

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

LBP-25-01

ATOMIC SAFETY AND LICENSING BOARD PANEL

Before the Licensing Board:

G. Paul Bollwerk, III, Chair
Dr. Sue H. Abreu
Dr. Arielle J. Miller

In the Matter of

DUKE ENERGY CAROLINAS, LLC

(Oconee Nuclear Station, Units 1, 2, and 3)

Docket Nos. 50-269-SLR-2, 50-270-SLR-2, and 50-287-SLR-2

ASLBP No. 24-985-03-SLR-BD01

January 17, 2025

MEMORANDUM AND ORDER
(Ruling on Intervention Petition)

For a second time, the June 2021 subsequent license renewal (SLR) application of Duke Energy Carolinas, LLC (Duke) seeking an additional twenty-year term for the 10 C.F.R. Part 50 operating licenses for Oconee Nuclear Station (ONS) Units 1, 2, and 3 is pending before a Nuclear Regulatory Commission (NRC) Atomic Safety and Licensing Board.¹ In this instance, Licensing Board consideration was triggered by an April 29, 2024 hearing request (as corrected on May 1, 2024) filed by petitioners Beyond Nuclear, Inc. (Beyond Nuclear) and the Sierra Club,

¹ See Letter from Steven M. Snider, Site Vice President, ONS, to NRC Document Control Desk (June 7, 2021) (Agencywide Documents Access and Management System (ADAMS) Accession No. ML21158A194). The Duke SLR application seeks to extend the operating terms of ONS Units 1, 2, and 3, to February 6, 2053, October 6, 2053, and July 19, 2054, respectively. See id. at 1.

Inc. (Sierra Club) (collectively Petitioners).² Their intervention petition challenges the adequacy of several aspects of the NRC Staff's February 2024 National Environmental Policy Act (NEPA)

² See Hearing Request and Petition to Intervene by [Petitioners] (Apr. 29, 2024) (redacted version) [hereinafter Redacted Hearing Request]; Hearing Request and Petition to Intervene by [Petitioners] (Apr. 29, 2024; corrected May 1, 2024) (redacted version) [hereinafter Redacted Corrected Hearing Request]; Errata to Hearing Request and Petition to Intervene by [Petitioners] (May 1, 2024) at 1. Regarding the May 1 corrected hearing petition, in the Board's initial prehearing order, we indicated that the non-substantive nature of the changes did not provide a basis for extending the previously established deadline for answers to Petitioners' hearing request. See Licensing Board Memorandum and Order (Initial Prehearing Order) (May 8, 2024) at 1 n.1 (unpublished) [hereinafter Initial Prehearing Order].

Additionally, we indicated that going forward we would reference the May 1, 2024 corrected version of Petitioners' hearing petition in this proceeding. See id. Although the NRC Staff subsequently removed the petition from the public record pending a determination whether that hearing request contained nonpublic Sensitive Unclassified Non-Safeguards Information (SUNSI), a redacted version of this pleading recently was placed into this proceeding's public docket. See Licensing Board Memorandum and Order (Rulings Regarding Protective Order Reconsideration/Clarification Motions and Submissions Concerning Public Release of Redacted Versions of June 24, 2024 Initial Prehearing Conference Transcript, Four Filings by Petitioners, and Ex Parte/Separation of Functions Communications; Establishing Briefing Schedule for Challenging Withholding of Redacted Information) (Dec. 2, 2024) at 14–15 (unpublished) [hereinafter Board Decision Regarding Public Release of Redacted Documents]. The redacted version is the one we reference in this decision.

Also, on May 15, 2024, Petitioners submitted a corrected version of the second exhibit to the Declaration of Jeffery T. Mitman, which was included as attachment 1 to their original hearing request. See Errata to Expert Report by Jeffrey T. Mitman (May 15, 2024) at 1. We again advised the participants that these changes would not affect the deadline for filing answers to Petitioners' hearing request. See Licensing Board Memorandum and Order (Regarding Corrected Exhibit to Hearing Request) (May 16, 2024) at 1 (unpublished). And for citation purposes we will treat that corrected exhibit as a separate filing. See Jeffrey T. Mitman, NRC Relicensing Crisis at [ONS]: Stop Duke from Sending Safety Over the Jocassee Dam (Apr. 2024; corrected May 15, 2024) (redacted version) [hereinafter Redacted Corrected Mitman Report]. This report likewise was withdrawn from and then reinstated into the public record with SUNSI redactions. See Board Decision Regarding Public Release of Redacted Documents at 14–15. We reference that redacted version in this issuance.

Finally, we note that because the other four attachments provided by Petitioners in support of their intervention request were only filed with their original April 29, 2024 hearing petition, in referencing those attachments we will cite to the initial version of their hearing petition, albeit the version redacted to remove nonpublic SUNSI. See id.

draft site-specific supplemental environmental impact statement (DSSEIS) that assesses the impacts of the proposed SLR for the ONS facility as well as the alternatives to SLR.³

For the reasons set forth below, we conclude that Petitioners have established their standing to intervene in this proceeding. As for their three contentions, Petitioners allege deficiencies in the DSSEIS regarding the adequacy of the risk analysis associated with a failure of the Jocassee Dam upstream from the ONS facility (Contention 1), the failure of various other ONS-associated risk assessments to meet NEPA requirements (Contention 2), and the failure to address the effects of climate change on ONS accident risks (Contention 3). Because we determine that each contention has not met the contention admissibility standards of 10 C.F.R. § 2.309(f)(1), we deny Petitioners' hearing request and, following completion of a process for review of this decision for nonpublic information, terminate this proceeding.

I. BACKGROUND

A. Prior Commission and Licensing Board SLR Proceedings Associated with ONS

Given that “[w]hat is past is prologue,”⁴ to provide a clear understanding of why the ONS SLR application is again before this Licensing Board, we begin with a review of the circumstances under which the SLR for the ONS facility previously was the subject of licensing board consideration.

