proposed policy, storage facility operator Private Fuel Storage's (PFS) policy was to ship back a leaking or defective canister to its point of origin, and Utah alleged that this practice was unsafe (as Joint Petitioners do here).[580]

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[576] Id. at 64.

[577] Id. at 62.

[578] Private Fuel Storage, CLI-04-22, 60 NRC at 136–37.

[579] Id. at 136, 137.

[580] Id. at 138.

As the NRC had already generically determined that an accidental canister breach was not a credible scenario, the Commission held that Utah had failed to advance a credible, unconsidered accident scenario concerning a canister breach while in transport.[581] And as for PFS's "return to sender" policy regarding damaged fuel canisters, which is the same as Holtec's, the Commission held that Utah had failed to contest the NRC-approved quality assurance programs in the packaging and transportation of spent nuclear fuel[582]—those very programs that provide that a transportation accident or breach of canister is not credible. As Private Fuel Storage is analogous to this proceeding, we reject Contention 7 for the same reasons the Commission rejected Utah's contention.

Joint Petitioners Contention 7 is not admitted.

8. Joint Petitioners Contention 8

Joint Petitioners Contention 8 states:

> In several places in the [Environmental Report], Holtec states that 'Table 4.9.1' provides data tending to show minimal radiation dangers from transporting the casks of spent nuclear fuel [(SNF)]. The data is not narratively reproduced in the ER. The missing table undermines Holtec's basis for claiming minimal effects from transporting SNF and GTCC waste.[583]

Because Joint Petitioners withdrew Contention 8,[584] it is not admitted.

9. Joint Petitioners Contention 9

Joint Petitioners Contention 9 states:

> There is only one map published in the Environmental Report that shows any of the routes which will be taken for delivery of [spent nuclear fuel (SNF)] and [greater than class C (GTCC)] waste to Holtec, and it only mentions transport of radioactive material from two reactors. The information provided comes nowhere near

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[581] Id. at 137.

[582] Id. at 138.

[583] Joint Pet'rs Pet. at 64.

[584] Joint Pet'rs Reply at 50.

> disclosure of a 20-year transport campaign of an estimated 10,000 cask deliveries.[585]

Joint Petitioners ask for "unconditional disclosure of probabl[e] transportation routes, whether by barge, highway or rail" so that they can "meaningfully participate in the NEPA process" and "public and emergency response officials [can] begin to understand the scope of the Holtec project's transportation side."[586] They also claim that the "transportation aspects of Holtec are of high significance to completion of the project" and that NRC regulations require discussion of "[a]dverse environmental effects which cannot be avoided," of alternatives, and of "any irreversible and irretrievable commitments of resources which would be involved in the proposed action," as well as an "investigation of environmental effects of the act of transporting the [spent nuclear fuel]-filled canisters."[587]

We agree with the NRC Staff[588] and Holtec[589] that Joint Petitioners fail to demonstrate how NEPA or NRC regulations require a specific assessment of possible transportation routes. None of the legal authority cited by Joint Petitioners (10 C.F.R. §§ 51.45, 72.108, and NEPA) specifies that a certain number of transportation routes must be analyzed in an applicant's Environmental Report, let alone every conceivable transportation route. Holtec's Environmental Report already evaluates three "representative routes" to determine likely radiological impacts of transportation—one from San Onofre to the proposed facility, one from Maine Yankee to the proposed facility, and one from the proposed facility to Yucca Mountain.[590] The use of

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[585] Joint Pet'rs Pet. at 66.

[586] Id. at 67.

[587] Id. at 67–68 (citing 10 C.F.R. §§ 51.45(b)(1)–(3),(5), 72.108).

[588] See NRC Staff Consol. Answer at 51–53.

[589] See Holtec Answer to Joint Pet'rs at 70–71.

[590] ER at § 4.9.

representative routes is in keeping with past NRC practice to evaluate transportation impacts.[591] Joint Petitioners have failed to raise a genuine dispute with Holtec's application.

Regarding Joint Petitioners' statement that "public and emergency response officials" need "unconditional disclosure of probabl[e] transportation routes," we agree with Holtec[592] that this concern is outside the scope of this proceeding. Spent nuclear fuel transportation route identification requires separate review and approval by the NRC and the Department of Transportation, as well as by applicable States or Tribes.[593] For that separate review process, Holtec will also need to coordinate with local law enforcement and emergency responders. Such coordination is not relevant at this point in the licensing process.

Joint Petitioners Contention 9 is not admitted.

10. Joint Petitioners Contention 10

Joint Petitioners Contention 10 states:

> Holtec plans to provide long-term [spent nuclear fuel (SNF)] storage for up to 120 years, or for however much time beyond 120 years it may take to develop a deep geological repository elsewhere. Holtec itself has recommended to the U.S. Department of Energy that a [CISF] should have a minimum service life of 300 years.[594]

Joint Petitioners claim that "[e]xtended operation of the Holtec CISF beyond the 100-year benchmark is a cumulative action and must be analyzed as such under NEPA."[595]

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[591] See, e.g., Continued Storage GEIS at 5-49 to -54; Final Environmental Impact Statement for the Construction and Operation of an Independent Spent Fuel Storage Installation on the Reservation of the Skull Valley Band of Goshute Indians and the Related Transportation Facility in Tooele County, Utah, NUREG-1714 at 5-39 (Dec. 2001). See also 10 C.F.R. § 51.52, Tbl. S-4 (deriving generic effects of transportation and fuel waste for one power reactor based on survey of then-existing power plants).

