LBP-24-07

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Michael M. Gibson, Chair
Dr. Gary S. Arnold
Nicholas G. Trikouros

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| In the Matter of:<br><br>VIRGINIA ELECTRIC AND POWER COMPANY<br><br>(North Anna Power Station, Units 1 and 2) | Docket Nos. 50-338-SLR-2<br>50-339-SLR-2<br><br>ASLBP No. 24-984-02-SLR-BD01<br><br>July 10, 2024 |

MEMORANDUM AND ORDER
(Denying Petitioners' Hearing Request and Terminating Proceeding)

Before this Licensing Board is the March 28, 2024 request for hearing and petition for leave to intervene of Beyond Nuclear, Inc. (BN) and Sierra Club, Inc. (Sierra Club) (collectively Petitioners) seeking to challenge the draft site-specific environmental impact statement (Draft EIS)[1] for the subsequent license renewal application (SLRA) of Virginia Electric and Power Company's (VEPCO) North Anna Power Station Units 1 and 2. The Board concludes that Petitioners have established representational standing, but have not proffered an admissible contention. Accordingly, Petitioners' hearing request is denied, and this proceeding is terminated.

[1] See NUREG-1437, "Site-Specific Environmental Impact Statement for License Renewal of Nuclear Plants, Supp. 7a, Second Renewal, Regarding Subsequent License Renewal for North Anna Power Station Units 1 and 2" (Dec. 2023) (Agencywide Documents Access and Management System [ADAMS] Accession No. ML23339A047) (Draft EIS).

## I. BACKGROUND

This proceeding concerns VEPCO's application[2] for a twenty-year subsequent renewal of the licenses for North Anna Power Station Units 1 and 2, two pressurized-water nuclear reactors located in Louisa County, Virginia.[3] Currently, North Anna Power Station Units 1 and 2 are authorized to operate until, respectively, April 1, 2038 and August 21, 2040.[4] After receipt of VEPCO's 2022 supplement to its SLRA,[5] the Nuclear Regulatory Commission Staff (NRC Staff) prepared a Draft EIS for North Anna Units 1 and 2 and published a notice in the Federal Register announcing the opportunity to request a hearing to challenge the Draft EIS.[6] On March 28, 2024, Petitioners jointly submitted a timely hearing request that proffered three contentions contesting different aspects of the Draft EIS.[7]

The next day, the Secretary of the Commission referred Petitioners' hearing request to the Chief Administrative Judge of the Atomic Safety and Licensing Board Panel for further

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[2] VEPCO's license renewal request was originally submitted on August 24, 2020, and was later supplemented in 2022. See Letter from J. Holloway, VEPCO to NRC, "Virginia Electric and Power Company, North Anna Power Station Units 1 and 2, Subsequent License Renewal Application for Facility Operating Licenses NPF-4 and NPF-7, Appendix E Environmental Report, Supplement 1" (Sept. 28, 2022) (ADAMS Accession No. ML22272A041) (Supp. ER).

[3] See "North Anna Power Station Units 1 and 2 Application for Subsequent License Renewal" (Aug. 24, 2020) (ADAMS Accession No. ML20246G696).

[4] See id. at 1-2.

[5] See Supp. ER.

[6] See 89 Fed. Reg. 960 (Jan. 8, 2024).

[7] See Hearing Request and Petition to Intervene by Petitioners (Mar. 28, 2024) (Petition). Requests for a hearing or petitions for leave to intervene were originally due on March 8, 2024. However, Petitioners filed a request for a six-week extension. Conditional Motion by Beyond Nuclear and Sierra Club for Extension of Time to Submit Hearing Request (Feb. 1, 2024) (ADAMS Accession No. ML24032A004). On February 21, 2024, the Secretary of the Commission extended to March 28, 2024 the deadline for Petitioners' requests for a hearing or petitions for leave to intervene. Order of the Secretary (Feb. 21, 2024) at 3–4 (ADAMS Accession No. ML24052A386).

action.[8] On April 3, 2024, this Licensing Board was established to rule on standing and contention admissibility matters and, if necessary, to preside at any hearing.[9]

Then, on April 11, 2024, Petitioners moved to augment the basis of Contention 3 with purportedly new information contained in an April 2, 2024 Government Accountability Office (GAO) report addressing the impact of climate change on nuclear power plants.[10] Thereafter, VEPCO and the NRC Staff timely filed their answers to both the hearing request and the motion to amend on May 6,[11] the Board granted Petitioners' motion to amend,[12] and on May 20, Petitioners timely filed their reply to the answers of VEPCO and the NRC Staff.[13]

On June 3, 2024, this Board heard oral argument from counsel for Petitioners, the NRC Staff, and VEPCO regarding whether Petitioners have standing and whether their proffered contentions are admissible. We address standing first.

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[8] See Memorandum from Carrie M. Safford, Secretary of the Commission, to E. Roy Hawkens, Chief Administrative Judge (Mar. 29, 2024).

[9] See Establishment of Atomic Safety and Licensing Board (April 3, 2024).

[10] See Motion by Petitioners to Amend Their Contention 3 Regarding Failure to Consider Environmental Impacts of Climate Change (Apr. 11, 2024) (Motion to Amend); id., Attach. A (GAO-106326, "Nuclear Power Plants: NRC Should Take Actions to Fully Consider the Potential Effects of Climate Change" (April 2024)) (GAO Report).

[11] See Applicant's Answer to the Hearing Request and Petition to Intervene and Motion for Leave to Amend Contention 3 Filed by Petitioners (May 6, 2024) (VEPCO Answer); NRC Staff Answer in Opposition to Petition for Leave to Intervene Filed by Petitioners (May 6, 2024) (NRC Staff Answer).

[12] See Licensing Board Memorandum & Order (Granting Joint Intervenors' Motion to Amend Contention 3) (May 7, 2024) (unpublished).

[13] See Reply by Petitioners to Oppositions to Their Hearing Request and Petition to Intervene (May 20, 2024) (Reply). Originally, Petitioners' reply was due to be filed on May 13, 2024, but Petitioners filed an unopposed motion for extension of time and postponement of oral argument that the Board granted on May 14. See Licensing Board Memorandum and Order (Granting Motion for Extension of Time and Postponing Oral Argument) (May 14, 2024) (unpublished).

## II. STANDING

### A. Legal Standard for Standing

To participate in an NRC adjudicatory proceeding, a petitioner must first establish standing.[14] NRC regulations on standing require that a hearing request include information regarding (1) the name, address, and telephone number of the petitioner; (2) the "nature of the [petitioner's] right under [the Atomic Energy Act (AEA) or the National Environmental Policy Act (NEPA)] to be made a party to the proceeding"; (3) the "nature and extent of the [petitioner's] property, financial, or other interest in the proceeding"; and (4) the possible effect on the petitioner's interest of any decision or order that may be issued in the proceeding.[15] Although the petitioner bears the "burden of setting forth a clear and coherent argument for standing,"[16] when assessing standing, "we construe the petition in favor of the petitioner."[17]

Further, where an organization, like BN or Sierra Club here, seeks to establish representational standing on behalf of its members, the organization must show that (1) "at least one member has standing and has authorized the organization to represent [them] and to request a hearing on [their] behalf," (2) "the interests that the representative organization seeks to protect [are] germane to its own purpose," and (3) "neither the asserted claim nor requested relief must require an individual member to participate in the organization's legal action."[18]

In determining whether a petitioner meets the first requirement for representational standing, the Commission has instructed licensing boards to apply "contemporaneous judicial concepts of standing" that require a showing of a concrete and particularized injury that is fairly

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[14] See 10 C.F.R. § 2.309(a).

[15] Id. § 2.309(d)(1).

[16] Commonwealth Edison Co. (Zion Nuclear Power Station, Units 1 & 2), CLI-99-4, 49 NRC 185, 194 (1999).

[17] Ga. Inst. of Tech. (Georgia Tech Research Reactor), CLI-95-12, 42 NRC 111, 115 (1995).

[18] Southern Nuclear Operating Co., Inc. (Vogtle Electric Generating Plant, Unit 3), CLI-20-6, 91 NRC 225, 238 (2020).

traceable to the challenged action and is likely to be redressed by a favorable decision.[19] However, in certain power reactor license proceedings, the Commission routinely applies a "proximity presumption."[20] The proximity presumption allows a petitioner to establish standing without the need to make an individualized showing of injury, causation, and redressability if that petitioner resides,[21] has frequent contacts,[22] or has a significant property interest[23] within 50 miles of the subject nuclear power reactor.[24]

B. Analysis

Although neither VEPCO nor the NRC Staff contest the standing of BN or Sierra Club to participate in this proceeding,[25] this Board nevertheless is charged with independently determining their standing.[26] In this regard, BN and Sierra Club each maintain that they satisfy representational standing requirements based on their members' proximity to, and frequent contacts with, the area near North Anna Units 1 and 2.[27]

1. Analysis of BN's Standing

To demonstrate representational standing, BN proffers declarations from three of its members.[28] The first lives about 45 miles from the North Anna Nuclear Power Station, the

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[19] Sequoyah Fuels Corp. (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 71–72 (1994).

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

[21] Id.

[22] See Cleveland Electric Illuminating Co. (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 95 (1993).

[23] USEC, Inc. (American Centrifuge Plant), CLI-05-11, 61 NRC 309, 314 (2005).

[24] Calvert Cliffs, CLI-09-20, 70 NRC at 915.

[25] See VEPCO Answer at 10 note 55; Staff Answer at 11.

[26] See 10 C.F.R. § 2.309(d)(2); see also Exelon Generation Co., LLC (Peach Bottom Atomic Power Station, Units 2 & 3), LBP-19-5, 89 NRC 483, 491 (2019), aff'd on other grounds, CLI-20-11, 92 NRC 335 (2020).

[27] See Petition at 2–5.

[28] See Petition App., attachs. 2A, 2B, 2C.

second lives about 35 miles away, and the third lives at two separate residences, one about 19 miles from North Anna and the other about 37 miles away.[29] All three members (1) authorize BN "to represent [their] interests in this proceeding,"[30] (2) state that they are concerned, among other things, with public and environmental health, and (3) maintain that the license for North Anna should not be renewed under VEPCO's current application before the NRC.[31]

BN further explains 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 [the] future."[32] It also "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."[33]

Based on the declaration of the three BN members, the proximity presumption clearly affords them each individual standing to intervene in this proceeding, and they have each authorized BN to represent their interests in this proceeding. The organization's stated description in the Petition establishes that the interests BN seeks to protect are germane to its purpose. Lastly, neither BN's asserted claim, nor its requested relief, require that an individual member of BN participate in this proceeding because all members will benefit from the requested relief and no member has a unique injury requiring individualized proof.[34]

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[29] See id.

[30] Id.

[31] Id.

[32] Petition at 4.

[33] Id.

[34] See Vogtle, CLI-20-6, 91 NRC at 238; see also Warth v. Seldin, 422 U.S. 490, 515–16 (1975) (holding that an organization could not seek damages for the profits and business losses of its members because "whatever injury might have been suffered is peculiar to the individual

We therefore conclude that BN has established its representational standing in this proceeding.