³ See Redacted Corrected Hearing Request at 1–2; see also Office of Nuclear Material Safety and Safeguards (NMSS), NRC, NUREG-1437, Site-Specific [EIS] for License Renewal of Nuclear Plants, Supp. 2, Second Renewal, Regarding [SLR] for [ONS] at iii (drft. Feb. 2024) (redacted version) (ADAMS Accession No. ML24033A298) [hereinafter DSSEIS]. On a cover sheet to the current publicly available version of this document, the Staff notes that in September 2024 the DSSEIS was redacted to remove Critical Energy/Electric Infrastructure Information (CEII), a type of SUNSI. See *id.* at Portable Document Format (PDF) p. 1. All the citations in this decision to the DSSEIS are to the redacted version. And for clarity, any other redacted document cited in this decision will be identified as such. See *supra* note 2.

⁴ William Shakespeare, *The Tempest* act 2, sc.1, l. 261.

The Commission's first adjudicatory review of a license renewal application seeking authorization for reactor operation during the SLR period (i.e., for reactor operating years sixty through eighty) concerned the Turkey Point facility. In an April 2020 decision, the Commission rejected arguments that 10 C.F.R. § 51.53(c)(3), 10 C.F.R. Part 51, Subpart A, Appendix B, Table B-1, and the agency's 2013 Generic Environmental Impact Statement (GEIS) for nuclear plant license renewal encompassed only the initial renewal period (i.e., for reactor operating years forty through sixty).⁵ The Commission instead concluded that for evaluating environmental impacts for the SLR period the NRC Staff (and SLR applicants submitting an environmental report (ER) for Staff consideration in preparing the agency's NEPA analysis) could (1) rely on the 2013 GEIS; and (2) employ the various issue categories embodied in Table B-1, including those pertaining to the Category 1 issues that had been determined not to require the plant-specific NEPA analysis mandated for issues designated as Category 2. See Turkey Point, CLI-20-3, 91 NRC at 155. In addition, this ruling directed that to litigate a contention seeking a plant-specific NEPA analysis regarding a Category 1 issue, a petitioner was obligated to submit a 10 C.F.R. § 2.335(b) rule waiver petition. See id.

Thereafter, in a February 2022 decision regarding the same Turkey Point facility, the Commission reversed this earlier pronouncement, concluding that section 51.53(c)(3), Table B-1, and the 2013 GEIS applied only to the initial renewal period and mandating that the NRC Staff reevaluate the subsequent renewal period environmental impacts for each

⁵ See Fla. Power & Light Co. (Turkey Point Nuclear Generating Units 3 and 4), CLI-20-3, 91 NRC 133, 134, 155 (2020) (citing 10 C.F.R. § 51.53(c)(3); 10 C.F.R. pt. 51, subpart A, app. B, tbl.B-1 [hereinafter Table B-1]; 1 Office of Nuclear Reactor Regulation (NRR), NRC, NUREG-1437, [GEIS] for License Renewal of Nuclear Plants, Main Report, Final Report (rev. 1 June 2013) (ADAMS Accession No. ML13106A241) [hereinafter 2013 GEIS Vol. 1]).

then-pending SLR application.⁶ This reversal of its earlier ruling on the applicability of section 51.53(c)(3), Table B-1, and the 2013 GEIS to the SLR term of facility operation also led the Commission in a separate contemporaneous issuance to (1) take sua sponte review of a February 2022 licensing board determination finding inadmissible the three contentions filed by the same petitioners now before us in which they contested the adequacy of the ER associated with Duke's June 2021 ONS SLR application; and (2) dismiss the three contentions without prejudice and terminate the proceeding.⁷

In doing so, the Commission also explained that in light of its 2022 Turkey Point determination, Duke and other similarly-situated SLR applicants would have the option of either (1) awaiting the completion of the NRC Staff's generic reevaluation of the impacts of the SLR period and the associated rulemaking establishing the legal and technical basis for a revised GEIS covering that period; or (2) providing site-specific information (in the form of a revised ER or responses to Staff additional information requests) on facility-related environmental impacts during the SLR period. See Oconee, CLI-22-3, 95 NRC at 41–42. Further, the Commission declared that in the latter instance, once the Staff reviewed the applicant's site-specific information and issued a site-specific environmental impact statement (EIS), petitioners would

⁶ See Fla. Power & Light Co. (Turkey Point Nuclear Generating Units 3 and 4), CLI-22-2, 95 NRC 26, 27 (2022).

⁷ See Duke Energy Carolinas, LLC (Oconee Nuclear Station, Units 1, 2, and 3), CLI-22-3, 95 NRC 40, 43 (2022). The licensing board decision under sua sponte review had terminated the ONS SLR proceeding, concluding relative to Petitioners' three environmental contentions that (1) based on the Commission's 2020 Turkey Point decision, for contention 1 regarding the applicability of the section 51.53(c)(3) and the 2013 GEIS to SLR applications, Petitioners failed to fulfill the admissibility standards of 10 C.F.R. § 2.309(f)(1); and (2) for contentions 2 and 3, which sought to contest Table B-1 Category 1 issues concerning the impacts caused by a dam failure-related severe accident and the need to consider severe accident mitigation alternatives (SAMAs) associated with such an event, Petitioners did not meet the section 2.335 requirements for seeking a waiver so as to permit site-specific consideration of those contentions. See Duke Energy Carolinas, LLC (Oconee Nuclear Station, Units 1, 2, and 3), LBP-22-1, 95 NRC 49, 94 (2022).

be given an opportunity to submit new or amended contentions based on new information in that impact statement without the necessity of meeting the 10 C.F.R. § 2.309(c) heightened pleading requirements for newly filed or refiled contentions. See id. at 41–42.