[592] Holtec Answer to Joint Pet'rs at 68.

[593] See 10 C.F.R. Parts 71 and 73; 49 C.F.R. Parts 107, 171–80, 390–97.

[594] Joint Pet'rs Pet. at 68 (internal quotations omitted).

[595] Id. at 69.

The proposed action in this proceeding is a 40-year initial license.[596] Holtec may anticipate following the initial license with two 40-year license renewals, under 10 C.F.R. § 72.42, but that is not relevant to this proceeding, as those renewals would trigger new hearing opportunities. The Continued Storage Rule explicitly provides that an applicant's Environmental Report is not required to discuss impacts following the proposed license term.[597] Therefore, we agree with the NRC Staff[598] and Holtec[599] that Joint Petitioners impermissibly challenge the Continued Storage Rule and the impact evaluations contained in the Continued Storage GEIS. Joint Petitioners have not requested a waiver, and this contention is therefore outside the scope of this proceeding under 10 C.F.R. § 2.309(f)(1)(iii).

Joint Petitioners Contention 10 is not admitted.

11. Joint Petitioners Contention 11

Joint Petitioners Contention 11 states:

> NEPA Requires Significant Security Risk Analyses for the Massive Spent Nuclear Fuel and Greater-Than-Class-C Wastes Proposed for Interim Storage And Associated Transportation Component at Holtec's New Mexico Facility.[600]

Joint Petitioners claim that this Board should require in Holtec's Environmental Report an analysis of terrorist attacks as a "not so remote and highly speculative" environmental impact, consistent with the Ninth Circuit's decision in San Luis Obispo Mothers for Peace v. NRC.[601] Joint Petitioners then direct the Board to a 69-page report by Dr. James D. Ballard

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[596] Notice of Opportunity to Request a Hearing, 83 Fed. Reg. at 32,919 ("If the NRC approves the application and issues a license to Holtec, Holtec intends to store . . . commercial spent nuclear fuel . . . for a 40-year license term.").

[597] 10 C.F.R. § 51.23(b).

[598] NRC Staff Consol. Answer at 54.

[599] Holtec Answer to Joint Pet'rs at 72.

[600] Joint Pet'rs Pet. at 70.

[601] Joint Pet'rs Pet. at 77 (quoting San Luis Obispo Mothers for Peace v. NRC, 449 F.3d 1016, 1032 (9th Cir. 2006)).

concerning human-initiated events, transportation, and storage of highly radioactive materials at the proposed UMAX interim storage facility.[602] Based on the Ballard Report, Joint Petitioners put forward twenty-eight "detailed sub-contentions"[603] ranging from recommending Holtec create a "site specific and programmatic EIS process" because of its "vertical monopoly" in the energy industry;[604] to wanting the NRC and/or Holtec to "define [Design Basis Events] and [Design Basis Threats] for the whole duration of the transportation campaign;[605] to recommending the NRC define through regulations the specific penalties to be imposed upon Holtec for "lack of vigilance" in any aspect of the transportation and the management of the spent fuel;[606] to suggesting the NRC incorporate consent-based siting, waste transport, and storage based on the Blue Ribbon Commission and National Academy of Sciences report recommendations.[607]

In San Luis Obispo Mothers for Peace, the United States Court of Appeals for the Ninth Circuit held "that it was unreasonable for the NRC to categorically dismiss the possibility of terrorist attack on the Storage Installation . . . as too remote and highly speculative to warrant consideration under NEPA."[608] And although Joint Petitioners acknowledge that New Mexico is not part of the Ninth Circuit,[609] they claim that because "hundreds of shipments will come through the Ninth Circuit en route to New Mexico . . . the Ninth Circuit law must be respected

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[602] James David Ballard, Holtec HI-STORM UMAX Interim Storage Facility (a.k.a. CISF): Human Initiated Events (HIE), Transportation of the Inventory and Storage of Highly Radioactive Waste Materials (Sept. 2018) [hereinafter Ballard Report]. Dr. Ballard has a Ph.D. in sociology and is a professor of criminology and justice studies at California State University, Northridge.

[603] Joint Pet'rs Pet at 79.

[604] Id. at 79–80.

[605] Id. at 80.

[606] Id. at 84.

[607] Id. at 85.

[608] San Luis Obispo Mothers for Peace, 449 F.3d at 1030 (internal quotations omitted).

[609] Joint Pet'rs Reply at 61.

and abided by within the geographic territory of the Ninth Circuit," and thus Holtec must conduct a terrorism analysis in its Environmental Report under the Ninth Circuit standard in accordance with NEPA.[610]

The NRC takes the position (as confirmed by the United States Court of Appeals for the Third Circuit[611]) that for all licensing actions outside the Ninth Circuit, "terrorist attacks are too far removed from the natural or expected consequences of agency action to require environmental analysis."[612] Unless the proposed facility would be located in one of the nine states in the Ninth Circuit, no terrorist analysis under NEPA is required. Holtec's facility would be constructed in New Mexico (located in the Tenth Circuit). Holtec's Environmental Report need not conduct an analysis concerning terrorism under NEPA. This aspect of Contention 12 is therefore inadmissible as outside the scope of this proceeding.[613]

As to the remaining recommendations and observations in the Ballard Report, we agree with the NRC Staff's assessment[614] that all of the twenty-eight proffered subcontentions fall short of the Commission's contention admissibility standards. Namely, they all fail to show a genuine dispute with the interim storage facility application, much less even address or acknowledge the application in the petition.[615] An admissible contention must, at a minimum, reference the portion of the application to which the contention is challenging "and show where

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[610] Tr. at 174.