2. Analysis of Sierra Club's Standing

Sierra Club provides the declarations of four members to demonstrate representational standing.[35] Two live about 41 miles from the North Anna Nuclear Power Station and the other two live about 29 miles from North Anna.[36] All four members (1) authorize Sierra Club "to represent [their] interests in this proceeding,"[37] (2) state that they are concerned, among other things, with public and environmental health, and (3) maintain that the license for North Anna should not be renewed under VEPCO's current application before the NRC.[38]

Sierra Club further explains that it is a "national environmental organization" whose purposes are to "explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's ecosystems and resources; to educate and enlist humanity to protect and restore the quality of the natural and human environment; and to use all lawful means to carry out these objectives."[39]

Based on the declaration of the four Sierra Club members, again, the proximity presumption clearly affords each individual standing to intervene in this proceeding, and each individual has authorized Sierra Club to represent their interests in this proceeding. The organization's stated description in the petition establishes that the interests Sierra Club seeks to protect are germane to Sierra Club's purpose. Lastly, neither Sierra Club's asserted claim, nor its requested relief, require that an individual member of Sierra Club participate in this

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member concerned, and both the fact and extent of the injury would require individualized proof.").

[35] See Petition App., attachs. 2D, 2E, 2F, 2G.

[36] See id.

[37] Id.

[38] Id.

[39] Petition at 4.

proceeding because all members will benefit from the requested relief and no member has a unique injury requiring individualized proof.[40]

We therefore conclude that, like BN, Sierra Club has established its representational standing in this proceeding.

## III. CONTENTION ADMISSIBILITY

### A. Legal Standard for Contention Admission

For a hearing to be granted, a petitioner not only must establish standing to intervene, but it also must proffer at least one admissible contention.[41] To be admissible, a contention must:

> (i) Provide a specific statement of the issue of law or fact to be raised or controverted . . .;
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> (ii) Provide a brief explanation of the basis for the contention;
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> (iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;
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> (iv) 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;
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> (v) Provide a concise statement of the alleged facts or expert opinions which support the [petitioner's] position on the issue . . . , together with references to the specific sources and documents on which the [petitioner] intends to rely to support its position on the issue; [and]
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> (vi) [P]rovide sufficient information to show that a genuine dispute exists with the [applicant] on a material issue of law or fact. This information must include references to specific portions of the application . . . that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by law, the identification of each failure and the supporting reasons for the petitioner's belief . . . .[42]

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[40] See supra note 34.

[41] 10 C.F.R. § 2.309(a).

[42] Id. § 2.309(f)(1).

A petitioner's failure to comply with any of these requirements renders a contention inadmissible.[43] The contention admissibility regulations are "strict by design"[44] in order to exclude vague, unparticularized, or unsupported contentions.[45] While petitioners need not prove their contentions at the admissibility stage, the contention admissibility standards do require petitioners to "proffer at least some minimal factual and legal foundation in support of their contentions."[46] Contentions must be based on a genuine material dispute, rather than mere disagreement with an application.[47]

B. Relevant Procedural History

After VEPCO applied in 2020 for a subsequent renewal of the operating licenses for North Anna Units 1 and 2,[48] the NRC Staff issued a Federal Register notice alerting the public of its opportunity to challenge VEPCO's SLRA.[49] In December 2020, three environmental groups (including Petitioners here) challenged VEPCO'S Environmental Report (ER) in its SLRA by proffering a contention that criticized the ER for its analysis of a 2011 earthquake near North

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[43] See Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 & 3), CLI-05-24, 62 NRC 551, 567 (2005).

[44] Entergy Nuclear Operations, Inc. (Indian Point, Unit 2), CLI-16-5, 83 NRC 131, 136 (2016) (citing Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001)).

[45] See North Atl. Energy Serv. Corp. (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 219 (1999).

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

[47] See USEC, Inc. (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 480 (2006) ("Contentions . . . must be based on a genuine material dispute, not the possibility that petitioners, if they perform their own additional analyses, may ultimately disagree with the application.").

[48] See SLRA.

[49] See Virginia Electric and Power Company; North Anna Power Station, Units 1 and 2; Subsequent License Renewal Application; Opportunity to Request a Hearing and to Petition for Leave to Intervene, 85 Fed. Reg. 65,438 (Oct. 15, 2020).

Anna that had exceeded the design basis for the plant.[50] However, the NRC's 2013 Generic Environmental Impact Statement for Renewal of Nuclear Power Plant Licenses[51] (2013 GEIS), as adopted into 10 C.F.R. Part 51, Subpart A, App. B, Table B-1, categorized design-basis accidents as having an impact generically applicable to all plants, or in the NRC's nomenclature, as being a Category 1 issue.[52] As a result, those three petitioners also sought a waiver so as to be able to contest the generic finding in the 2013 GEIS that the environmental impact from design-basis accidents is "SMALL."[53]

In 2021, a previous licensing board in North Anna LBP-21-4[54] held that the 2013 GEIS removed design-basis accidents from the permissible scope of that proceeding and so it (1) declined to admit the contention and (2) concluded that those three petitioners had failed to

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[50] See Hearing Request and Petition to Intervene by BN, Sierra Club, and Alliance for Progressive Virginia and Petition for Waiver of 10 C.F.R. 51.53(c)(3)(i), 51.71(d), and 51.95(C)(1) to Allow Consideration of Category 1 NEPA Issues at 28 (Dec. 14, 2020) (2020 Petition).

[51] NUREG-1437, Vol. 1, Rev. 0, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (May 1996) (ADAMS Accession No. ML040690705); NUREG-1437, Rev. 1, Generic Environmental Impact Statement for License Renewal of Nuclear Plants (June 2013) (ADAMS Accession No. ML13106A241) (2013 GEIS).

[52] See 2020 Petition at 30–37.

[53] In a license renewal proceeding such as this one involving a dispute over the efficacy of the Staff's Draft EIS discussion regarding a Table B-1, Category 1 issue, of equal import is whether that challenge merits a section 2.335 waiver. That provision declares that "no rule or regulation of the Commission, or any provision thereof . . . is subject to attack by way of . . . any adjudicatory proceeding" in the absence of a waiver granted in accordance with paragraphs (b) through (d) of that section. 10 C.F.R. § 2.335(a). Further, section 2.335(b) states that the "sole ground" for a "waiver or exception" from a regulation is that "special circumstances with respect to the subject matter of the particular proceeding are such that the application of the rule or regulation (or a provision of it) would not serve the purposes for which the rule or regulation was adopted." Id. § 2.335(b).

[54] See Va. Elec. and Power Co. (North Anna Power Station, Units 1 and 2), LBP-21-4, 93 NRC 179 (2021).

meet the standards for obtaining a waiver set forth in section 2.335.[55] Those petitioners then appealed this adverse ruling in LBP-21-4 to the Commission.[56]

In 2022, the Commission issued two related decisions that impacted the LBP-21-4 decision. First, in CLI-22-2, the Commission reversed an earlier Commission ruling and held that the 2013 Generic Environmental Impact Statement solely applied to the initial renewal of a nuclear power plant operating license, i.e., the 2013 GEIS did not govern the NRC's evaluation of environmental impacts during the period of subsequent renewal.[57] Second, in CLI-22-3, the Commission effectively set aside LBP-21-4, as well as the decisions in several other licensing board proceedings that were then on appeal to the Commission, because those boards, in conformity with then-existing Commission precedent, had applied the 2013 GEIS to subsequent license renewals.[58]

The remedy the Commission applied in setting aside LBP-21-4 was to dismiss those petitioners' appeal without prejudice and, if VEPCO chose to submit a revised ER analyzing environmental impacts during the SLR period, to invite those petitioners to proffer new or refiled contentions challenging any draft site-specific EIS the NRC Staff prepared thereafter that evaluated the environmental conditions at North Anna during the period between 2038 and 2060.[59]

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[55] Id.

[56] Notice of Appeal of LBP-21-4 by Beyond Nuclear, Sierra Club, and Alliance for Progressive Virginia (Apr. 23, 2021) (ADAMS Accession No. ML21113A316); Brief on Appeal of LBP-21 by Beyond Nuclear, Sierra Club, and Alliance for Progressive Virginia (Apr. 23, 2021) (ADAMS Accession No. ML21113A317).

[57] See Fla. Power & Light Co. (Turkey Point Nuclear Generating Units 3 & 4), CLI-22-2, 95 NRC 26, 27 (2022).

[58] See Va. Elec. and Power Co. (North Anna Power Station, Units 1 and 2), CLI-22-3, 95 NRC 40, 42–43 (2022).

[59] See id. at 41–43. CLI-22-3 offered applicants two options: (1) wait for the NRC to update the GEIS, or (2) "submit a revised environmental report providing information on environmental impacts during the subsequent license renewal period" (which would be in the form of an ER

The NRC Staff completed a site-specific Draft EIS in December 2023, and Petitioners timely filed their petition challenging the Draft EIS by proffering three contentions that focus on (1) design-basis accidents, (2) severe accidents, and (3) climate change. While we address these specific contentions below, it is important to note two additional developments that arose after the Petition was filed.

First, as we previously noted,[60] on April 2, 2024, GAO issued its report on climate change and nuclear power plants that led Petitioners to seek, and obtain, an amendment of their petition to add this GAO Report as additional support for their climate change contention.[61]

Second, on May 16, 2024, the Commission approved a new Rule (2024 Rule) that will amend 10 C.F.R. Part 51 and adopt a new Generic Environmental Impact Statement for both an initial license renewal application and one subsequent license renewal application.[62] Based on the parties' comments during oral argument, it appears that the 2024 Rule is likely to be published in August 2024 and will likely go into effect in September 2024.[63]

In the 2024 Rule, severe accidents will be categorized as a generic, or Category 1, issue.[64] The 2024 Rule also will include a new category of environmental impacts designated as "climate change impacts on environmental resources."[65] Any environmental impact falling into this category is to be addressed, not generically as a Category 1 issue, but rather as a site-

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supplement with site-specific analyses of issues that previously had been analyzed generically as Category 1 issues in the GEIS). Id. at 41. VEPCO chose not to wait for the GEIS update.

[60] See supra note 10.

[61] See supra notes 11–12.

[62] See Mem. from Carrie M. Safford, Secretary, NRC, to Raymond V. Furstenau, Acting Executive Director for Operations, NRC, at 1 (May 16, 2024) (ADAMS Accession No. ML24137A164) (SRM). The 2024 Rule is based on a revised Generic Environmental Impact Statement whose previous versions (see supra note 51) only applied to initial license renewal applications.

[63] See Tr. at 53–55.

[64] See SRM, encl. at 6.

[65] See id.

specific, or Category 2, issue.[66] The parties and the Board agree, however, that the 2024 Rule does not govern our proceeding.

C. Analysis

1. Contention 1

Petitioners' first contention alleges that the Draft EIS fails to satisfy both NEPA and 10 C.F.R. § 51.71 "because it does not address the environmental significance of the 2011 Mineral Earthquake, whose epicenter was a short distance from the two reactors and whose ground motion exceeded the design basis levels for both reactors."[67] Petitioners argue that by "exceeding the reactors' design basis, the earthquake disproved the assumption underlying the NRC's issuance of operating licenses in 1978 (for Unit 1) and 1980 (for Unit 2) and renewal of those licenses [in] 2003, that the reactors could be operated safely and without significant adverse environmental impacts because their [structures, systems, and components] were built to a design basis of sufficient rigor to protect against likely earthquakes."[68] According to Petitioners, this assumption is also found in the "2013 License Renewal GEIS and the Draft EIS for the North Anna SLR application."[69] Thus, Petitioners argue the Draft EIS fails to address, "the question of whether the environmental impacts of operating North Anna Units 1 and 2 in noncompliance with its design basis for an additional twenty years will have significant impacts."[70]

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[66] See id.