B. Current Licensing Board Proceeding Regarding SLR for ONS

In response to this Commission decision, in November 2022 Duke submitted a supplemental ER that (1) addressed the plant-specific impact of any relevant new information on the environmental consequences of Table B-1 Category 1 issues arising during the SLR period; and (2) indicated that its additional review of other environmental issues discussed in its initial ER had not identified any new and significant information arising since that report was submitted to the agency.⁸ In February 2024, the NRC Staff issued its DSSEIS regarding the ONS SLR application along with a Federal Register notice requesting public comment on that DSSEIS and providing an opportunity to request a hearing and to petition for leave to intervene regarding the DSSEIS.⁹ On March 18, 2024, Petitioners asked to extend by two weeks the time for filing their intervention petition until April 29, 2024, a request the Secretary of the Commission granted on March 28.¹⁰ Petitioners then filed their pending hearing request on the extended date, which included three contentions challenging various aspects of the NRC Staff's DSSEIS. See Redacted Corrected Hearing Request at 5–19.

⁸ See Letter from Steven M. Snider, Site Vice President, ONS, to NRC Document Control Desk at 2 (Nov. 7, 2022) (ADAMS Accession No. ML22311A036).

⁹ See [Duke], [ONS]; Draft Supplemental [EIS], 89 Fed. Reg. 10,107, 10,107–08 (Feb. 13, 2024).

¹⁰ See Motion by [Petitioners] for Extension of Time to Submit Hearing Request (Mar. 18, 2024) at 1; Secretary of the Commission Order (Mar. 28, 2024) at 3 (unpublished).

By memorandum dated May 1, 2024, the Secretary of the Commission referred the intervention petition to the Chief Administrative Judge,¹¹ who, in turn, on May 2, 2024, assigned Petitioners' hearing request to this Licensing Board to rule on standing and contention admissibility matters and to preside at any hearing.¹² The Board then issued its initial prehearing order on May 8, 2024, in which it advised the participants that it was considering whether to conduct an initial prehearing conference in this proceeding and set out a process by which they could provide input on their availability for such a session in late June or early July 2024. See Initial Prehearing Order at 6–7.

Meanwhile, on May 16, 2024, the Commission adopted a final rule amending section 51.53(c)(1) and Table B-1 to make an agency generic environmental analysis applicable to both the initial renewal and first SLR periods for nuclear power plants.¹³ And in support of this rule, the NRC Staff updated the 2013 GEIS.¹⁴ In response, the Board on May 21, 2024, issued an order requesting that the participants, as part of their upcoming answer and reply

¹¹ See Memorandum from Carrie M. Safford, NRC Secretary, to E. Roy Hawkens, Chief Administrative Judge (May 1, 2024).

¹² See [Duke], Establishment of Atomic Safety and Licensing Board, 89 Fed. Reg. 38,926, 38,926 (May 8, 2024).

¹³ See Memorandum from Carrie M. Safford, NRC Secretary, to Raymond V. Fursteneau, Acting Executive Director for Operations (EDO), NRC, at 1 (May 16, 2024) (ADAMS Accession No. ML24137A164).

¹⁴ See id. In adopting the final rule, the Commission referenced a version of the GEIS issued in February 2024. See id.; see also 1 NMSS, NRC, NUREG-1437, [GEIS] for License Renewal of Nuclear Plants, Main Report, Final Report (rev. 2 Feb. 2024) (ADAMS Accession No. ML23201A224). Just prior to the final rule becoming effective, however, another version of the GEIS was issued, different portions of which are referenced in this decision. See 1 NMSS, NRC, NUREG-1437, [GEIS] for License Renewal of Nuclear Plants, Main Report, Final Report (rev. 2 Aug. 2024) (ADAMS Accession No. ML24086A526); see also infra notes 56, 59.

pleadings, address several questions seeking information about the applicability of the new rule and the impact of its adoption on this proceeding.¹⁵

Duke and the NRC Staff filed their answers to Petitioners' hearing request on May 31, 2024, in which they (1) did not contest Petitioners' standing to intervene; (2) opposed the admission of all three of their proffered contentions; and (3) responded to the Board's questions about the impacts of the 2024 rule.¹⁶ Petitioners submitted a reply to those answers on June 7, 2024, defending the admissibility of their contentions and responding to the Board's 2024 rule impact questions.¹⁷

After reviewing these pleadings and the participants' input regarding a possible initial prehearing conference schedule, in a June 12, 2024 issuance the Board established June 24, 2024, as the date for an initial prehearing conference.¹⁸ In doing so, the Board outlined the procedures that would govern the conference and noted that the conference would be limited to the issue of the admissibility of Petitioners' three contentions given that Petitioners' standing was not contested by either the NRC Staff or Duke.¹⁹ The conference was conducted on that

¹⁵ See Licensing Board Memorandum and Order (Request to Address Impacts of Final Rule Applying [GEIS] to [SLR]) (May 21, 2024) at 3–4 (unpublished).

¹⁶ See [Duke] Answer Opposing the Hearing Request and Petition to Intervene Filed by [Petitioners] (May 31, 2024) at 1 n.2, 12–54 [hereinafter Duke Answer]; NRC Staff Answer to Hearing Request and Petition to Intervene by [Petitioners] (May 31, 2024) at 11–45 [hereinafter Staff Answer]; id. attach. A at 48–53 (Response to May 21, 2024 Licensing Board Order).

¹⁷ See Reply by [Petitioners] to Oppositions to Their Hearing Request and Petition to Intervene (June 7, 2024) at 3–28 (redacted version) [hereinafter Petitioners Redacted Reply]. As was the case with Petitioners' hearing request, see supra note 2, this pleading also was withdrawn from and then restored to the public record of this proceeding with SUNSI redactions. See Board Decision Regarding Public Release of Redacted Documents at 14–15. The redacted version of this document also is the one referenced in this ruling.

¹⁸ See Licensing Board Order (Scheduling Initial Prehearing Conference) (June 12, 2024) at 2 (unpublished) [hereinafter Initial Conference Scheduling Order].