[611] N. J. Dep't of Envtl. Prot. v. NRC, 561 F.3d 132 (3d Cir. 2009).

[612] Continued Storage GEIS at 4-91.

[613] 10 C.F.R. § 2.309(f)(1)(iii).

[614] See NRC Staff Consol. Answer at 57–59.

[615] The NRC Staff notes, and we agree, that only in one place does the Ballard Report cite sections of the application. See Ballard Report at 54–55, n.11. The report does not grapple with the application as required by the Commission's contention admissibility standards.

the applicant is lacking"—here, none of the subcontentions does this.[616] Board proceedings regarding an application for an NRC-issued license are not a proper forum for contentions that comprise broad policy recommendations and challenges to the Agency's rules.[617]

Joint Petitioners Contention 11 is not admitted.

12. Joint Petitioners Contention 12

Joint Petitioners Contention 12 states:

> Because of the geologic formations and conditions beneath the Holtec site, there are risks inherent in siting and operating the [consolidated interim storage] facility as proposed by Holtec. The [Environmental Report] and SAR in this case do not adequately discuss and evaluate the risks created by those geologic conditions.[618]

Joint Petitioners cite two regulations, 10 C.F.R. § 51.45 (requirement for an environmental report) and 10 C.F.R. § 72.90 (site characteristics related to safety),[619] but mainly rely on a thirty page report by a geologist, Dr. Steven Schafersman.[620] Joint Petitioners allege that Dr. Schafersman has "extensive experience and knowledge regarding Permian Basin geology."[621] The Schafersman Report is divided into two parts: Part I, which presents "three geologic reasons that demonstrate why it is inadvisable to temporarily or permanently store [spent nuclear fuel/high level nuclear waste]" at the proposed Holtec site; and Part II, which presents "six major reasons that oppose the transport and storage of [spent nuclear fuel/high

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[616] Ariz. Pub. Serv. Co. (Palo Verde Nuclear Generating Station, Units 1, 2, & 3), CLI-91-12, 34 NRC 149, 156 (1991).

[617] 10 C.F.R. § 2.335.

[618] Joint Pet'rs Pet. at 88.

[619] Id.

[620] See Steven Schafersman, Ph.D., Geological Report Documenting and Opposing Use of the Holtec Site in New Mexico to Store High Level Nuclear Wastes (2018) [hereinafter Schafersman Report].

[621] Id.

level nuclear waste] at the Holtec site."[622] In his report, Dr. Schafersman generally describes the geology [623] and hydrology[624] of the region, and puts forth his ideas concerning "several scientific, economic, political, and anecdotal reasons that make it inadvisable to store high-level nuclear wastes" at the proposed HI-STORE UMAX storage facility.[625]

Joint Petitioners Contention 12 is inadmissible because it does not comply with the Commission's strict-by-design contention admissibility standards.[626] Merely referencing a report that does not identify specific portions of the license application does not comply with the Commission's specificity requirements.[627] The Schafersman Report does not provide sufficient information to show that a genuine dispute exists with Holtec's license application;[628] indeed, the Schafersman Report does not even mention the Holtec application (save for one reference to Figure 3.3.2 in the Environmental Report to establish that the top of the Salado Formation below the Holtec storage facility is 1400 feet below the facility) and does not challenge any aspect of the application.

The Commission's contention admissibility rules require petitioners seeking intervention "to read the pertinent portions of the license application, including the [SAR] and the

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[622] Schafersman Report at unnumbered p. 1.

[623] Id. at unnumbered pp. 1–16.

[624] Id. at unnumbered pp. 16–20.

[625] Id. at unnumbered pp. 20–30.

[626] Millstone, CLI-01-24, 54 NRC at 358.

[627] See NextEra Energy Seabrook LLC (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 332 (2012); Balt. Gas & Elec. Co. (Calvert Cliffs Nuclear Power Plant, Units 1 & 2), CLI-98-25, 48 NRC 325, 348 (1998) ("Mere reference to documents does not provide an adequate basis for a contention.").

[628] 10 C.F.R. § 2.309(f)(1)(vi).

Environmental Report, [and] state the applicant's position and the petitioners' opposing view."[629] The Schafersman Report does not meet this requirement.[630]

Joint Petitioners Contention 12 is not admitted.

13. Joint Petitioners Contention 13

Joint Petitioners Contention 13 states:

> Pursuant to 10 C.F.R. [§] 2.309(f)(3), Petitioners move to adopt all contentions filed by the Sierra Club in this proceeding and to re-allege them as their own as if written herein.[631]

To adopt a contention, a participant must have demonstrated standing in their own right and have themselves proffered an admissible contention.[632] As Joint Petitioners have done neither, they may not adopt any of Sierra Club's contentions.

Joint Petitioners Contention 13 is not admitted.

14. Joint Petitioners Contention 14

Joint Petitioners Contention 14 states:

> Section 186 of the Atomic Energy Act (AEA) (42 U.S.C. § 2236) provides that a license issued by the NRC may be revoked for any material false statement in the license application. Holtec has made a material false statement in its license application in this case by stating repeatedly that title to the waste to be stored at the [consolidated interim storage] facility would be held by DOE and/or the nuclear plant owners. This false statement was repeated in Holtec's Answers to Sierra Club's Contention 1 and [Joint Petitioners'] Contention 2.

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[629] Rules of Practice for Domestic Licensing Proceedings—Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989).