[67] See Petition at 9. "The earthquake in question, which the United States Geological Survey reported as having a Richter scale magnitude of 5.8, occurred on August 23, 2011, with its epicenter near Mineral, Virginia, approximately 10 miles from the North Anna facility." North Anna, LBP-21-4, 93 NRC at 193.

[68] Petition at 9.

[69] Id.

[70] Id. at 10.

Framed as a contention of omission, i.e., that the Draft EIS is devoid of any discussion of a particular issue that must be addressed, Contention 1 is inadmissible because the Draft EIS in Section 3.4.4 does indeed discuss the 2011 Mineral earthquake and the extensive regulatory review that followed it.[71] As noted by VEPCO, the Draft EIS "discusses the process by which the NRC evaluated the probability-weighted consequences of a postulated severe accident (including one initiated by an earthquake) and confirms that the probabilistic modeling expressly takes into account the 2011 Mineral earthquake."[72] For this reason alone, the Petitioners have failed to show that a genuine dispute exists with the Draft EIS on a material issue of law or fact, as required by 10 C.F.R. § 2.309(f)(1)(vi).

Contention 1 is also inadmissible because it is so vague and unparticularized that it fails to provide a specific statement of fact to be raised as required by 10 C.F.R. § 2.309(f)(1)(i).[73] Petitioners must "provide sufficient information" to show that a genuine dispute exists with the Draft EIS on a material issue of law or fact, and this information "must include references to specific portions of the application. . . that the petitioner disputes" and "supporting reasons for the petitioner's belief" that the application fails to contain material information.[74] However, Petitioners do not specify what portion of the Draft EIS is allegedly required to "address the environmental significance of the 2011 Mineral earthquake."[75] Nor do Petitioners cite to any requirement that the Draft EIS include the information they seek, such as the "fundamental difference between a finding of no significant or small impact that is based on a deterministic analysis and a finding of no significant impact that is based on a probabilistic analysis" or an explanation of the purported "significant disparity" in the results of the Unit 3 seismic risk

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[71] See Draft EIS at 3-23 to 24.

[72] VEPCO Answer at 18.

[73] 10 C.F.R. § 2.309(f)(1).

[74] 10 C.F.R. § 2.309(f)(1)(vi).

[75] Petition at 9.

analysis compared with the same analysis for Units 1 and 2, even though in both instances the NRC and VEPCO "were responding to the very same earthquake."[76] Thus, Contention 1 is inadmissible.

But even were we to read Contention 1 as a contention of adequacy, i.e., as asserting that the Draft EIS's discussion of a particular issue is inadequate, Contention 1 remains inadmissible insofar as it raises safety instead of environmental concerns. Because the NRC considers the safety assessment of seismic hazards for existing nuclear power plants to be a "separate and distinct" process from license renewal,[77] safety issues are to be addressed on an ongoing basis as a part of the plant's current licensing basis.

Additionally, another licensing board, LBP-21-4, evaluated a nearly identical contention concerning this 2011 earthquake and found it inadmissible under the 2.309(f)(1) criteria.[78] As Petitioners offered no new evidence or support for Contention 1 since the LBP-21-4 Board ruled, our independent determination that the contention is inadmissible is supported by the prior Board's decision.[79]

2. Contention 2

Petitioners' second contention alleges that the "Draft EIS does not contain a complete or adequately rigorous evaluation of accident risks because essential data are missing and important analytical assertions are erroneous or misleading."[80] Petitioners list nine bullet points

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[76] Petition at 10, 11.

[77] See 2013 GEIS at 1-21 ("reactor oversight process, which includes seismic safety, remains separate from license renewal"); Draft EIS at 3-26 ("Reactor Oversight Process, which considers seismic safety, is separate and distinct from the NRC staff's license renewal environmental review.").

[78] See Va. Elec. and Power Co. (North Anna Power Station, Units 1 and 2), LBP-21-4, 93 NRC 179, 193 (2021).

[79] We note that were Contention 1 to be evaluated under the pending 2024 Rule, it would be inadmissible because all design-basis accident matters will be deemed Category 1 issues and hence would be outside the permissible scope of this proceeding, absent Petitioners obtaining a 10 CFR § 2.335(b) waiver to challenge the 2024 Rule. See supra note 53.

[80] Petition at 12.

summarizing Section C.2 of the declaration of their expert witness, Mr. Mitman, that purportedly establish the NRC Staff's Draft EIS, "lacks an adequate basis for concluding that the environmental impacts of accidents during a license renewal term are 'SMALL.'"[81]

Contention 2 falls short for (1) its failure to "set forth with particularity the [contention] sought to be raised," and (2) its failure to show that a genuine dispute exists with the Draft EIS on a material issue of law or fact.[82]

First, Petitioners attempt to incorporate by reference Mr. Mitman's declaration, without providing any further explanation as to the significance or relevance of the nine bullet points they offer to meet the admissibility criteria of 10 C.F.R. § 2.309(f)(1). But the Commission prohibits this kind of wholesale incorporation of documents as alleged support for contention admissibility.[83] Instead, the Commission "expects parties to bear their burden and to clearly identify the matters on which they intend to rely with reference to a specific point," rather than forcing the Board itself to search for a needle that may be in a haystack.[84] Rather than setting "forth with particularity the contentions sought to be raised," Petitioners have failed to do so for Contention 2.[85]

Second, the set of statements pulled from Mr. Mitman's declaration (which Petitioners include as their "statement of contention" as required by 10 C.F.R. § 2.309(f)(1)(i)) fail to show that a genuine dispute exists with the Draft EIS on a material issue of law or fact. An expert opinion that "merely states a conclusion (e.g., the application is 'deficient,' 'inadequate,' or 'wrong') without providing a reasoned basis or explanation for that conclusion is inadequate

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[81] Id. at 13.

[82] 10 C.F.R. §§ 2.309(f)(1), (f)(1)(vi).

[83] See Entergy Nuclear Operations, Inc. (Palisades Nuclear Plant and Big Rock Point Site), CLI-22-8, 96 NRC 1, 100 (2008); Pub. Serv. Co. of N.H. (Seabrook Station, Units 1 and 2), CLI-89-3, 29 NRC 234, 240–41 (1989).

[84] Seabrook Station, CLI-89-3, 29 NRC at 241 (1989).

[85] See 10 C.F.R. § 2.309(f)(1).

because it deprives the Board of the ability to make the necessary, reflective assessment of the opinion."[86] Here, the summaries of Mr. Mitman's declaration fail to articulate any reason why the Draft EIS falls short of any legal or regulatory obligations or how this alleged deficiency renders the Draft EIS materially inadequate.

The first of Contention 2's nine bullet points alleges that the Draft EIS "is inadequate as a general matter for making broad generalizations about external event core damage frequency ('CDF') based on extrapolations from internal event CDF values and limited actual plant-specific values for external event CDF."[87] However, Petitioners do not identify any of these alleged "broad generalizations" about CDF, nor do they identify why a "broad generalization[ ]" would run afoul of any sort of statutory or regulatory obligation. As a result, Petitioners have failed to show that a genuine dispute exists with the Draft EIS on a material issue of law or fact.

The second bullet point alleges that "in finding that the environmental impacts of severe accidents are 'SMALL,' the NRC ignores its own data regarding seismic and fire [CDF] that indicate these impacts are significant" and that "the NRC also disregards the fact that the occurrence of the 2011 Mineral Earthquake, by itself, increased the risk of impacts from another earthquake severe enough to damage safety equipment."[88] However, Petitioners do not identify the "data" that the NRC allegedly ignores nor do they explain why such data is legally required to be considered in the first place. In addition, Petitioners provide no support for their assertion that the occurrence of the 2011 Mineral Earthquake increases the risk of impacts from another earthquake. Thus, Petitioners have not shown that a genuine dispute exists with the Draft EIS on a material issue of law or fact.

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[86] USEC Inc. (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006) (quoting Private Fuel Storage, LLC. (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181 (1998)).

[87] Petition at 13.

[88] Id.

The third bullet point claims that "the Draft EIS assertion at page F-26 that there has been 'a substantial decrease in internal event CDF' is erroneous" and that this "error affects other estimates such as the estimate of population dose risk."[89] However, Petitioners do not explain why this assertion from the Draft EIS is erroneous. Given all this, such a statement is not enough to support a genuine dispute.

Petitioners' fourth bullet point maintains that the Draft EIS "fails to demonstrate consideration of external flooding with subsequent ingress of water into the turbine building" and that flooding posing a significant accident risk "has not been addressed in the Draft EIS."[90] Again, Petitioners provide no support for this assertion, nor do they engage with the sections of the Draft EIS, namely sections 3-24 to 3-26 and F-21, that do indeed consider external flooding risks post-Fukushima.[91]

Petitioner's fifth bullet point alleges that the Draft EIS "makes misleading statements about the NRC's review of Fukushima-related information relevant to North Anna and risk improvements obtained by NRC and license efforts after September 2001."[92] Petitioners do not provide any support for this statement or explain why the Draft EIS is "misleading" such that this would show a genuine dispute exists with the Draft EIS.

Petitioners' sixth bullet point argues that the Draft EIS "takes inappropriate credit for reductions in environmental risk that are not reflected in the PRA [Probabilistic Risk Assessment] for" North Anna Units 1 and 2.[93] Petitioners do not provide any support for this statement or explain why such "credit" makes the Draft EIS deficient.

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[89] Id.

[90] Id.

[91] See Draft EIS at 3-24 to 26, F-21. While this portion of Contention 2 is not admissible purely as a severe accident contention, it also forms the basis for Petitioners' Contention 3 and will be evaluated there separately.

[92] Petition at 14.

[93] Id.

In their seventh bullet point, Petitioners assert that the Draft EIS "fails to demonstrate consideration of uncertainties with respect to the conclusion that severe accident impacts are 'SMALL.'"[94] However, Petitioners neither address what those "uncertainties" are nor why they are legally required to be considered. Moreover, as the Applicant points out, the Draft EIS includes an entire section (F.3.9) devoted to "uncertainties" which the Petitioners do not address or dispute.[95]

In their eighth bullet point, Petitioners argue that the Draft EIS "does not address the environmental impacts of concurrent multi-unit accidents."[96] However, as the NRC Staff notes in its Answer,[97] the SAMA analysis was performed for the initial license renewal, there is no requirement to perform a new analysis for the current renewal, and any challenge to the scope of the SAMA analysis should have been made in the proceedings of the initial license renewal. This challenge thus falls outside the scope of the current relicensing proceeding, failing to meet the contention admissibility criterion of 10 C.F.R. § 2.309(f)(1)(iii).

Finally, in their ninth bullet point, Petitioners allege that the SAMA analysis in the Draft EIS is "deficient" for its "failure to consider SAMAs that meet criteria for consideration, and failure to provide documentation of an NRC audit relied on to conclude that VEPCO's approach to its SAMA analysis was methodical and reasonable."[98] Petitioners fail to provide any support or explanation for this assertion, namely, what specific SAMAs meeting the criteria to be considered were not considered, much less what legal requirement exists to require "documentation of an NRC audit" in the Draft EIS. Thus, Petitioners fail to present a genuine dispute with the Draft EIS.

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[94] Id.

[95] See VEPCO Answer at 34; Draft EIS at F-15 to F-17.