¹⁹ See Initial Conference Scheduling Order at 2–3 & n.4. In limiting the prehearing conference agenda only to contention admissibility, the Board also noted that, consistent with

date, with counsel for each of the participants providing an oral presentation outlining their position on, and answering Board questions concerning, the admissibility of Petitioners' three contentions.²⁰

II. STANDING

When the Oconee SLR application was first before a licensing board, Petitioners' assertion that they should be afforded representational standing was not contested. See Oconee, LBP-22-1, 95 NRC at 77. The same is true in this proceeding. See Staff Answer at 12; Duke Answer at 1 & n.2 (recognizing Petitioners' standing showing but raising no objection to the sufficiency of that showing). Yet, as was the case previously, see Oconee, LBP-22-1, 95 NRC at 77, an independent Board determination is required regarding whether each petitioner has met the standing requirements.²¹ Nor does the fact that the petitioning organizations are the same in both the prior proceeding and this proceeding relieve the Board of

the 10 C.F.R. § 2.309(j) schedule for Board rulings on hearing petitions, a Board determination on the viability of Petitioners' hearing request would need to be issued well before the September 2024 time frame in which the Staff had represented that the 2024 rule likely would become effective. See id. at 3 n.4. As it turned out, that was not the case because of a series of events that were initiated when the NRC Staff subsequently identified nonpublic information in the transcript of the June 24, 2024 initial prehearing conference and four of Petitioners' submissions. See Licensing Board Memorandum (Notice Regarding Issuance of Decision) (Aug. 8, 2024) at 1 (unpublished).

²⁰ See Tr. at 1–149 (redacted version) [hereinafter Redacted Tr.]. This initial prehearing conference transcript also was subject to NRC Staff review for nonpublic SUNSI and a redacted version of the transcript now in the public record of this proceeding. See Board Decision Regarding Public Release of Redacted Documents at 14. We reference the redacted version of that transcript in this decision.

²¹ See 10 C.F.R. § 2.309(d)(2); see also Exelon Generation Co., LLC (Peach Bottom Atomic Power Station, Units 2 and 3), LBP-19-5, 89 NRC 483, 491 (2019), aff'd on other grounds, CLI-20-11, 92 NRC 335 (2020).

its responsibility to make a standing determination based on the information provided by Petitioners in this case.²²

To obtain standing, an organization must identify itself and its interest in the proceeding by providing the information required by 10 C.F.R. § 2.309(d)(1).²³ Further, as it seeks to establish representational standing to champion the interests of its members, an organization must demonstrate that (1) the interests it seeks to protect in the proceeding are germane to its purpose; (2) neither the asserted claim nor the requested relief require that an individual member participate in the organization's legal action; and (3) "at least one member has standing and has authorized the organization to represent [the member] and to request a hearing on [the member's] behalf."²⁴

In this instance, to establish the standing of the individual members they seek to represent, Petitioners here rely on the proximity presumption. See Redacted Corrected Hearing Request at 3. As applied recently by several licensing boards in initial and SLR proceedings,

²² See PPL Bell Bend, LLC (Bell Bend Nuclear Power Plant), CLI-10-7, 71 NRC 133, 138 (2010) (stating "petitioner must make a fresh standing demonstration in each proceeding in which intervention is sought because a petitioner's circumstances may change from one proceeding to the next").

²³ See 10 C.F.R. § 2.309(d)(1)(i)–(iv) (requiring that a hearing petition include a petitioner's name, address, and phone number; a showing regarding the petitioner's right under the Atomic Energy Act to be a party; a showing of the petitioner's interest in the proceeding; and a demonstration of the possible effect of any determination in the proceeding on the petitioner's interest).

²⁴ S. Nuclear Operating Co. (Vogtle Electric Generating Plant, Unit 3), CLI-20-6, 91 NRC 225, 237–38 (2020); see Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 323 (1999). Recently, based on its review of Commission caselaw going back to the late 1990s, the licensing board in the Diablo Canyon initial license renewal case raised the question whether the required showing to establish representational standing includes the "germane to its purpose" and "need for member participation" elements set forth above. See Pac. Gas and Elec. Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-24-6, 100 NRC 1, 17–19 (2024), appeal pending. Like the Diablo Canyon licensing board, see id. at 23–24, we include both these items in assessing whether Petitioners have fulfilled the requirements to establish their representational standing.

this presumption excuses a petitioner otherwise meeting the requirements for standing from having to make a specific showing of injury in fact so long as that petitioner resides, works, or otherwise has regular contacts within a 50-mile radius of the reactor facility in question.²⁵

Besides meeting the general requirements of section 2.309(d)(1), Petitioners' hearing request and the member affidavits supplied with their intervention petition show that each has at least one member residing within 50 miles of the ONS facility who has met the other standing requirements specified above.²⁶ Additionally, in seeking to have the NRC Staff fix its allegedly "inadequate" NEPA analysis of the environmental impacts associated with the SLR term for ONS, Redacted Corrected Hearing Request at 1–2, the direct participation of Petitioners' members is not required. Finally, the uncontested description of the purpose of each intervening organization in their hearing petition is sufficient to establish that the interests each seeks to protect in the proceeding are germane to that purpose.²⁷

²⁵ See Fla. Power & Light Co. (Turkey Point Nuclear Generating Units 3 and 4), LBP-24-3, 99 NRC 39, 51–52 (2024); Diablo Canyon, LBP-24-6, 100 NRC at 23 n.93; Va. Elec. and Power Co. (North Anna Power Station Units 1 and 2), LBP-24-7, 100 NRC 52, 58–59 (2024), appeal pending.