[630] Further, several of Contention 12's claims are outside the scope of this proceeding. See, e.g., Schafersman Report at 4 (exploring the supposition that a "large militia group can take over the facility, declare themselves an independent state" and threaten to destroy the storage facility should authorities try to take back the facility); 21 (alleging the facility will be permitted for 120 years and the fuel will never be moved to a permanent repository); 22 (discussing "our poorly-regulated American free enterprise system" where corporations internalize gains and externalize losses at the expense of the environment).

[631] Joint Pet'rs Pet. at 88.

[632] See Indian Point, CLI-01-19, 54 NRC at 132–33.

> The statement that nuclear plant owners might retain title to the waste is shown to be false by a January 2, 2019, e-mail message from Holtec to the public titled "Reprising 2018[.]" "Reprising 2018" states, "While we endeavor to create a national monitored retrievable storage location for aggregating used nuclear fuel at reactor sites across the U.S. into one (HI-STORE CISF) to maximize safety and security, its deployment will ultimately depend on the DOE and the U.S. Congress."
>
> Thus, if a false statement such as Holtec has made in its filings in this case is grounds for revoking a license, it is grounds for not issuing the license in the first instance.[633]

Joint Petitioners' Contention 14 is substantially identical to Sierra Club Contention 26. It is based on the same January 2, 2019 Holtec e-mail message to the public ("Reprising 2018"), and was submitted on the same day (January 17, 2019).

As discussed supra, the Board granted the motion to file Sierra Club Contention 26, but rejected the Contention as inadmissible. For the same reasons, we grant the motion to file Joint Petitioners Contention 14 and likewise rule it inadmissible.

Joint Petitioners Contention 14 is not admitted.

D. Fasken

Rather than submit a contention in response to the proceeding's Federal Register notice, Fasken instead filed a motion with the Commission to dismiss this proceeding as well as the Interim Storage Partners LLC proceeding, which involves a proposed interim storage facility that would be constructed in Texas.[634] The Secretary of the Commission denied the motion and referred it for review under the NRC's contention admissibility standards.[635]

Fasken's contention states:

> The NRC lacks jurisdiction over the [application] because [it is] premised on the proposition that the U.S. Department of Energy ("DOE") will be responsible for

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[633] Joint Pet'rs Motion to File New Contention, attach., [Joint Petitioners] Contention 14, at unnumbered p. 1.

[634] Fasken Motion to Dismiss at 1–8.

[635] Order Denying Motions to Dismiss.

> the spent fuel that would be transported to and stored at the proposed [facility]. This premise is prohibited under the NWPA because the DOE is precluded from taking title to spent fuel until a permanent repository is available.[636]
>
> The NRC's acceptance and processing of the application[] conflicts with the essential predicate that a permanent repository be available before licensure of a [consolidated interim storage facility]. Further, processing the subject applications implies that the NRC disregards the NWPA's unambiguous requirement that spent fuel remain owned by and is the responsibility of reactor licensees until a permanent repository is available. The logic that underpins the plain language of the NWPA's requirement for a functioning permanent repository is effectively vitiated by processing the[] application[]. [Fasken] contend[s] the [consolidated interim storage facility] applicant[] should be required to show cause why [its] application[] do[es] not constitute a violation of the NWPA since no permanent repository for spent nuclear fuel exists in the United States. Processing the[] application[] to licensure under the present circumstances invites the situation Congress was attempting to avoid because licensure of a CISF without an available permanent repository contradicts the NWPA's objective to establish a permanent repository. The prospect that any CISF will become a de facto permanent repository is precisely what the NWPA intends to avoid.[637]

Fasken's contention is similar to Beyond Nuclear's contention. However, its basis solely relies upon Beyond Nuclear's petition and incorporates by reference "the arguments and authorities in the Beyond Nuclear Inc. motion to dismiss at sections IV, V and VI."[638]

The Commission has approved the incorporation of contentions of other petitioners by reference, but only for those who have demonstrated standing and have submitted their own admissible contention themselves.[639] However, the Commission cautioned:

> Nor will we permit wholesale incorporation by reference by a petitioner who, in a written submission, merely establishes standing and attempts, without more, to incorporate the issues of other petitioners. Further, we would not accept incorporation by reference of another petitioner's issues in an instance where the petitioner has not independently established compliance with our requirements for admission as a party in its own pleadings by submitting at least one admissible issue of its own.[640]

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[636] Fasken Motion to Dismiss at 1–2 (citing 42 U.S.C. §§ 10222(a)(5)(A), 10143).

[637] Id. at 2 (citing Decl. of Tommy Taylor ¶ 8).

[638] Id. at 7.

[639] Indian Point, CLI-01-19, 54 NRC at 132.

[640] Id. at 133.

Although Fasken demonstrated standing in this proceeding, it did not proffer a contention of its own— it only incorporated Beyond Nuclear's arguments and authorities by reference. Fasken would be permitted to do this if it had proffered its own admissible contention, but it did not.

Fasken's contention is therefore not admitted.

E. AFES

1. AFES Contention 1

AFES Contention 1 states:

> As a matter of law, the applicant has not performed a sufficient investigation and has not done a sufficient analysis to support that the Holtec site will not have a disparate impact on the minority and low income population of Lea and Eddy County.[641]

AFES objects to Holtec's site selection process, because it alleges that the siting process "entirely fails to account for alternative sites" for Holtec's proposed fuel storage facility.[642] AFES cites a licensing board decision, Louisiana Energy Services, L.P. (Claiborne Enrichment Center),[643] alleging that Claiborne is akin to binding precedent upon this Board because that licensing board "addressed in detail what a licensing applicant must do to ensure that the site selection process to possess and use nuclear material is free from impermissible discrimination as to minority and low income populations."[644] AFES further alleges that Holtec violates NEPA, Claiborne, and Executive Order 12898 (which incorporates the topic of

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[641] AFES Pet. at 11.