[96] Petition at 14.

[97] NRC Staff Answer at 30.

[98] Petition at 14.

For these reasons, Contention 2 is inadmissible because it is out of scope, fails to provide support for its assertions, and to demonstrate a genuine dispute with the Draft EIS on a material issue of law or fact, as required by 10 C.F.R. § 2.309(f)(1)(iii)-(vi).[99]

3. Contention 3

As amended, Petitioners' third contention alleges that the Draft EIS fails to satisfy both NEPA and 10 C.F.R. § 51.71 "because it does not address the effects of climate change on accident risk."[100] Petitioners contest the NRC's claim that it considers "climate-related information in its licensing reviews and ongoing oversight."[101] In other words, they argue, "[t]he fact that NRC plans to address climate change risks in the future does not excuse the agency from addressing the risks as they are understood at this time."[102] Petitioners cite to the GAO Report as the basis for their Contention 3.[103] In their answers, both VEPCO and the NRC Staff argue this contention is inadmissible because it fails to demonstrate a genuine dispute with the Draft EIS on a material issue of law or fact and it is outside the scope of this proceeding.[104]

In their answers disputing that Contention 3 is admissible, both the NRC Staff[105] and VEPCO[106] assert that a similar contention was not admitted in the recent Turkey Point LBP-24-03 decision.[107] There, the petitioners alleged that the NRC Staff's Draft Supplemental

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[99] We note that were Contention 2 to be evaluated under the pending 2024 Rule, it would be inadmissible because all severe accident matters will be deemed Category 1 issues and hence, absent a waiver, would be outside the permissible scope of this proceeding. See supra note 79.

[100] Petition at 15.

[101] Id. at 16.

[102] Id.

[103] See Motion to Amend at 1.

[104] See VEPCO Answer at 37–42; NRC Staff Answer at 33–44.

[105] See NRC Staff Answer at 38.

[106] See VEPCO Answer at 37–38.

[107] See Florida Power & Light Company (Turkey Point Nuclear Generating Units 3 and 4), LBP-24-03, 99 NRC __, __ (slip op.) (Mar. 7, 2024).

Environmental Impact Statement for Turkey Point had failed to address the impact of climate change on accident risk at that facility.

We conclude that Contention 3 is inadmissible because it is out of scope, based on speculation, and lacks the requisite specificity to provide other parties with notice of what they would have to defend against at hearing.[108]

a. Scope

First, Petitioners fail to demonstrate that Contention 3 is within the scope of the proceeding. The scope of this proceeding was limited by the notice of opportunity to intervene to "contentions based on new information in the DEIS."[109] Petitioners stated without additional information that "the Contention falls within the scope of 'new information' as described in the hearing notice because it concerns a new reactor-specific accident analysis in the Draft SEIS that takes the place of a previous environmental analysis."[110] Petitioners failed to identify that analysis, explain how it is "new information in the DEIS," or how it differs from previously available information.

Petitioners assert that the scope of this proceeding extends to all subjects that were treated as Category 1 issues in the previous Draft EIS as well as other new information in the Draft EIS.[111] The only support provided for that claim is that any other interpretation would be

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[108] The Commission explained that the "detailed pleadings" requirement in section 2.309(f) puts other parties in the proceeding on notice of the Petitioners' specific grievances and thus gives them a good idea of the claims they will be either supporting or opposing." Duke Energy Corporation (Oconee Nuclear Station, Units 1, 2 and 3) CLI-99-11, 49 NRC 328, 334 (1999).

[109] 89 Fed. Reg at 962. This language was consistent with that in CLI-22-3, 95 NRC 40, 42 (2022) ("After each site-specific review is complete, a new notice of opportunity for hearing — limited to contentions based on new information in the site-specific environmental impact statement — will be issued.").

[110] Petition at 17.

[111] Tr. 152–53 ("And it's wide open, we don't have to show that there's something new that is different from the 2021 environmental impact statement because the Commission has basically said that environmental impact statement, because it relied on the previous GEISs, is also

contrary to the language of CLI-22-2 and CLI-22-3.[112] While it is arguable that this might be what the notice of opportunity "should" have said, it is not what the notice actually said. The scope of the proceeding was set by the Notice consistent with CLI-22-3,[113] and we do not believe that the Board has the authority to change that scope.

Petitioners not only did not demonstrate new information in the Draft EIS, but they also stated at oral argument that such a showing was not necessary.[114] Additionally, at oral argument, Petitioners established that the "new information" referenced in Petitioners' scope statement was the Probabilistic Risk Assessment (PRA) that was used to evaluate accident risk.[115] But this PRA was the basis of the Severe Accident Mitigation Analysis (SAMA) performed for the initial license renewal of North Anna, and is not at this time new information.[116] The actual new analysis in the Draft EIS was an evaluation finding that no new information required reevaluation of the SAMA.[117]

b. Speculation

Additionally, this contention is based upon the speculation that inclusion of climate change effects might change the results of the North Anna PRA. Petitioners' expert, Mr. Mitman, provided numerous examples of how climate effects could impact the PRA, but he never addressed whether expected climate change effects near North Anna were sufficient to

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inadequate. And this is a clean slate we're working with. . . . [N]ew information would include anything that was previously designated as Category 1.").

[112] See id.

[113] See supra note 109.

[114] See Tr. at 203 ("[W]e don't have to show that this is something new from the 2021 Draft – Final EIS."). See supra note 109.

[115] See Tr. at 154.

[116] See id. at 154–155.

[117] See id. at 150–51. Hypothetically Petitioners could have challenged that this new evaluation of new information relative to the SAMA analysis, contained in section F.3 of the Draft EIS, was deficient in not considering climate change, but they did not.

actually affect North Anna accident risk. As such, Petitioners' claims remain speculation. In fact, neither the Petition itself nor Petitioners' expert engages with the climate change projections provided in Section 3.14.3.2 of the Draft EIS. In the absence of such an analysis, the contention does not present a "seriously" different picture of the environmental impact, which the Commission has indicated is necessary to provide grounds for an admissible contention.[118]

While Petitioners have provided reasonable support for the proposition that climate change effects can alter accident risk, they have provided no factual or expert opinion support for the assertion that climate change effects will affect accident risk at North Anna in a way that provides the requisite "seriously different picture" of environmental impacts. As such, Petitioners have not established that their contention raises a genuine dispute on a material issue.

c. Lack of Specificity in the Petition

Section 2.309 (f)(1) requires that the petition provide the information fulfilling the contention admissibility criteria. The petition refers to the attached declaration as providing that information, but it generally does so without specifying exactly what part of the declaration provides the required information.[119] As we noted previously, providing a myriad of related information in a declaration in a manner requiring the Board to root through that information to satisfy admissibility criteria is not adequate. Admittedly a Board could, from the plethora of

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[118] Hydro Resources, Inc., CLI-06-29, 64 NRC 417, 419 (2006) ("But as the Commission explained earlier in this proceeding, not all new information that might emerge following issuance of an environmental impact statement requires a supplement to the impacts analysis. The new information must present a 'seriously different picture of the environmental impact of the proposed project from what was previously envisioned.'"); see USEC, Inc. (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 480 (2006) (indicating contentions must be based on a genuine material dispute, not the possibility that petitioners, if they perform their own analyses, may ultimately disagree with the application.).

[119] Petitioners reference only paragraphs 48 and 51 of the Mitman Declaration, but these two paragraphs only provide speculation that climate change might impact accident risk.

information provided by Mr. Mitman, retrieve and arrange information that appears to meet admissibility requirements. But there is no way to guarantee that the resultant contention would be the contention intended by Petitioners in their initial pleading.

Two examples of this lack of specificity are provided below.

i. Lack of Necessary Supporting Facts or Expert Opinion

Contention admissibility rules dictate that a petition must, "[p]rovide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position."[120] Petitioners provide a section within their Petition concerning Contention 3 titled, "Concise Statement of the Facts or Expert Opinion Supporting the Contention, Along with Appropriate Citations to Supporting Scientific or Factual Materials."[121] Despite its title, we find that this section, in its entirety reads: "The facts supporting Petitioners' Contention are stated in the Contention itself and in the attached Mitman Declaration."[122]

The Mitman Declaration consists of 37 dense pages of information and opinions. The petition improperly leaves it to the Board to determine what parts support the petition and how they do so. And while the Board may be capable of collating the information and assembling a cohesive argument, that is neither the Board's place nor the Board's duty.

ii. Absence of Required Basis

The contention admissibility criteria in 10 CFR § 2.309(f)(1)(ii) require that a petition must include "a brief explanation of the basis for the contention." While the "basis for a contention" is undefined in 10 CFR Part 2, we view the basis of a contention as that train of logic and legal foundation that, when starting with the facts and expert opinions provided by Petitioners, leads inevitably to the conclusion that the contention poses a legitimate question

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[120] 10 CFR 2.309(f)(1)(v).

[121] Petition at 18.

[122] Id.

concerning the adequacy of the application. The basis of a contention is how Petitioners intend to demonstrate the validity of the contention.

In reviewing the Petitioners' "Basis Statement" of Contention 3, we find nothing that outlines Petitioners' train of logic or looks like such a basis for a contention. We see that Petitioners intend to rely on the Mitman declaration, on a New York v. NRC decision, and upon Council on Environmental Quality guidance. But we see nothing that we can identify as a basis. Perhaps Petitioners intend for the Board to infer a basis. But as the Commission has admonished, "boards may not simply infer unarticulated bases of contentions. It is a contention's proponent, not the licensing board, that is responsible for formulating the contention and providing the necessary information to satisfy the basis requirement for the admission of contentions."[123]

Contention 3 fails to meet 10 C.F.R. § 2.309(f)(1)(ii), (iii), (v), and (vi). For these reasons we conclude the contention as submitted by Petitioners is inadmissible.[124]

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[123] USEC Inc. (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 457 (2006) (internal quotation marks omitted).

[124] Under the 2024 Rule this contention would still be inadmissible. This contention challenges the assessment of accident risk, which is assessed as a severe accident issue, and the 2024 Rule classifies this as a Category 1 issue addressed in a generic manner.

## IV. CONCLUSION

For the foregoing reasons, we (1) deny Petitioners' hearing request; and (2) terminate this proceeding. Because this memorandum and order rules upon an intervention petition, in accordance with the provisions of 10 C.F.R. § 2.311, any appeal to the Commission from this memorandum and order must be taken within twenty-five days after this issuance is served.

It is so ORDERED.

THE ATOMIC SAFETY
AND LICENSING BOARD

***/RA/***

Dr. Gary S. Arnold
ADMINISTRATIVE JUDGE

***/RA/***

Nicholas G. Trikouros
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 10, 2024

**Judge Gibson, Concurring in Part, and Dissenting in Part**

While I agree with the majority's rulings that Petitioners have standing and that Petitioners' Contentions 1[1] and 2[2] are not admissible, I must dissent from their ruling that Petitioners' Contention 3 is inadmissible. The majority rejects Contention 3 with a broad brush by stating that it fails to meet the requirements of 10 C.F.R. § 2.309(f)(1). Contrary to the majority's conclusion, however, Contention 3 satisfies each of § 2.309(f)(1)'s six admissibility criteria.

Because the majority found little, if any, fault with Petitioners' pleadings and technical support as to three of these § 2.309(f)(1) criteria, I turn first to address them only briefly; they are: (1) issue raised by the contention, (2) materiality, and (3) genuine dispute on a material issue of law or fact.