²⁶ See Redacted Corrected Hearing Request at 3–4 (indicating Beyond Nuclear and Sierra Club have longstanding interests in nuclear safety and preventing environmental harm and, to protect their members' health and safety and the environment, wish to ensure that ONS facility operation is not approved for a second renewal term until Duke demonstrates full compliance with NEPA's requirements); Redacted Hearing Request, attachs. 2A through 2C (affidavits of Beyond Nuclear members residing less than 15 miles from the ONS facility); id. attach. 2D (affidavit of Beyond Nuclear and Sierra Club member residing approximately two miles from the ONS facility); id. attachs. 2E through 2G (Sierra Club members residing less than 25 miles from the facility). The distance measurements provided above are Google Maps-based calculations. We note as well that the standing declaration in attachment 2H to the hearing petition appears to be a duplicate of attachment 2D.

²⁷ See Redacted Corrected Hearing Request at 3–4 (describing Beyond Nuclear as "a nonprofit, nonpartisan membership organization that aims to educate and activate the public about the connections between nuclear power and nuclear weapons and the need to abolish both to protect public health and safety, prevent environmental harms, and safeguard our future."); id. at 4–5 (indicating that "[t]he purposes of the Sierra Club are to explore, enjoy, and protect the wild places of the earth; to practice and promote the responsible use of the earth's

We thus conclude that each of the Petitioners has established its representational standing to intervene in this proceeding.

III. ADMISSIBILITY OF PETITIONERS' CONTENTIONS

A. Contention Admissibility Standards Under 10 C.F.R. § 2.309(f)(1)

For a petitioner's contention to be considered admissible for further litigation in a licensing proceeding, the contention must satisfy the six admissibility factors set forth in section 2.309(f)(1). Those factors require the proponent of a contention to

- (i) Provide a specific statement of the issue of law or fact to be raised or controverted . . . ;
- (ii) Provide a brief explanation of the basis for the contention;
- (iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;
- (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;
- (v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing . . . ;
[and]
- (vi) [P]rovide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact.

10 C.F.R. § 2.309(f)(1)(i)–(vi).

These six criteria aim to “focus litigation on concrete issues and result in a clearer and more focused record for decision.”²⁸ The petitioner bears the burden to satisfy each of the

ecosystems and resources; to educate and enlist humanity to protect and restore the quality of the natural and human environment”).

²⁸ Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004) [hereinafter 2004 Part 2 Changes].

criteria,²⁹ and a failure to comply with any of the requirements constitutes grounds for rejecting a proposed contention.³⁰ Moreover, when a petitioner neglects to provide the requisite support for its contentions, a board may not cure the deficiency by supplying that information.³¹

B. Analysis of Petitioners' Three Contentions Shows Each One Is Inadmissible

1. Petitioners' Contention 1

a. Background

The focus of Petitioners' first contention is the purported inadequacy of the NRC Staff's DSSEIS discussion about whether Duke has provided "adequate protection" for the ONS units such that the environmental impacts of an accident arising from a failure of the Jocassee Dam upstream of the ONS facility can be considered insignificant. See Redacted Corrected Hearing Request at 5. And a principal component of their argument is that the DSSEIS fails to account for the environmental significance of what they assert is a never-repudiated 2011 Staff Safety Evaluation. Petitioners contend this evaluation made safety findings calling for the establishment of various still-unimplemented measures to provide "adequate protection" against a flood caused by a Jocassee Dam failure.³²

²⁹ See Entergy Nuclear Operations, Inc. (Palisades Nuclear Plant), CLI-15-23, 82 NRC 321, 329 (2015) ("[I]t is Petitioners' responsibility, not the Board's, to formulate contentions and to provide 'the necessary information to satisfy the basis requirement' for admission." (quoting Statement of Policy on Conduct of Adjudicatory Proceedings, CLI-98-12, 48 NRC 18, 22 (1998))).

³⁰ See 2004 Part 2 Changes, 69 Fed. Reg. at 2221; see also Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999).

³¹ See Ariz. Pub. Serv. Co. (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991).

³² See Redacted Corrected Hearing Request at 6–7 (citing Redacted Corrected Mitman Report § 2.6.4 and Letter from Eric J. Leeds, Director, NRR, NRC, to Preston Gillespie, Site Vice President, ONS, encl. (Jan. 28, 2011) (Safety Evaluation by [NRR] Related to [Duke] Confirmatory Action Letter - Commitments to Address External Flooding Concerns, Closure of Inundation Site Results [ONS], Docket Nos. 50-269, 50-270, and 50-287) (ADAMS Accession

As the participants' filings reflect,³³ in considering this contention's allegations, we do not necessarily write on a clean slate. Indeed, as we noted above, see supra section I.A, in assessing the sufficiency of a section 2.335 waiver petition seeking consideration of a contention not dissimilar from Petitioners' Contention 1 in this proceeding, in 2022 another licensing board provided an extensive discussion (with supporting references to Duke and NRC regulatory documents) outlining both the events leading up to the January 2011 Safety Evaluation and the measures taken by the NRC Staff and Duke in the wake of the March 2011 Fukushima Dai-ichi accident to address concerns about potential flooding impacts on the ONS facility.³⁴ Although that licensing board's decision was dismissed without review in the wake of the Commission's 2022 Turkey Point decision, and thus is not binding in this proceeding, as it may be relevant here, that board's discussion can be viewed as persuasive.³⁵ And because we find particularly instructive here the 2022 licensing board's extended examination of the historical circumstances surrounding the assessment of the risk associated with the possible failure of the Jocassee Dam upstream of the ONS facility and any concurrent flooding, which is

No. ML110280153) [hereinafter January 2011 Safety Evaluation]).

We note that although the January 2011 Safety Evaluation, which was previously publicly released pursuant to a Freedom of Information Act request, is now considered a nonpublic document, the ADAMS accession number cited above is part of the public record of this proceeding. See Redacted Corrected Mitman Report at 1 n.2.

³³ See Redacted Corrected Hearing Request at 7 n.8; Staff Answer at 4–5, 18–19, 25–29; Duke Answer at 26–29.