[642] Id. at 17 (emphasis in original).

[643] Louisiana Energy Services, L.P. (Claiborne Enrichment Center), LBP-97-8, 45 NRC 77 (1997), aff'd in part, rev'd in part, CLI-98-3, 47 NRC 77 (1998).

[644] AFES Pet. at 11.

environmental justice into all executive agencies' NEPA reviews)[645] because it did not conduct a site selection process "other than a cursory review of a report on a different site selection process"[646] and allegedly only relied "on the unsupported opinions" of the Eddy-Lea Energy Alliance (ELEA).[647]

Environmental justice is a federal policy established in 1994 by Executive Order 12898 directing federal agencies to identify and address "disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."[648] The Commission's Claiborne decision clarified that NEPA requires the NRC to consider "social and economic impacts ancillary" to environmental impacts; that is, environmental justice concerns.[649]

In response to Claiborne and Executive Order 12898, the NRC promulgated its policy statement concerning environmental justice matters involving NRC licensing and regulatory actions.[650] The policy statement directs the Staff to conduct a more thorough analysis "if the percentage in the impacted area significantly exceeds that of the State or County percentage for either the minority or low-income population."[651] Although not binding regulations, NRC guidance documents specify that the applicant's Environmental Report should include "a

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[645] See Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations, Exec. Order 12898, 59 Fed. Reg. 7629 (Feb. 11, 1994) [hereinafter Exec. Order 12898].

[646] AFES Pet. at 18.

[647] Id. at 19.

[648] See Exec. Order 12898, 59 Fed. Reg. at 7629.

[649] Claiborne, CLI-98-3, 47 NRC at 101.

[650] See Policy Statement on the Treatment of Environmental Justice Matters in NRC Regulatory and Licensing Actions, 69 Fed. Reg. 52,040, 52,040–41, 52,048 (Aug. 24, 2004) [hereinafter NRC Environmental Justice Policy Statement]. Because the NRC is an independent agency, Executive Order 12898 did not automatically apply to the NRC.

[651] Id. at 52,048.

discussion of the methods used to identify and quantify impacts on low-income and minority populations, the location and significance of any environmental impacts during construction on populations that are particularly sensitive, and any additional information pertaining to mitigation."[652] The NRC Staff considers "differences [of block groups compared to the state and county percentages of minority populations] greater than 20 percentage points to be significant" enough for an Environmental Report to warrant greater detail.[653]

We conclude that AFES Contention 1 is not admissible because AFES has not shown any legal requirement for Holtec to conduct a more in-depth inquiry into alternatives to the proposed action (i.e., the siting of the facility) or environmental justice analyses in its Environmental Report. Moreover, AFES has not cited any legal basis mandating Holtec to further analyze environmental justice impacts. Environmental Report section 3.8 describes the social and economic characteristics for the 50-mile region of influence (ROI) around Holtec's proposed facility.[654] Environmental Report section 3.8.5, titled "Environmental Justice," cites to and responds to Executive Order 12898 and the NRC Environmental Justice Policy Statement regarding the proposed storage facility's ROI. The Environmental Report's table 3.8.13 identifies percentages of minority and low income communities within the Holtec facility's ROI. Because Holtec did not find differences greater than 20 percent, as recommended by the NRC Environmental Justice Policy Statement,[655] Holtec did not consider environmental justice in greater detail than it already had. As AFES cites no other legal requirement for Holtec to

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[652] Final Report, Environmental Review Guidance for Licensing Actions Associated with NMSS Programs, NUREG-1748 at 6-25 (Aug. 2003) [hereinafter NUREG-1748].

[653] Id. at C-5.

[654] See ER at 3-95.

[655] Id. at 4-29.

consider environmental justice impacts in greater detail, the contention fails to show a genuine dispute with the application regarding a material issue of law or fact.

Insofar as the contention concerns Holtec's site selection process, where AFES alleges the Environmental Report "fails to account for alternative sites,"[656] (i.e., a contention of omission) the contention fails as well. The Environmental Report contains an analysis of location alternatives that explains the methodology of Holtec's selection of the proposed site,[657] and also shows six other potential sites that were analyzed and considered for suitability of the Holtec HI-STORE consolidated interim storage facility's characteristics.[658]

AFES Contention 1 is not admitted.

2. AFES Contention 2

AFES Contention 2 states:

> As a matter of fact and expert opinion, the siting process will have a disparate impact on the minority and low income population of Lee and Eddy County.[659]

To support its assertion, AFES submits an affidavit from Professor Myrriah Gómez, Ph.D., that is entitled "Environmental Racism an Active Factor in the Siting and White Privilege Associated with the Holtec International HI-STORE Consolidated Interim Storage Facility Project."[660] Dr. Gómez claims that the proposal "is an example of environmental racism based on studies defining and documenting environmental racism across . . . the United States," and alleges that the proposed Holtec facility meets African-American civil rights leader Benjamin

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[656] AFES Pet. at 17.

[657] See ER at §§ 2.3, 2.4.2.

[658] Id. at 2-27 (Fig. 2.3.1).

[659] AFES Pet. at 22.