After confirming that Petitioners' pleadings meet each of these three criteria, I then devote the remainder of this dissent to a more extensive analysis of the other three § 2.309(f)(1) criteria—(4) basis of the contention, (5) scope, and (6) statement of supporting facts and expert opinion—because this is where the primary error of the majority's ruling lies.

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[1] I do, however, disagree with part of the majority's rationale for denying the admission of Contention 1, insofar as the majority asserts that a contention challenging a safety issue is per se out of scope. See Majority Opinion at 15. As I explain in my analysis of the Part 54 regulations, not all safety issues are out of scope. Rather, only those safety concerns that are part of the current licensing basis of the plant are out of scope. See infra at 11–14.

[2] I likewise cannot support the entire rationale the majority offers for not admitting Contention 2. Specifically, I disagree with the majority's perfunctory dismissal of Petitioners' "fourth bullet," offered in support of Contention 2—which concerns flooding of the turbine building. Majority Opinion at 18. As this dissent makes clear, whether the environmental impact of climate change, during the period of subsequent license renewal, poses an accident risk of local intense precipitation-induced flooding of the turbine building at North Anna is a legitimate concern—and, in fact, it is the very reason that Contention 3 (but not Contention 2) should have been admitted.

(1) Issue Raised by the Contention

Section 2.309(f)(1)(i) requires that a petitioner provide a specific statement of the issue of law or fact to be raised or controverted. Petitioners allege the legal issue raised by Contention 3 is the failure of the Draft EIS to comply with NEPA and with 10 CFR § 51.71,[3] which requires that a "draft environmental impact statement…include a preliminary analysis that considers and weighs the environmental effects, including any cumulative effects, of the proposed action."[4]

In addition, Petitioners allege Contention 3 raises the factual issue of whether the environmental impact of climate change, during the period of subsequent license renewal, poses an accident risk that must be addressed in Draft EIS Section 3.11.6.9 "Postulated Accidents" or Appendix F "Environmental Impacts of Postulated Accidents" because climate change "demonstrably affects the frequency and intensity of some external events and therefore has the potential to significantly increase accident risks.…[including] the reasonably foreseeable increase in the frequency and volume of flooding"[5] at North Anna.

Taken together, these allegations sufficiently state the issue raised by the contention as required by 10 C.F.R. § 2.309(f)(1)(i).

(2) Materiality

Section 2.309(f)(1)(iv) requires a petitioner to demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action involved in the proceeding. Here, CLI-22-3 obligated the NRC Staff to prepare a site-specific Draft EIS that contains the NRC's findings needed to support the action involved in this proceeding, i.e.,

[3] Petition at 15.

[4] 10 C.F.R. § 51.71(d).

[5] Petition at 16 (citing Mitman Declaration at Paragraphs 48, 51).

whether to grant VEPCO's SLRA.[6] In challenging the NRC Staff's findings, Petitioners assert (1) that 10 CFR § 51.71 requires an evaluation of the environmental impact of climate change, during the period of subsequent license renewal, posing an accident risk of flooding at North Anna,[7] (2) that no such evaluation appears in Section 3.11.6.9 "Postulated Accidents" of the Draft EIS or Appendix F "Environmental Impacts of Postulated Accidents",[8] and (3) that this omission is material because, had such an evaluation been included, it reasonably could have affected "the NRC's proposed findings that the environmental impacts of re-licensing North Anna are "SMALL."[9] In further support of this allegation, Petitioners offer the Declaration of their expert, Mr. Mitman:

> In summary, in my professional opinion, the Draft [EIS for North Anna] does not reflect a complete or adequately rigorous evaluation of all external hazards, does not consider uncertainties and does not address the reasonably foreseeable effects of climate change on the risks of accidents at North Anna. Given these serious deficiencies, the NRC cannot claim to have a reasonable basis for concluding that the environmental impacts of accidents during a license renewal term are "SMALL."[10]

And elsewhere in his Declaration, Mr. Mitman identifies a specific accident risk, i.e, climate change-induced local intense precipitation could cause flooding of the turbine building at North Anna.[11] Taken together, these allegations and technical support are sufficient to establish the materiality of Contention 3 as required by 10 C.F.R. § 2.309(f)(1)(iv).

(3) Genuine Dispute on a Material Issue of Law or Fact

Section 2.309(f)(1)(vi) requires a petitioner to provide sufficient information demonstrating that a genuine dispute exists with the applicant on a material issue of law or fact

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[6] Rather than wait for the 2024 Rule to be adopted and for the concomitant final GEIS to be issued, VEPCO opted to go forward with its SLRA, which in turn triggered the preparation of the draft site-specific EIS for North Anna that is at issue here. See Majority Opinion at note 59.

[7] Petition at 15–16 (citing Mitman Declaration at Paragraphs 48, 51).

[8] Petition at 15.

[9] Id. at 17.

[10] Mitman Declaration at Paragraph 60.

[11] Id. at Paragraphs 34–35.

including "references to specific portions of the application…that the petitioner disputes and the supporting reasons for each dispute."[12] Here, Contention 3, as a contention of omission, asserts that the Draft EIS fails to address the environmental impact of climate change, during the period of subsequent license renewal, on accident risk at North Anna—and specifically the risk of flooding there. In addition, Mr. Mitman's Declaration avers that climate change-induced local intense precipitation presents a risk of flooding of the turbine building at North Anna.[13]

The specific provisions of the Draft EIS that Contention 3 challenges are Section 3.11.6.9 "Postulated Accidents" and Appendix F "Environmental Impacts of Postulated Accidents."[14] Consistent with Petitioners' allegations and Mr. Mitman's Declaration, these sections of the Draft EIS contain no analysis of the environmental impact of climate change, during the period of subsequent license renewal, including any impacts from local intense precipitation-induced flooding of the turbine building at North Anna. In fact, neither the phrase "climate change" nor the phrase "turbine building" even appears in Section 3.11.6.9 or in Appendix F.

But even had Petitioners searched through other parts of the Draft EIS in hopes of finding an evaluation of the environmental impact of such a climate change-induced accident risk at North Anna, they would have struck out there, too. For it simply is not there.

As the majority correctly points out, the Draft EIS does contain another notable section, Section 3.14.3.2 "Climate Change." However, as discussed below under scope,[15] this section of the Draft EIS explicitly states that the NRC Staff will not consider the impact of climate change on the plant itself.[16] Critically, then, Section 3.14.3.2 "Climate Change" in the Draft EIS likewise

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[12] 10 CFR 2.309(f)(1)(vi).

[13] Mitman Declaration at Paragraphs 34–35.

[14] Petition at 15.

[15] See infra at 15.

[16] See Draft EIS at 3-194.

fails to discuss the environmental impact of climate change, during the period of subsequent license renewal, including any impacts from local intense precipitation-induced flooding of the turbine building at North Anna. And again, neither the phrase "accident risk" nor the phrase "turbine building" appears in Section 3.14.3.2.[17] Instead, in this section, under "Surface Water Resources," the Draft EIS simply notes that heavy precipitation "has increased by an average of 27 percent across the Southeast" since 1958, and that "[o]bserved increases in heavy precipitation events are projected to continue across the Southeast, including Virginia."[18] It says nothing else of consequence with respect to how these events will impact North Anna itself.

Additionally, there are several parts of the Draft EIS that address flooding: (1) Section 2.4.5 "Hydroelectric Power" notes that flooding is a possible downside of pursuing the alternative of hydroelectric power; (2) Section 3.3.1 "Meteorology and Climatology" notes that, during the period 1950-2023, Virginia experienced eight floods that would qualify as "occasional extreme weather events;" (3) Sections 3.4.5 and F.4.3 "Fukushima-Related Activities" of Appendix F "Environmental Impacts of Postulated Accidents" note that studies have been conducted to address possible flooding associated with Fukushima-type seismic events (although the NRC Staff maintains—just as it has with climate change—that any challenge to the NRC Staff's examination of the environmental impacts of such events on the plant is

[17] There also is no discussion of this accident risk in Appendix G of the Draft EIS, which purports to address how the new 2024 Rule is to resolve the issues that the Draft EIS discusses in Section 3.14.3.2 "Climate Change." But just like Section 3.14.3.2 "Climate Change" of the Draft EIS, Appendix G contains no analysis of the environmental impact of climate change, during the period of subsequent license renewal, on accident risk at North Anna. Nor does Appendix G mention the phrases "accident risk" or "turbine building." Significantly, although Appendix G recognizes a new Category 2 issue, "Climate Change Impact on Environmental Resources," (See SRM, encl. at 6), it appears largely to parrot the evaluation in Section 3.14.3.2 "Climate Change" of the Draft EIS. And so, despite the fact that the Commission's 2024 Rule establishes this entirely new category, this discussion in Appendix G suggests that the Commission's adoption of the 2024 Rule will not alter the NRC Staff's refusal to consider the environmental impacts of climate change on a particular nuclear power plant in conjunction with that plant's license renewal.

[18] Draft EIS at 3-195.

"outside the scope of the NRC's license renewal environmental review"[19]); and (4) Section 3.5.1.1 "Surface Water Hydrology" claims both that the North Anna Dam provides a flood control function and that North Anna is safe from flood hazards. Nevertheless, in none of these sections of the Draft EIS can one find the phrases "accident risk," "climate change," or "turbine building."

Plainly and simply, Contention 3 is a contention of omission that demonstrates a genuine dispute on a material issue of law or fact that includes specific references to portions of the application and, as such, it satisfies the admissibility criteria of 10 C.F.R. § 2.309(f)(1)(vi).

(4) Basis of the Contention

Section 2.309(f)(1)(ii) requires a brief explanation of the basis for the contention. In this regard, the majority faults Petitioners (1) for failing to sketch out a "train of logic" (a requirement the majority seeks to impose on Petitioners without offering any apparent legal authority) that presumably ties the allegations of Petitioners' pleadings to their supporting technical information and (2) for failing to specify legal support for the contention.[20] Contrary to the majority's ruling, however, Petitioners have provided an adequate explanation of the basis for the contention.

As for the "train of logic," Petitioners supplied two technical documents that, in my estimation, address the majority's concern. The first is the Declaration of Petitioners' expert, Mr. Mitman, in which he both (a) confirms that, as Contention 3 alleges, neither Section 3.11.6.9 nor Appendix F of the Draft EIS evaluates the impact of climate change on accident risk at North Anna and (b) identifies a specific accident risk that climate change poses during the period of

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[19] Id. at 3-25. It certainly seems conceivable that VEPCO conducted Fukushima-related studies or made Fukushima-related modifications at the North Anna site which would establish that the environmental impact of climate change, during the period of subsequent license renewal, does not pose an accident risk of local intense precipitation-induced flooding of the turbine building at North Anna. However, there is nothing in the Draft EIS to suggest the NRC Staff even considered whether any such VEPCO studies or plant modifications would be adequate to prevent climate-change induced flooding of the turbine building at North Anna.