³⁴ See Oconee, LBP-22-1, 95 NRC at 65–77. Although Administrative Judge Bollwerk also chaired that licensing board, the other two board members were Administrative Judges Trikourous and Arnold. See id. at 95.

³⁵ See Fla. Power & Light Co. (Turkey Point Nuclear Generating Units 3 and 4), LBP-24-3, 99 NRC 39, 50 (2024) (citing S. Cal. Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3), CLI-13-9, 78 NRC 551, 558 (2013) (“Unreviewed Board decisions do not create binding legal precedent.”)).

the renewed focus of Petitioners' Contention 1 in this proceeding, below we provide a synopsis of that discussion.

Noting that “[a] breach of the Jocassee Dam and the impact on ONS of a resulting flood has been a matter of evolving regulatory concern,” the 2022 licensing board described how such a dam failure was not considered a credible event based on dam design and construction when ONS was first licensed in the early 1970s and so was not made a part of the facility’s current licensing basis (CLB).³⁶ Then, in the early 1980s, Duke built a Standby Shutdown Facility (SSF) with subsystems as an independent means to achieve and maintain safe shutdown of the ONS units under certain postulated scenarios that included turbine building floods. See id. at 66. The SSF subsystems provide reactor coolant makeup, auxiliary service water for steam generator injection, electrical power via a diesel generator and batteries, and support systems. See id. And Duke’s SSF was further enhanced with a doorway barrier to address possible above plant-yard grade flooding identified in a 1983 Duke/Electric Power Research Institute probabilistic risk assessment (PRA) that posited various Jocassee Dam failure modes. See id. Over the next nearly two decades, the issues of estimated flood height relative to the SSF and the ONS site in general as well as dam-failure risk were considered in several contexts. See id. at 66–72. This included a June 2010 NRC Staff confirmatory action letter (CAL) requiring Duke, in addition to implementing compensatory measures, to provide a site inundation bounding analysis, which was, in turn, the subject of a January 2011 Staff assessment and the accompanying Safety Evaluation that is at the heart of Petitioners’ Contention 1 claims. See id. at 70–72.

³⁶ Oconee, LBP-22-1, 95 NRC at 65–66. The 2022 licensing board’s decision contains a description of the Jocassee Dam and its location relative to the ONS facility. See id. at 65.

Concerns about Jocassee Dam failure risk and ONS site inundation then became a part of the agency's response to the March 2011 severe accident at the Fukushima Dai-ichi facility in Japan caused by an earthquake and tsunami. As outlined in the 2022 licensing board decision, in March 2012 the agency issued a 10 C.F.R. § 50.54(f) request for information (RFI) to all power reactor licensees to provide reevaluations of seismic hazard and external flooding sources at their facilities to aid the NRC Staff in evaluating the need for additional regulatory action regarding seismic and flooding design.³⁷ In September 2012, under the aegis of the June 2010 CAL, the Staff accepted Duke's proposal to design and construct Jocassee Dam failure inundation mitigation structures, but also indicated that the CAL would remain active until it could be superseded by regulatory action related to the section 50.54(f) responses. See id. at 73.

Duke responded to the March 2012 RFI with a March 2015 updated flood hazard reevaluation report (FHRR) addressing both design-basis and beyond-design-basis events. See id. Thereafter, as part of a series of Duke and Staff interactions regarding the Staff's analysis of the March 2015 updated FHRR, the Staff issued a September 2015 letter concluding that the FHRR used suitable input values associated with flood hazard mechanisms that should be employed to support Duke's preparation and submission of an additional flood-focused hazard evaluation. See id. at 73–74. Furthermore, in June 2016 the Staff issued a report

³⁷ See id. at 73. Under the heading "Conditions of licenses," section 50.54(f) authorizes the agency to request that a licensee submit a written statement that enables the agency to determine whether a license should be "modified, suspended, or revoked." 10 C.F.R. § 50.54(f). Unless the information is being sought to verify licensee compliance with a facility's CLB, the agency must prepare an EDO-approved statement of reasons justifying the burden imposed in responding to the information request in view of the potential safety significance of the issue being addressed in the requested information. See id. A section 50.54(f) RFI can be contrasted with Staff-generated requests for additional information (RAIs), which "are a routine means for our staff to request clarification or further discussion of particular items in the application." Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-1, 49 NRC 328, 336 (1999).

indicating that (1) because Duke's completed 2010 CAL-related compensatory measures provided adequate assurance that the required terms of the 2010 CAL had been satisfied, the 2010 CAL was closed; and (2) the Staff would be addressing ONS flooding issues in the context of a recommendation issued by the agency's Fukushima Near-Term Task Force in July 2011, Recommendation 2.1, which directed that a licensee use present-day methodologies and regulatory guidance applicable to 10 C.F.R. Part 52 licenses to assess all flood-causing mechanisms. See id. at 75–76, 87–88. Duke submitted its additional ONS flood hazard evaluation in July 2017, which the Staff concluded in a June 2018 assessment demonstrated effective flood protection mechanisms for a beyond-design-basis external flooding event. See id. at 76. Finally, in a November 2020 letter, the Staff advised Duke that it had provided the information requested by the March 2012 Fukushima-related RFI and had completed all actions required for ONS by NRC's post-Fukushima orders. See id. at 76–77.