[660] Id., Ex. 7. Dr. Gómez holds a Ph.D. in English with a concentration in Latina/o literature and works as an assistant professor for the Honors College at the University of New Mexico.

Chavis's definition of environmental racism.[661] AFES argues that "Holtec's reliance on an invitation for siting by a small group of government officials is a deficient process from the outset."[662]

AFES Contention 2 is inadmissible because it does not show a genuine dispute with the application on a material issue of law or fact. As discussed supra, the environmental justice analysis in an applicant's Environmental Report is guided by the NRC's Environmental Justice Policy Statement and NUREG-1748, which were issued in response to Executive Order 12898. Holtec addressed environmental justice matters to the depth recommended by NRC guidance,[663] and neither AFES's petition nor Dr. Gómez's affidavit challenge the information in Holtec's Environmental Report. Rather, AFES Contention 2 challenges the NRC's environmental justice policy and implementing guidance documents themselves.[664]

AFES Contention 2 is not admitted.

3. AFES Contention 3

AFES Contention 3 states:

> There is no factual support for Holtec's primary site selection criterion, which is community support.[665]

Acknowledging that "community support" is not a material issue to the findings that the NRC must make to license the proposed facility, AFES points the Board to Environmental Report section 2.4.2 to clarify that Holtec "has made community support a material issue"

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[661] Id., Ex. 7, at 2–3.

[662] AFES Reply at 22.

[663] See ER at 3-113 (Tbl. 3.8.13).

[664] Because both AFES Contentions 1 and 2 are inadmissible, we need not address Holtec's motion to strike concerning these contentions. See [Holtec's] Motion to Strike Portions of Replies of [AFES], [Joint Petitioners], [NAC], and Sierra Club (Oct. 26, 2018) at 4–5.

[665] AFES Pet. at 23.

regarding the proposed site selection criterion for two reasons.[666] First, AFES claims that, because Holtec has taken ELEA's support for the proposed facility as local "community support," Holtec has misrepresented the community support (or the lack thereof) in its application.[667] AFES alleges that this makes the issue of public support material to Holtec's application, in addition to the alleged violations by ELEA of New Mexico's Open Meetings Act.[668] Second, AFES contends that "Holtec cannot even demonstrate that the land under the site is 'controlled' by Holtec,"[669] which AFES alleges is the "lynchpin of Holtec's entire application."[670]

AFES Contention 3 is inadmissible because the issue of public support for the proposed facility is not material to the findings the NRC must make in this licensing proceeding. Assertion of community support or opposition in a license application does not lend any weight to the environmental justice analysis to be conducted by the applicant.[671] And, as discussed supra, an Environmental Report's environmental justice analysis may follow NUREG-1748, Appendix C, which Holtec chose to do. Because AFES points to no other source of law that places weight on "community support" with regard to the selection of a project site, the contention fails.

Although not expressly set forth in AFES Contention 3, AFES also raises, in its supporting bases, a claim that the ELEA acquired the proposed site (which it intends to sell to Holtec) in violation of the New Mexico Open Meetings Act.[672] These claims under New Mexico law against an entity that is not seeking a license from the NRC are plainly outside the scope of this proceeding.

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[666] Id.

[667] Id. at 23–24.

[668] Id. at 24.

[669] Id. (citing ER, rev. 0 § 2.2.1).

[670] Id.

[671] See Exec. Order 12898; NRC Environmental Justice Policy Statement; NUREG-1748.

[672] N.M. Stat. Ann. § 10-15-1 (1978).

AFES contention 3 is not admitted.

F. NAC

1. NAC Contention 1

NAC Contention 1 states:

> The Holtec CISF license application inadequately substantiates its design basis analyses concerning normal, off-normal, and accident events, which are required to demonstrate compliance with 10 C.F.R. Part 72, including Subparts E, F and G (and related acceptance criteria in NUREG 1567), as it lacks required design and safety information on the NAC canisters to be housed in the CISF UMAX casks.[673]

Because NAC has not licensed or otherwise provided its proprietary design information to Holtec,[674] it alleges that Holtec cannot comply with NRC safety-related requirements, as Holtec lacks required design and safety information on any NAC canisters that would be stored in the proposed facility. In support, NAC submits the affidavit of George C. Carver, its Vice President of Engineering & Licensing.[675]

As explained supra in connection with the Board's discussion of standing, however, Holtec is not presently seeking NRC approval to store any NAC canisters. NAC Contention 1 is therefore outside the scope of this licensing proceeding.

If and when Holtec seeks NRC permission to store NAC canisters, the necessary license amendment or amendments will provide NAC with an opportunity to participate, as Holtec acknowledges.[676] NAC's argument that future license amendment proceedings (if any) might be affected in some way by the present proceeding is not persuasive.[677] To speculate

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[673] NAC Pet. at 10.

[674] Id. at 4.

[675] Id., attach., Aff. of George C. Carver (Sept. 14, 2018).

[676] Holtec Answer to NAC at 11.

[677] See NAC Reply at 6–8.

about the possibility of such an impact does not bring NAC's claims in Contention 1 within the scope of the present proceeding.[678]

NAC Contention 1 is not admitted.

2. NAC Contention 2

NAC Contention 2 states:

> The Holtec CISF application omits technical information required under NRC regulations, including but not limited to 10 C.F.R. § 72.24, about the design and safety performance of NAC canisters within its UMAX casks.[679]

Similar to its claims in Contention 1, NAC alleges in Contention 2 that, because Holtec does not have access to NAC's proprietary information, Holtec's license application omits required technical information about the design and safety performance of NAC canisters.