[20] Majority Opinion at 25.

subsequent license renewal at North Anna, i.e., local intense precipitation-induced flooding of the turbine building at North Anna.[21] The second technical document that Petitioners offer is the GAO Report,[22] which suggests the NRC should devote more attention to the impact of climate change on its licensing and oversight of nuclear power plants.[23] The GAO Report also specifically rates the potential for flooding at North Anna as a high hazard.[24]

As for legal authority, Petitioners cite to a D.C. Circuit case, New York v. NRC,[25] which rejected another NRC NEPA analysis for failing to sufficiently analyze environmental risks, much like what is alleged in Contention 3 here. Petitioners maintain that New York v. NRC requires the NRC Staff to look at "both the probabilities of potentially harmful events and the consequences if those events come to pass."[26] Petitioners further cite New York v. NRC as requiring that, unless the probability of impacts is "so low as to dismiss the potential consequences," then those impacts must be addressed.[27] Petitioners maintain that the impact of climate change on accident risk is precisely the sort of event that New York v. NRC requires the NRC Staff to analyze under NEPA.[28]

As additional legal authority, Petitioners cite to the Council of Environmental Quality's 2023 Interim Guidance on Climate Change:[29]

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[21] Petition at 16 (citing Mitman Declaration at Paragraphs 48, 51).

[22] Majority Opinion at note 10.

[23] See Motion to Amend at 4 (citing GAO Report).

[24] Id. (citing GAO Report at 60, classifying the North Anna site as being in a high flood hazard area).

[25] Petition at 8 (quoting New York v. NRC, 681 F.3d 471 (D.C. Cir. 2012)); see also Petition at 16–17.

[26] Petition at 7–8 (quoting New York v. NRC, 681 F.3d at 482).

[27] Id. at 17 (quoting New York v. NRC, 681 F.3d at 478).

[28] Id.

[29] Petition at 8, 17 (citing Council on Environmental Quality, "National Environmental Policy Act Interim Guidance on Consideration of Greenhouse Gas Emissions and Climate Change," 88 Fed. Reg. 1196 (Jan. 9, 2023) (CEQ Interim Guidance on Climate Change)).

> The effects of climate change observed to date and projected to occur in the future include more frequent and intense heat waves, longer fire seasons and more severe wildfires, degraded air quality, increased drought, greater sea-level rise, an increase in the intensity and frequency of extreme weather events, harm to water resources, harm to agriculture, ocean acidification, and harm to wildlife and ecosystems. The IPCC [Intergovernmental Panel on Climate Change] Assessment Report reinforces these findings by providing scientific evidence of the impacts of climate change driven by human-induced GHG emissions, on our ecosystems, infrastructure, human health, and socioeconomic makeup.[30]

In its Interim Guidance, CEQ encouraged all federal agencies to use this guidance to examine the impact of climate change in the decisions those agencies make.[31] The Commission has long recognized that the NRC looks to CEQ for guidance on interpreting NEPA.[32] And, at least on its face,[33] the NRC's new 2024 Rule appears consistent with CEQ's Interim Guidance in obligating the NRC Staff to consider the impact of climate change on its licensing decisions by creating a new Class 2 Category entitled "Climate Change Impacts on Environmental Resources."[34]

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[30] Petition at 8, quoting CEQ Interim Guidance on Climate Change at 1200.

[31] CEQ Interim Guidance on Climate Change at 1196. CEQ states categorically "This guidance is not a rule or regulation." Id. at 1197, note 4.

[32] See Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI 11-11, 74 NRC 427, 443–44 (2011). The NRC Staff maintained during oral argument that it is not obligated to follow guidance from CEQ. See Tr. at 219. To be sure, the Commission reiterated in Diablo Canyon that "the NRC, as an independent regulatory agency, 'is not bound by those portions of CEQ's NEPA regulations' that…'have a substantive impact on the way in which the Commission performs its regulatory functions'" (citing "Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions and Related Conforming Amendments," 49 Fed. Reg. 9352, 9352 (Mar. 12, 1984), as well as 10 C.F.R. § 51.10(a)). But whether the NRC Staff is literally mandated to follow every jot and tittle of CEQ's substantive regulations is beside the point. Petitioners have simply cited CEQ's interim guidance here as additional legal support for the basis of Contention 3. In that respect, we must be mindful of Andrus v. Sierra Club, 442 U.S. 347, 358 (1979), which holds that CEQ's NEPA interpretations are entitled to substantial deference.

[33] See supra note 17.

[34] See SRM, encl. at 6.

Taken together, and contrary to the majority's ruling, the Mitman Declaration and these legal authorities cited in the Petition are sufficient to state the basis of Contention 3 as required by 10 C.F.R. § 2.309(f)(1)(ii).

(5) Scope

Section 2.309(f)(1)(iii) requires that every contention be within the permissible scope of the proceeding. The majority opinion errs in its scope ruling in two significant ways.

a. CLI-22-3's "New Information" is Not a Heightened Pleading Requirement

To prop up its holding that Contention 3 is not within scope, the majority accepts the NRC Staff's erroneous argument that CLI-22-3 blocks this Board from considering Contention 3 because it purportedly challenges information that had previously appeared in the NRC Staff's August 2021 Draft EIS for North Anna.[35] But the NRC Staff's claim that an evaluation of such information is outside the permissible scope of this proceeding[36] flies in the face of two indisputable facts: (1) the August 2021 Draft EIS for North Anna predates the Commission's decision in CLI-22-3; and (2) in CLI-22-3, the Commission specifically invited the Petitioners here to proffer new or refiled contentions once the NRC Staff had prepared a new site-specific Draft EIS for North Anna.

The NRC Staff's argument was summarily rejected in Turkey Point LBP-24-3.[37] There, a petitioner, Miami Waterkeeper, had proffered a climate change contention challenging the 2023 site-specific Draft EIS for Turkey Point Units 3 and 4. As it did here, the NRC Staff argued that Miami Waterkeeper's climate change contention was out of scope because the Turkey Point site-specific Draft EIS (which, like the Draft EIS here, was prepared after, and specifically in response to, CLI-22-3) just happened to contain some information that had previously been

[35] Majority Opinion at 21–22.

[36] See Staff Answer at 8 note 34, 13–15.

[37] Florida Power & Light Company (Turkey Point Nuclear Generating Units 3 and 4), LBP-24-3, 99 NRC __, __–__ (slip op. at 13–16) (Mar. 7, 2024).

discussed in the Turkey Point 2019 Supplemental EIS. This is how the Turkey Point board unraveled the NRC Staff's misguided argument:

> The Staff asserts that in CLI-22-3 the Commission intended "not to allow the re-litigation of pre-existing information for which a hearing opportunity had already been offered, but to allow for the litigation of new information that could not have been challenged previously." The Staff argues that [Miami Waterkeeper's climate change contention] impermissibly challenge[s] pre-existing information in the 2019 SEIS.
>
> …
>
> [W]e conclude that Miami Waterkeeper's proposed contentions are within the scope of this proceeding. In both form and substance, Miami Waterkeeper bases its contentions on the Draft SEIS. Although Miami Waterkeeper references documents and repeats arguments that pre-date the Draft SEIS, Miami Waterkeeper makes clear that it remains unsatisfied with the Staff's treatment of these issues in the Draft SEIS.[38]

The Turkey Point Board next (1) examined the precise instructions the Commission gave to the parties (including the NRC Staff) that were before it in CI-22-3 and (2) provided essential context for how the Commission's instructions are to be implemented.

> Further, we find significant the Commission's express permission in CLI-22-3 for petitioners to refile contentions. Although the Commission advised petitioners of its expectation that refiled contentions would be accompanied with updated references, petitioners were told that they would be responsible solely for meeting the agency's standing and general contention admissibility requirements. The agency's rules of practice include heightened pleading standards for new and amended contentions, which require a showing of good cause that hinges on the newness of the information supporting those contentions, along with an inquiry into whether the information could not have been raised previously. But here the Commission excused petitioners from satisfying these heightened pleading standards in their new hearing requests. Were we to credit the Staff's and FPL's cabined reading of CLI-22-3 to preclude Miami Waterkeeper's refiled contentions and references to documents that pre-date the Draft SEIS, we would, in effect, have shoehorned the heightened pleading standards for new and amended contentions into the scope inquiry.
>
> Rather, we find that the best way to give full effect to the Commission's instructions in CLI-22-3 is to treat the newness of the information underlying Miami Waterkeeper's refiled contentions as a materiality issue rather than a scope issue. Thus, as a general matter, the failure to provide new information or discuss its significance might risk failing to persuade us (or the Commission, on appeal) that a refiled contention previously dismissed by the prior board should now be admitted. But that failure does not require us to find a refiled contention beyond the scope of this proceeding.[39]

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[38] Id. at __– __ (slip op. at 14–15) (citation and footnotes omitted).

[39] Id. at __ –__ (slip op. at 15–16) (footnotes omitted).

Sadly, though, rather than following this sound reasoning of Turkey Point LBP-24-3, the majority has aligned itself with the NRC Staff's erroneous "scope" argument.

Still, even under the stilted scope argument that the majority adopts here, the key technical documents on which Petitioners rely qualify as "new information" because they post-date the NRC Staff's August 2021 Draft EIS for North Anna.[40] As "new information," these documents are sufficient to bring Contention 3 squarely within the contention admissibility criteria of § 2.309(f)(1)(iii). Accordingly, the majority erred in ruling that Contention 3 is not within scope.

b. Climate Change Impacts Are Not Per Se Out of Scope

Next, I must address head-on a second, and equally erroneous, scope argument that the NRC Staff interposed—because the majority simply side-stepped it. This second NRC Staff scope argument maintains that a contention may not challenge an EIS for failing to consider the impact of climate change on accident risk at a nuclear power plant.[41] To construct this argument, the NRC Staff sets up an illicit contrast between permissible "environmental" challenges and impermissible "safety" challenges by asserting:

> The Draft EIS says the effects of climate change on North Anna … structures, systems, and components are outside the scope of the staff's SLR environmental review. So we're not saying that we want to look at the effect on plant systems here in this EIS that is caused by climate change. That's not something that we're going to do."
> ….
> [W]e do not consider the effects of climate change on systems, structures, and components that are important to safety. We don't consider the safety issue as part of our environment review. We consider it separately in our safety review.[42]

[40] CEQ's Interim Guidance was issued in 2023, while the Mitman Declaration and the GAO Report are dated in 2024.

[41] See NRC Staff Answer at 38 (criticizing Petitioners by asserting they "do not explain how their contention concerns the impacts of the proposed action (i.e., continued operation for an additional 20 years) on the environment, as distinct from the impacts of environmental conditions on the plant.").

[42] Tr. at 189–192.

As support for this claim, the NRC Staff invokes 10 CFR Part 54.[43] There are two specific sections of Part 54 that define the subjects that may (and may not) be considered during license renewal. The first of these, 10 CFR § 54.4, entitled "Scope," establishes that the operation of the plant's systems, structures, and components must be considered during license renewal unless they are excluded from consideration elsewhere in Part 54. Significantly, neither VEPCO nor the NRC Staff ever mentioned § 54.4 during oral argument or in their Answers.

The other pertinent provision of Part 54 is 10 CFR § 54.30, "Matters not subject to a renewal review." This regulation prescribes that, during a license renewal, there can be no consideration of certain matters deemed part of the current licensing basis (CLB) of the plant. CLB, in turn, is defined in 10 CFR § 54.3 as:

> the set of NRC requirements applicable to a specific plant and a licensee's written commitments for ensuring compliance with and operation within applicable NRC requirements and the plant-specific design basis (including all modifications and additions to such commitments over the life of the license) that are docketed and in effect. The CLB includes the NRC regulations contained in 10 CFR parts 2, 19, 20, 21, 26, 30, 40, 50, 51, 52, 54, 55, 70, 72, 73, 100 and appendices thereto; orders; license conditions; exemptions; and technical specifications. It also includes the plant-specific design-basis information defined in 10 CFR 50.2 as documented in the most recent final safety analysis report (FSAR) as required by 10 CFR 50.71 and the licensee's commitments remaining in effect that were made in docketed licensing correspondence such as licensee responses to NRC bulletins, generic letters, and enforcement actions, as well as licensee commitments documented in NRC safety evaluations or licensee event reports.