Against this backdrop, we turn to our consideration of Petitioners' Contention 1.

b. Petitioners' Position

Petitioners' first contention is titled "Erroneous, Incomplete and Misleading Information Regarding Whether Duke Has Provided the Oconee [R]eactors with 'Adequate Protection' From Failure of the Upstream Jocassee Dam." Redacted Corrected Hearing Request at 5. The focus of this issue statement under its subpart A, which is labeled as "Statement of Contention," is the NRC Staff's DSSEIS conclusion that the environmental impacts from ONS "design-basis accidents" during the SLR period will be "insignificant, i.e., 'SMALL.'" Id. (citing DSSEIS at F-5). Petitioners claim this DSSEIS determination is based on the erroneous assertion that Duke has provided the ONS reactors "with 'adequate protection' from accident risks caused by 'external

events,' such as failure of the upstream Jocassee Dam.”³⁸ Id. According to Petitioners, “[i]n support of this assertion, the [DSSEIS] relies heavily on a description of the scope, nature and outcome of the NRC Staff’s review of seismic and flooding risks (i.e., ‘external hazards’) to [ONS], conducted between 2012 and 2020 in response to the catastrophic 2011 Fukushima Dai-ichi accident in Japan.” Id. Further, in subparts A.1 and A.2, Petitioners’ Contention 1 makes the claim that this DSSEIS assertion (1) relies on “erroneous, incomplete and misleading information”; and (2) omits the “discussion of [a] relevant factor affecting [the] outcome of [the] environmental analysis,” namely “abandonment of [the] 2011 Safety Evaluation without making new adequate protection findings.”³⁹ Id. at 6, 15. And in support of these assertions, in subparts B and E, titled respectively “Basis Statement” and “Concise Statement of the Facts or Expert Opinion Supporting the Contention, Along with Appropriate Citations to Supporting Scientific or Factual Materials,” Petitioners indicate that the support for this contention can be found in the eleven-page subpart A “Statement of Contention,” in the report of their expert Jeffrey Mitman attached to their hearing petition, and in the various documents cited in the “Statement of Contention” and the Mitman report. See id. at 16.

³⁸ Table B-1 defines the significance level of a “SMALL” impacts designation for a NEPA issue as

environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource. For the purposes of assessing radiological impacts, the Commission has concluded that those impacts that do not exceed permissible levels in the Commission’s regulations are considered SMALL as the term is used in this table.

Table B-1 n.3. This can be contrasted with significance level “MODERATE,” for which “environmental effects are sufficient to alter noticeably, but not to destabilize, important attributes of the resource” and significance level “LARGE,” for which “environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource.” Id.

³⁹ As it is quoted and reproduced in Petitioners’ reply, Contention 1 encompasses pages five through fifteen of their hearing petition. See Petitioners Redacted Reply at 4–11.

Looking to the particulars of Petitioners' claims regarding the failure of the NRC Staff's DSSEIS to satisfy NEPA, according to their "Statement of Contention" the DSSEIS "omits any discussion of the environmental significance of an outstanding [January] 2011 Safety Evaluation establishing a minimum flood height that safety equipment must be protected against and also prescribed measures for providing adequate protection against a flood caused by failure of the Jocassee Dam."⁴⁰ Petitioners characterize Atomic Energy Act (AEA) section 182's direction to the NRC to ensure production and utilization facilities like ONS provide "adequate protection to the health and safety of the public" as being the agency's "primary statutory standard . . . to ensure safe operation of nuclear power plants."⁴¹ And on the basis of that characterization, Petitioners assert that the absence of "adequate protection" language in subsequent Staff safety analyses of Jocassee Dam flooding risks means that the agency has failed to make a finding concerning the possibility that those "accident risks have been reduced to a level that is both acceptable under the [AEA] and insignificant or 'SMALL' under NEPA." Id. at 8. Petitioners point specifically to the Staff's claim that the issues raised by the January 2011 Safety Evaluation are closed by the Staff's June 2016 CAL termination letter, arguing that document does not use the "adequate protection" language needed to demonstrate that the agency has concluded that public health and safety is appropriately protected in the absence of the flood protection requirements set out in the January 2011 evaluation.⁴² Petitioners maintain the same

⁴⁰ Redacted Corrected Hearing Request at 6–7 (citing Redacted Corrected Mitman Report § 2.6.4 and January 2011 Safety Evaluation); see also Petitioners Redacted Reply at 12 (indicating Duke and NRC Staff attempts in their answers to discount and disparage the January 2011 Safety Evaluation establish a genuine and material legal and factual dispute).

⁴¹ Redacted Corrected Hearing Request at 7–8 (quoting 42 U.S.C. § 2232(a); Union of Concerned Scientists v. NRC, 824 F.2d 108, 109 (D.C. Cir. 1987)).

⁴² See id. at 6–7 (citing Letter from Catherine Haney, Regional Administrator, NRC Region II, to Scott Batson, Site Vice President, ONS, at 1 (June 16, 2016) (ADAMS Accession No. ML16168A176)).

is true for the Staff's November 2020 section 50.54(f) letter, as well as the Staff reference documents cited in that letter.⁴³ Petitioners assert that this letter and the referenced documents are relied upon by the Staff in the DSSEIS as evidence of a post-Fukushima "design-basis" review regarding ONS external flooding events to support its conclusion that "no further regulatory actions were needed to ensure adequate protection or compliance with regulatory requirements, including site-specific external hazards information, re-confirming the acceptability of Oconee Station's design basis." Id. at 9 (quoting DSSEIS at F-4). But according to Petitioners, "in the entire post-Fukushima review record for Oconee, no NRC document can be found that makes adequate protection findings with respect to the risk of flooding from failure of the Jocassee Dam or measures necessary to provide adequate

⁴³ See id. at 9–12 (citing Letter from Robert J. Bernardo, Project Manager, NRR, NRC, to J. Ed Burchfield, Jr., Site Vice President, ONS (Nov. 17, 2020) (ADAMS Accession No. ML20304A369); Letter from Juan F. Uribe, Project Manager, NRC NRR, to Ed Burchfield, Jr., Site Vice President, ONS, encl. 2, at 10 (June 18, 2018) (Staff Assessment by [NRR] Related to the Focused Evaluation for ONS, Units 1, 2, and 3 as a Result of the Reevaluated Flood Hazard Near-Term Task Force Recommendation 2.1 -- Flooding (CAC Nos. MG0265, MG0266, MG0267, and EPID L-2017-JLD-0029) (redacted version) (ADAMS Accession No. ML18141A755); and Letter from Mary Jane Ross-Lee, Acting Division Director, NRR, to The Licensees of Operating Reactors on the Enclosed List, encl. 1, at 4 (Aug. 20, 2019) (Treatment of Reevaluated Flooding Hazard Information) (ADAMS Accession No. ML19067A247)).