NAC Contention 2 is not admissible for the same reason NAC Contention 1 is not admissible. Holtec is not presently seeking NRC approval to store any NAC canisters, so NAC Contention 2 is outside the scope of this proceeding.

NAC Contention 2 is not admitted.

3. NAC Contention 3

NAC Contention 3 states:

> The Holtec CISF license application incorrectly omits a design alternatives analysis on the speculative grounds that the UMAX cask system is the only such system that is capable of including as contents all non-Holtec canister types.[680]

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[678] The Board has also considered and rejected NAC's argument—first expressed in its petition and amplified in its reply—that Holtec is somehow seeking a "universal" license notwithstanding the more limited scope of its actual application. As set forth infra, the Board has denied as moot Holtec's motion to strike portions of NAC's reply that make this argument because we determine NAC's contentions are not admissible regardless of whether we consider its reply. See Holtec Motion to Strike at 9–10.

[679] NAC Pet. at 10.

[680] NAC Pet. at 14.

NAC alleges that, in its Environmental Report, Holtec incorrectly chose not to examine in detail the alternative cask designs of various competitors, including NAC. Specifically, Holtec identified but eliminated from detailed analysis design alternatives to "use the AREVA, NAC, and EnergySolutions systems."[681]

Although the NRC Staff would have us deny NAC's hearing request for failure to demonstrate standing, the Staff would otherwise not oppose the admissibility of NAC Contention 3 "to the extent that the [Environmental Report's] basis for eliminating these design alternatives from detailed analysis is unclear."[682] The Board does not agree. As Holtec's counsel stated during oral argument, "the purpose of this project is to deploy Holtec technology."[683] As a practical matter, it seems most unlikely that Holtec would elect in any circumstances to go forward with the project to deploy its competitors' storage technology.

Regardless, an applicant's Environmental Report is not required to include the type of alternatives analysis that NAC claims must be included. NAC does not allege any of the systems (including its own) that it claims Holtec should have analyzed in detail would have any lesser environmental impacts than Holtec's own HI-STORM UMAX system. Nor is any such difference apparent, as all of these competing systems are similar—comprised of canisters contained within casks.

To be sure, NEPA requires federal agencies (and hence the NRC requires applicants' Environmental Reports[684]) to take a hard look at the environmental impacts of a proposed action

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[681] Id. (quoting ER, rev. 1 § 2.4.1).

[682] NRC Staff Consol. Answer at 65.

[683] Tr. at 267.

[684] See 10 C.F.R. §§ 51.45, 51.61.

and of environmentally-significant alternatives. An applicant's discussion of alternatives in its Environmental Report must be sufficiently complete to aid the NRC in complying with NEPA.[685]

But NEPA does not require a detailed analysis of alternatives that are of no environmental significance. As stated in the Council on Environmental Quality's implementing regulations, NEPA calls for consideration of reasonable alternatives to proposed actions "that will avoid or minimize adverse effects of these actions upon the quality of the human environment"[686] or that involve unresolved conflicts concerning alternative users of available resources.[687] NAC has not alleged that any such environmental impacts or unresolved conflicts would be associated with Holtec's use of its competitors' storage systems rather than its own.

As the Commission has reminded us, an environmental analysis "is not intended to be 'a research document.'"[688] If there are alleged omissions in the analysis, "in an NRC adjudication it is [the] Intervenors' burden to show their significance and materiality."[689] NAC has not done so.

NAC Contention 3 is not admitted.

V. INTERESTED GOVERNMENT PETITIONERS

Government entities (1) City of Carlsbad, New Mexico; (2) The Eddy-Lea Energy Alliance; (3) Lea County, New Mexico; (4) City of Hobbs, New Mexico; and (5) Eddy County, New Mexico timely filed requests to participate as an interested governmental body.[690] The

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[685] Id. § 51.45(b)(3).

[686] 40 C.F.R. § 1500.2(e).

[687] Id. §§ 1501.2(c); 1502.1.

[688] Entergy Nuclear Generation Co. (Pilgrim Nuclear Power Station), CLI-10-22, 72 NRC 202, 208 (2010) (citation omitted).

[689] Exelon Generating Co. (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801, 811 (2005).

[690] See ELEA Pet.; Lea Cty. Pet.; Carlsbad Pet.; Hobbs Pet.; Eddy Cty. Pet.

NRC Staff stated that it "does not object to the participation of any of these governmental bodies . . . if a hearing is granted."[691] Neither Holtec nor any other petitioner has raised an objection.

Pursuant to 10 C.F.R. § 2.315(c), a local governmental body that is not admitted as a party under section 2.309 shall, upon request, be permitted a reasonable opportunity to participate in a hearing as an interested non-party. Section 2.315(c) does not require a demonstration of standing, but does require identification of those contentions on which the non-party intends to participate.[692]

As the Board denies all the petitioners' requests for a hearing, the motions of the City of Carlsbad, New Mexico; Eddy-Lea Energy Alliance; Lea County, New Mexico; City of Hobbs, New Mexico; and Eddy County, New Mexico are accordingly denied as moot.

VI. RULING ON PETITIONS

Although Beyond Nuclear, Sierra Club, and Fasken have demonstrated standing in accordance with 10 C.F.R. § 2.309(d), no petitioner has proffered an admissible contention meeting the requirements of 10 C.F.R. § 2.309(f)(1). Therefore, in accordance with 10 C.F.R. § 2.309(a), the Board denies the requests for hearing and petitions for leave to intervene submitted by Beyond Nuclear, Sierra Club, Joint Petitioners, Fasken, AFES, and NAC.