Thus, a particular plant's CLB is to be documented in its most recent FSAR. The most recent update of the FSAR for North Anna Units 1 and 2 appears to have been made in 2016.[44]

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[43] NRC Staff Answer at 36–37 ("the safety issues raised in this contention do not address the safety requirements of 10 C.F.R. Part 54….the Petitioners' argument that the Staff's environmental review is inconsistent with federal guidance and NEPA because it does not address the impacts of climate change on plant safety amounts to a challenge to the NRC's regulations governing the scope of safety issues that may be raised in a license renewal proceeding.") (footnotes omitted).

[44] See Draft EIS at F-3. This is the most recent update of the FSAR that is referenced in the Draft EIS.

Consequently, insofar as VEPCO and the NRC Staff regularly analyze the impact of climate change on North Anna's systems, structures, and components as part of the CLB for North Anna, such analysis would be addressed in that FSAR. However, there is no mention of climate change in the 2016 update of the North Anna FSAR.[45]

In addition, every substantive obligation in the Part 54 regulations was promulgated before 2013,[46] when the NRC Staff became obligated to consider climate change in the Draft EIS evaluations it conducts in conjunction with the renewal of a particular plant's license.[47] Consequently, had there been any prohibition on considering the impact of climate change on a nuclear power plant during its license renewal review, as the NRC Staff posits here, then surely climate change would have been added to Part 54. But it was not.

Moreover, there were two corrections made to Part 54 after the 2013 GEIS added climate change as a topic that must be addressed during license renewal.[48] Had the NRC

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[45] "North Anna Power Station Updated Final Safety Analysis Report", available at https://www.nrc.gov/docs/ML1703/ML17033B477.html (ADAMS Accession No. ML17033B477). There are a few sections of this 2016 update of the North Anna FSAR that address flooding, though the bulk of this analysis of flooding was conducted in the 1970s. See North Anna FSAR at Appendix 2A, "Revised Analysis, Probable Maximum Flood" and Section 3.4 "Water Level (Flood) Design Criteria." There were three earlier revisions of the North Anna FSAR that discuss possible flooding. Two of these revisions were made in 2001, i.e., Sections 2.4.10 "Flood Protection Requirements" (which recognizes the possibility that local intense precipitation could produce a flood hazard) and 3.8.6 "Flood Protection Dike." An additional revision was made in 2005, i.e., 10.4.2.3, "Performance Analysis" (which considers the possibility of a flood of the turbine building). As discussed later, see infra at 22, this apparent absence of analysis of climate change in North Anna's Updated FSAR appears to bear out Petitioners' assertion that: "[f]ollowing an initial 40-year licensing period, NRC does not reevaluate natural hazard risks, including climate-related risks, to update the safety reviews required for the license renewal process." Petitioners' Motion to Amend at 5 (quoting the GAO Report at 35–36).

[46] See 60 Fed. Reg. 22,491 (May 8, 1995), 61 Fed. Reg. 65,175 (Dec. 11, 1996), 62 Fed. Reg. 17,690 (Apr. 11, 1997), 64 Fed. Reg. 71,990 (Dec. 23, 1999), 69 Fed. Reg. 2,279 (Jan. 14, 2004), 72 Fed. Reg. 49,352 (Aug. 28, 2007), and 77 Fed. Reg. 46,600 (Aug. 3, 2012).

[47] See Majority Opinion at note 51, noting that the 1996 GEIS was supplanted by the 2013 GEIS; see also 2013 GEIS at 1-30.

[48] See 80 Fed. Reg. 54,234 (Sep. 9, 2015) and 80 Fed. Reg. 58,574 (Sep. 30, 2015).

intended either (1) to prevent consideration of the environmental impact of climate change on a nuclear power plant during that plant's license renewal, or (2) to require consideration of the environmental impact of climate change on a nuclear power plant as part of that plant's CLB, then surely Part 54 would have been corrected in this regard as well. But the phrase "climate change" appears nowhere in either of these corrections to Part 54.

To be sure, 10 CFR § 54.30 clearly prohibits Petitioners from challenging the CLB for North Anna. But after considering (1) the applicable regulations governing matters that must be excluded from consideration during a license renewal, (2) the CLB for North Anna as reflected in the 2016 Updated FSAR, (3) the Answers of VEPCO and the NRC Staff, and (4) the claims that VEPCO and the NRC Staff made during oral argument, nothing in any of these sources suggests that the environmental impacts of climate change on the plant are being evaluated as part of North Anna's CLB. As such, I am unpersuaded by the support the NRC Staff offered for its assertion that Part 54 prohibits consideration of climate change impacts on the plant in its license renewal environmental review. Because the impact of climate change apparently is not considered as part of North Anna's CLB, if we were to accept the NRC Staff's position that the impact of climate change on North Anna cannot be evaluated when its license comes up for renewal, then it will never be evaluated.

The NRC Staff's resistance to considering any relationship between climate change and accident risk is by no means new. The first apparent mention of climate change-induced flooding presenting an accident risk came from a Commentor in 2007 during the requested license renewal for Oyster Creek.[49] The NRC Staff's response then is strikingly similar to the approach it has taken here in opposing the admission of Contention 3:

> Every U.S. nuclear power plant is designed to withstand design-basis events, including flooding, hurricanes, and tornadoes. These events are evaluated in the GEIS, which

[49] NUREG-1437, Vol. 2, Supp. 28, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding Oyster Creek Nuclear Generating Station" (Jan. 2007) at A-178 to A-179 (ADAMS Accession No. ML070100258).

> concludes that the environmental impacts resulting from these threats would be SMALL…. Systems and procedures at the plant are designed to present timely response to severe weather events and to ensure that the plant can be shut down safely if needed. In addition, the NRC Operations Center monitors severe weather events and coordinates with licensees during these events to ensure safe operation and shutdown, if needed.[50]

To be sure, six years after the NRC Staff's exchange with that Oyster Creek Commentor, the 2013 GEIS added "GHG Emissions and Climate Change" as a new topic that must be addressed in conjunction with all license renewal applications.[51] Not only did this new topic encompass "the potential cumulative impacts of GHG emissions and global climate change," but the NRC Staff pledged to "include within each SEIS a plant-specific analysis of any impacts caused by GHG emissions over the course of the license renewal term as well as any cumulative impacts caused by potential climate change upon the affected resources during the license renewal term."[52]

However expansive this pledge might have seemed at first blush, whenever the NRC Staff actually prepares a Draft EIS for the renewal of a nuclear power plant operating license, it consistently attempts to preclude any consideration of the environmental impacts of climate change on the plant itself. To effect this limitation, the NRC Staff invokes this oft-repeated mantra: "The effects of climate change on [insert name of nuclear power plant] structures, systems, and components are outside the scope of the NRC staff's [LR or SLR] environmental review."[53] By so tightly circumscribing the permissible scope of a draft EIS for the renewal of a

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[50] Id. at A-179.

[51] 2013 GEIS at 1-30.

[52] Id.

[53] See e.g., Draft EIS at 3-194; see also NUREG-1437, Supp. 5, Second Renewal "Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding Subsequent License Renewal for Turkey Point Nuclear Generating Unit Nos. 3 and 4" (Oct. 2019) at 4-124. See also NRC Staff Answer at 38 (criticizing Petitioners by asserting they "do not explain how their contention concerns the impacts of the proposed action (i.e., continued operation for an additional 20 years) on the environment, as distinct from the impacts of environmental conditions on the plant"); Tr. at 189–192.

nuclear power plant license, this boilerplate restriction effectively confines the NRC Staff's review of climate change to nothing more than a review of the plant's impacts on climate change. Needless to say, such a constricted review of climate change during license renewal is no more responsive to the Oyster Creek Commentor's concerns in 2007 than it is now to Petitioners' concerns, 17 years later, with their Contention 3.

The NRC Staff justifies its refusal to consider the impact of climate change on the plant itself on the ground that "Site-specific environmental conditions are considered when siting nuclear power plants."[54] And yet, the net result of this justification is that, at least for SLR reviews, sixty years will have elapsed since such a site-specific evaluation was conducted at the facility. And it is extremely unlikely that climate change was addressed when North Anna Units 1 and 2 were initially licensed in 1978 and 1980.[55]

In this regard, it is worth pointing out that the Turkey Point Board also rejected the NRC Staff's assertion that a contention challenging the impact of climate change on accident risk at a nuclear power plant is per se out of scope:

> The Staff reads [the Turkey Point climate change contention] as a claim that the agency must consider the "environmental effects on a [nuclear power] plant," rather than "the effects of the plant on the environment," and thus argues that it is outside the scope of the proceeding and amounts to an impermissible challenge to the agency's NEPA-implementing regulations. But the Staff's reading ignores Miami Waterkeeper's arguments … that climate change could impact accident risk. The agency analyzes the environmental impacts of accidents as part of its review of license renewal applications, either in the GEIS, or as here, in a site-specific supplemental environmental impact

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[54] See e.g., Draft EIS at 3-194.

[55] The first year that climate change was widely considered an environmental problem was 1988. See e.g., Peter Jackson, "From Stockholm to Kyoto: A Brief History of Climate Change" at https://www.un.org/en/chronicle/article/stockholm-kyoto-brief-history-climate-change#:~:text=In%201988%2C%20global%20warming%20and,public%20debate%20and%20political%20agenda. In the context of nuclear power plant licensing renewals, climate change was first mentioned in 2003, when a Commentor encouraged the NRC Staff to consider the impact of climate change on whether to renew the license for St. Lucie Units 1 and 2. See NUREG-1437, Supp. 11, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding License Renewal for St. Lucie Units 1 and 2" (May 2003) at A-48.

> statement, which may include an evaluation of how external events might impact that analysis.[56]

As support for its conclusion that a climate change contention was within the scope of the proceeding, the Turkey Point Board cited the Commission's 2011 decision in Diablo Canyon.[57] That decision affirmed a licensing board's admission of a contention that challenged the NRC Staff's failure to undertake a probabilistic risk assessment of a newly discovered fault as part of its severe accident mitigation alternatives analysis, which at that time was a "Category 2" site-specific issue. Similarly, here, Contention 3 should be admitted because it asserts that the NRC Staff has failed to assess the environmental impacts of the external event of climate change, during the period of subsequent license renewal, posing an accident risk of local intense precipitation-induced flooding of the turbine building at North Anna.

While I commend the majority for not outright adopting the NRC Staff's argument,[58] in my estimation, the majority should have gone further and embraced the Turkey Point Board's logic to hold that Contention 3 is within scope. For, to do otherwise is to render largely meaningless the NRC Staff's obligation to consider the environmental impacts of climate change.

Instead, (1) because the NRC's rules require a draft EIS to "include a preliminary analysis that considers and weighs the environmental effects, including any cumulative effects, of the proposed action,"[59] and (2) because climate change must be evaluated (either under the 2013 GEIS or under the forthcoming 2024 Rule and GEIS), then (3) it necessarily follows that a draft EIS must evaluate the environmental impacts of climate change on the plant itself, during the period of subsequent license renewal, because that is the subject of the "proposed action,"

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[56] Turkey Point, LBP-24-03, 99 NRC at __ note 177 (slip op. at 33 note 177) (citations omitted).