VII. ORDER

For the foregoing reasons:

A. Beyond Nuclear's petition is denied. Beyond Nuclear's contention is not admitted.
B. Sierra Club's petition is denied. Sierra Club's contentions are not admitted.
C. Joint Petitioners' petition is denied. Joint Petitioners' contentions are not admitted.
D. Fasken's petition is denied. Fasken's contention is not admitted.
E. AFES's petition is denied. AFES's contentions are not admitted.

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[691] NRC Staff Consol. Answer at 3–4, n.11.

[692] 10 C.F.R. § 2.315(c).

F. NAC's petition is denied. NAC's contentions are not admitted.

G. The petitions of City of Carlsbad, Eddy-Lea Energy Alliance, Lea County, City of Hobbs, and Eddy County to participate as local interested government bodies are denied as moot.

H. Holtec's October 26, 2018 motion to strike is denied as moot.[693]

I. Holtec's November 8, 2018 Motion for Leave to Reply to Alliance Response is denied as moot.[694]

J. Fasken's December 10, 2018 motion to file a supplemental declaration is granted.[695]

K. Joint Petitioners' and Sierra Club's January 11, 2019 motions to adopt each other's contentions are denied as moot.[696]

L. Sierra Club's and Joint Petitioners' joint motion for a subpart G hearing is denied as moot.[697]

M. Sierra Club's January 17, 2019 motion to late-file new Contention 26 is granted.[698]

N. Joint Petitioners' January 17, 2019 motion to late-file new Contention 14 is granted.[699]

O. Sierra Club's February 6, 2019 motion to amend its Contention 1 is granted.[700]

P. Beyond Nuclear and Fasken's February 6, 2019 motion to amend Beyond Nuclear's contention is granted.[701]

Q. Joint Petitioners' February 6, 2019 motion to amend their Contention 2 is granted.[702]

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[693] Holtec Motion to Strike.

[694] [Holtec's] Motion for Leave to Reply to [AFES'] Response to [Holtec's] Motion to Strike (Nov. 8, 2018).

[695] Motion for Permission to File Supplemental Standing Declaration of Tommy E. Taylor (Dec. 10, 2018).

[696] Sierra Club's Motion to Adopt the Contentions of [Joint Petitioners] (Jan. 11, 2019); Motion of [Joint Petitioners] to Adopt and Litigate Sierra Club Contentions (Jan. 11, 2019).

[697] Joint Motion to Establish Hearing Procedures by Sierra Club, [Joint Petitioners] (Jan. 3, 2019).

[698] Sierra Club's Motion to File a New Late-Filed Contention (Jan. 17, 2019).

[699] Motion by [Joint Petitioners] for Leave to File a New Contention (Jan. 17, 2019).

[700] Sierra Club's Motion to Amend Contention 1 (Feb. 6, 2019).

[701] Motion by Petitioners Beyond Nuclear and Fasken to Amend Their Contentions Regarding Federal Ownership of Spent Fuel to Address Holtec International's Revised License Application (Feb. 6, 2019).

[702] Motion by [Joint Petitioners] to Amend Their Contention 2 Regarding Federal Ownership of Spent Fuel in the Holtec International Revised License Application (Feb. 6, 2019).

R. Sierra Club's February 18, 2019 motion to amend its Contention 16 is denied.[703]

S. Joint Petitioners' February 18, 2019 motion to amend their Contentions 4 and 7 is denied.[704]

T. Joint Petitioners February 25, 2019 motion to amend their Contention 2 is denied.[705]

U. Sierra Club's February 25, 2019 motion to file new late-filed Contentions 27, 28, and 29 is denied.[706]

V. This proceeding is terminated.

Any appeal of this decision to the Commission shall be filed in conformity with 10 C.F.R. § 2.311.

It is so ORDERED.

THE ATOMIC SAFETY
AND LICENSING BOARD

/RA/

Paul S. Ryerson, Chairman
ADMINISTRATIVE JUDGE

/RA/

Nicholas G. Trikouros
ADMINISTRATIVE JUDGE

/RA/

Dr. Gary S. Arnold
ADMINISTRATIVE JUDGE

Rockville, Maryland
May 7, 2019

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[703] Sierra Club's Motion to Amend Contention 16 (Feb. 18, 2019).

[704] Motion of [Joint Petitioners] to Amend Their Contentions 4 and 7 Regarding Holtec's Decision to Have No Dry Transfer System Capability and Holtec's Policy of Returning Leaking, Externally Contaminated or Defective Casks and/or Canisters to Originating Reactor Sites (Feb. 18, 2019).

[705] Motion of [Joint Petitioners] to Amend Their Contention 2 Regarding Holtec's Proposed Means of Financing the Proposed Consolidated Interim Storage Facility (Feb. 25, 2019).

[706] Sierra Club Additional Contentions.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
	)	
HOLTEC INTERNATIONAL	)	Docket No. 72-1051-ISFSI
	)	
	)	
(HI-STORE Consolidated Interim Storage Facility)	)	
	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **MEMORANDUM AND ORDER (Ruling on Petitions for Intervention and Requests for Hearing) (LBP-19-4)** have been served upon the following persons by Electronic Information Exchange (EIE).

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[Original signed by Herald M. Speiser]
Office of the Secretary of the Commission

Dated at Rockville, Maryland,
this 7th day of May, 2019