[57] Diablo Canyon, CLI 11-11, 74 NRC at 442–43.

[58] Majority Opinion at 23 ("Petitioners have provided reasonable support for the proposition that climate change effects can alter accident risk…").

[59] 10 C.F.R. § 51.71(d)

i.e., whether to grant the SLRA. For the reasons discussed above, Contention 3 should have been considered in scope as required by § 2.309(f)(1)(iii).

(6) Statement of Supporting Facts and Expert Opinion

Section 2.309(f)(1)(v) requires there to be a concise statement of the alleged facts or expert opinions supporting the petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the petitioner intends to rely to support its position on the issue. The majority holds that Petitioners have not met their burden because the Petition relies upon the Mitman Declaration, which the majority characterizes as "37 dense pages of information and opinions," that "improperly leaves it to the Board to determine what parts support the petition and how they do so."[60]

Contrary to the majority opinion, however—and with one important caveat, discussed later—I would find that Petitioners have provided the requisite support both in the Petition itself and in their Motion to Amend, as well as in their supporting technical documents.

To support their allegation that the Draft EIS omits any evaluation of climate change on accident risk, including the environmental impacts of climate change-induced local intense precipitation that could reasonably cause an increase in the risk of flooding of the turbine building during the period of subsequent license renewal, Petitioners supply (1) the March 27, 2024 Declaration of their expert, Mr. Mitman[61] and (2) the April 2024 GAO Study.[62] Additionally, and contrary to the majority's suggestion, in both the Petition and the Motion to Amend, Petitioners provide specific references to statements in these supporting documents on which Petitioners rely.

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[60] Majority Opinion at 24.

[61] See Petition, attach. 1.

[62] Motion to Amend, attach. A.

Beginning with the Mitman Declaration, Petitioners reference paragraphs 48 and 51 of the Mitman Declaration as support for their contention.[63] Paragraph 51 of the Mitman Declaration further references paragraphs 34–37 therein, which avers that:

> 34. A review of the licensee's Flood Hazard Reevaluation Report (FHRR) shows an increase in the calculated "Local Intense Precipitation [LIP] Protected Area," "Local Intense Precipitation West Basin Area," and "Flooding in Streams and Rivers." These values are evaluated and confirmed in the NRC's corresponding Staff Assessment and reevaluated values are reproduced here.
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> 35. Table 4.0-2 Footnote 3 shows that a LIP event causes water to flow into the Turbine Building. "The total storage volume available in the West Basin area and in the Turbine Building basement below the crest of the flood protection wall is 274,131 $ft^3$. Thus, in both cases, the maximum flood levels during a LIP storm event causes water to flow into the Turbine Building and flow over the top of the flood protection wall." This will overtop the Emergency Switchgear Room (ESGR) flood protection wall incapacitating the ESGR and the Emergency Core Cooling Systems (ECCS) and containment cooling systems.
>
> 36. This is a significant and new finding not addressed in either [VEPCO's 2022 supplement to its SLRA] nor the NRC's DEIS. Instead of using this information to inform the associated external event CDF values the NRC relies on using average external event flooding information carried over from the 2013 GEIS.[64]

Moreover, Petitioners augmented the technical basis of Contention 3 with the GAO Report, which addresses the impact of climate change on nuclear power plants.[65] Petitioners maintain the GAO Report confirms their "assertion that the NRC does not systematically address the effects of climate change on nuclear reactors in license renewal decisions."[66] Petitioners then refer the Board to certain portions of the GAO report that they assert are consistent with Contention 3:[67]

> NRC's actions to address risks to nuclear power plants from natural hazards in its licensing, license renewal, and inspection processes do not fully consider the potential increased risks from natural hazards that may be exacerbated by climate change….NRC does not use climate projections data to identify and assess risk as part of the safety reviews or probabilistic risk assessment reviews

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[63] Petition at 16.

[64] Mitman Declaration at Paragraphs 34–36 (Table 4.0-2 and footnotes omitted).

[65] Motion to Amend at 4 (citing GAO Report at 19, Figure 6).

[66] Id. at 4.

[67] Id. at 4–5.

> it conducts during the initial licensing process. Rather, NRC uses historical data to extrapolate the future risks of natural hazards that may occur during the lifetime of a nuclear power plant….Following an initial 40-year licensing period, NRC does not reevaluate natural hazard risks, including climate-related risks, to update the safety reviews required for the license renewal process.[68]

In addition to concluding that the NRC should more fully consider the impact of climate change in its licensing and oversight of nuclear power plants, the GAO Report specifically addresses the impact of climate change on the North Anna facility itself. As Petitioners point out in their pleadings, the GAO Report characterizes the North Anna facility as being in a "high" flood hazard level.[69] Here is how GAO Report described the flood hazard data it applied to the North Anna facility:

> To analyze exposure to flood hazards, we used 2023 data from Federal Emergency Management Agency's National Flood Hazard Layer. We grouped flood hazard zones into three categories: no/low, moderate, and high. "No/low" refers to areas with minimal, unknown, or other flood hazards, including areas with reduced risk because of levees as well as areas with flood hazard based on future conditions, such as the future implementation of land-use plans. "Moderate" corresponds to a 500-year floodplain, which indicates between 0.2 percent and 1 percent annual chance of flooding. "High" corresponds to a 100-year floodplain, which indicates a 1 percent or higher annual chance of flooding.[70]

The GAO Report dovetails both with Petitioners' pleadings and with the Mitman Declaration as further support for admitting Contention 3. And with respect to both sources of support, Petitioners include specific references to pages and paragraphs of their supporting documents.

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[68] GAO Report at 34–36.

[69] See id. at 60. The GAO Report, which came out after the issuance of Turkey Point LBP-24-03, also addresses environmental conditions at the Turkey Point facility. Not surprisingly, the petitioner in Turkey Point has since proposed two new contentions that challenge the NRC Staff's evaluation of climate-change impacts, and that rely, in part, on the GAO Report. See Miami Waterkeeper's Motion to Admit Amended and New Contentions in Response to NRC Staff's Final Site-Specific Environmental Impact Statement, Florida Power & Light Co (Turkey Point Nuclear Generating Units 3 and 4 at 51–80 (May 8, 2024).

[70] GAO Report at 44–45 and note 10.

Nonetheless, it is the majority's view that Petitioners "have provided no factual or expert opinion support for the assertion that climate change effects will affect accident risk at North Anna in a way that provides the requisite 'seriously different picture' of environmental impacts."[71]

In my view, the majority is wrong. Petitioners' expert, Mr. Mitman, declares there is a specific climate change-induced accident risk at North Anna, i.e., local intense precipitation that could reasonably cause flooding, with subsequent ingress of water into, the turbine building at North Anna. And it is beyond dispute that neither Section 3.11.6.9 "Postulated Accidents" nor Appendix F "Environmental Impacts of Postulated Accidents" in the Draft EIS contain any evaluation of the environmental impact of climate change posing such an accident risk.

I would agree with the majority, however, that any other potential accident risks posed by climate change to the plant, during the period of subsequent license renewal, and contemplated in Contention 3, are not adequately supported.[72] Accordingly, I would have admitted Contention 3, but would have narrowed and restated it to read as follows: "Draft EIS Section 3.11.6.9 'Postulated Accidents' and Appendix F 'Environmental Impacts of Postulated Accidents' fail to address the environmental impact of climate change, during the period of subsequent license renewal, posing an accident risk of local intense precipitation-induced flooding of the turbine building at North Anna."

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[71] Majority Opinion at 23.

[72] See Cf. Detroit Edison Co. (Fermi Nuclear Power Plant, Unit 3), 70 NRC 227, 244 (2009) (where a petitioner proffers a contention of omission, such as Contention 3 here, "the pleading requirements of 10 C.F.R. § 2.309(f)(1)(v), calling for a recitation of facts or expert opinion supporting the issue raised, are inapplicable…beyond identifying the regulatively required missing information.") (quoting Virginia Electric and Power Co. (North Anna Power Station, Unit 3), LBP-08-15, 68 NRC 294, 317 (2008).

Finally, unlike the majority,[73] I would have rejected VEPCO's[74] and the NRC Staff's[75] argument that Petitioners' climate change contention is inadmissible simply because the Turkey Point Board declined to admit Miami Riverkeeper's climate change contention in that proceeding. While Contention 3 bears a superficial similarity to the climate change contention proffered by Miami Riverkeeper in Turkey Point, I would distinguish this contention. For the reasons discussed above, unlike Miami Riverkeeper's failure to marshal sufficient information to support its dispute with a specific portion of the draft Turkey Point SEIS, Petitioners here have offered specificity in their pleadings and enough factual support to fill all the gaps (as narrowed above) that prevented the Turkey Point Board from admitting Miami Riverkeeper's climate change contention.

Specifically, the Mitman Declaration and the GAO Study document the reasonable possibility that the environmental impact of climate change, during the period of subsequent license renewal, poses an accident risk of local intense precipitation-induced flooding of the turbine building at North Anna that was not addressed in either Section 3.11.6.9 "Postulated Accidents" or in Appendix F "Environmental Impacts of Postulated Accidents" of the Draft EIS. In this respect, Petitioners have offered the necessary information to satisfy 10 C.F.R. § 2.309(f)(1)(v).

Conclusion

In summary, Petitioners' Contention 3, as narrowed and restated, meets all six of the admissibility criteria of 10 C.F.R. § 2.309(f)(1). It is well-pleaded and is fully supported by substantial technical information that specifically challenges the Draft EIS's finding that the danger of Postulated Accidents at North Anna is "SMALL" with respect to the North Anna

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[73] See Majority Opinion at 20.

[74] See VEPCO Answer at 37–38.

[75] See NRC Staff Answer at 38.

subsequent license renewal. If this contention is not admissible, it is difficult to conjure how any climate change-related matter could ever come before us as long as it is forced to conform to the procrustean bed the majority has built here.

That is hardly the reception climate change should be given. As CEQ, the federal government's chief source for assessing the importance of climate change in environmental analyses under NEPA, has made clear, "The United States faces a profound climate crisis and there is little time left to avoid a dangerous—potentially catastrophic—climate trajectory. Climate change is a fundamental environmental issue, and its effects on the human environment fall squarely within NEPA's purview."[76] Sadly, the majority and the NRC Staff have failed to heed this warning.

[76] CEQ Interim Guidance on Climate Change at 1197.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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| In the Matter of | ) | |
| | ) | |
| VIRGINIA ELECTRIC AND POWER COMPANY | ) | Docket Nos. 50-338-SLR-2 |
| | ) | 50-339-SLR-2 |
| (North Anna Power Station, Units 1 and 2) | ) | |
| | ) | |

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **MEMORANDUM AND ORDER (Denying Petitioners' Hearing Request and Terminating Proceeding)** have been served upon the following persons by Electronic Information Exchange.

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**Virginia Electric and Power Company (North Anna Power Station, Units 1 and 2, Docket Nos. 50-338-SLR-2 and 50-339-SLR-2)**
**MEMORANDUM AND ORDER (Denying Petitioners' Hearing Request and Terminating Proceeding)**

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Office of the Secretary of the Commission

Dated at Rockville, Maryland,
this 10th day of July 2024.