In challenging the admissibility of Contention 1 the Staff calls out Petitioners' failure to contest "new information," Staff Answer at 18, which presumably is a reference to the Commission's Oconee decision that indicated any additional hearing relative to those SLR proceedings, like Oconee, that were impacted by the Commission's reversal of its earlier Turkey Point decision would be "limited to contentions based on new information in the site-specific [EIS]," Staff Answer at 7 (quoting Oconee, CLI-22-3, 95 NRC at 42). While we find ourselves in agreement with the recent Turkey Point decision in which the licensing board indicated that, in this context, an asserted lack of "new information" is more a matter of materiality than scope under the section 2.309(f)(1)(iii) contention admissibility standard, see Turkey Point, LBP-24-3, 99 NRC at 55–56 & nn.82–83, any admissibility claim based on a lack of "new information" is not applicable to this particular aspect of Petitioners' Contention 1 given it is based on the Staff's characterization of its November 2020 close-out letter in its recently-minted DSSEIS.

protection from those risks,” with any such findings limited only “to the adequacy of mitigation measures.”⁴⁴

Petitioners also assert that the NRC Staff has disregarded important facts and legal determinations relevant to ONS subsequent license renewal. Petitioners claim this includes the Staff not adequately accounting for (1) the failure of Duke and the NRC in the ONS initial licensing process to consider Jocassee Dam failure as a credible event requiring appropriate safety equipment protection; see Redacted Corrected Hearing Request at 12–13 (citing Redacted Corrected Mitman Report § 2.3.2); (2) the importance of NRC’s August 2008 action issuing a section 50.54(f) letter to Duke regarding the adequacy of its SSF to protect against floods in light of a 1992 Federal Energy Regulatory Commission (FERC) flood inundation study;⁴⁵ (3) the significance of an April 2009 NRC letter to Duke questioning Duke’s failure to demonstrate deterministically that the ONS facility would be adequately protected from the credible event of a Jocassee Dam failure;⁴⁶ (4) the import of the January 2011 Safety Evaluation’s “adequate protection” conclusions about the appropriate flood depth to be used for evaluating the suitability of ONS flood protection mechanisms, see id. at 13 (citing Redacted Corrected Mitman Report § 2.6.4); and (5) the insufficiency of the NRC’s post-Fukushima review that lowered the estimated flood depth associated with inundation events without an “adequate

⁴⁴ See Redacted Corrected Hearing Request at 12; see also Petitioners Redacted Reply at 11–12 (asserting that in their answers neither Duke nor the Staff cite any “adequate protection” finding indicating ONS reactors are adequately protected from flood risk).

⁴⁵ See Redacted Corrected Hearing Request at 13 (citing Letter from Joseph G. Giitter, Division Director, NRC NRR, to Dave Baxter, Vice President, ONS at 2 (Aug. 15, 2008) (redacted version) (ADAMS Accession No. ML081640244); Redacted Corrected Mitman Report § 2.6.2).

⁴⁶ See id. (citing Letter from Joseph G. Giitter, Division Director, NRC NRR, to Dave Baxter, Vice President, ONS at 2 (Apr. 30, 2009) (ADAMS Accession No. ML090570779)). Although the cited letter currently has a nonpublic status, the discussion of and citation to this letter has not been redacted from Petitioners’ hearing request. See id.

protection” finding.⁴⁷ According to Petitioners, these items illustrate that the Staff has improperly relied on purported “adequate protection” findings to justify an environmental impact of “SMALL” when no such findings have been made.⁴⁸

Finally, Petitioners maintain the DSSEIS fails to satisfy NEPA because it does not contain any discussion of the 2011 Safety Evaluation’s environmental significance as it established a minimum flood height for protecting safety equipment and prescribed measures for “adequate protection” against a Jocassee Dam failure flood. See Redacted Corrected Hearing Request at 15. Declaring that because the NRC has not repudiated the 2011 Safety

⁴⁷ See id. at 14 (citing Letter from Scott L. Batson, Vice President, ONS, to NRC Document Control Desk (Mar. 6, 2015) (ADAMS Accession No ML15072A106)).

⁴⁸ See id.; see also Petitioners Redacted Reply at 12–14 (asserting that the Staff’s failure to provide any follow-up safety evaluation and findings supporting a post-2011 Safety Evaluation change in position regarding the flood height applicable to the ONS facility deprives the DSSEIS of grounds for a “SMALL” environmental impacts finding regarding external flooding risk).

Also in support of these various claims, Petitioners assert generally that “[a]s discussed in the attached Mitman Declaration, these errors, omissions, and misleading statements have enormous safety and environmental significance because they obscure the fact that the NRC has failed to provide the basic level of protection to the Oconee reactors that is required by the [AEA].” Id. at 14. This is accompanied by a citation to the Mitman report introduction and sections 2, 3.1 and 4, which provide a background discussion, an ONS facility flooding risk analysis, and a conclusion, respectively, encompassing some 35 of the 46 pages on the report. See id. at 14 & n.33; see also Redacted Corrected Mitman Report at 1–34, 45–46. Such a reference seemingly runs afoul of the general proscription on incorporation by reference. See infra note 55. And this is particularly so with regard to section 3.1, entitled “Failure to Ensure Adequate Protection from Failure of the Jocassee Dam or to Adequately Evaluate Environmental Flooding Risks,” see Redacted Corrected Mitman Report at 23–34, which is only cited this once without any discussion regarding its contents or substance. Moreover, even assuming that this risk analysis does not constitute an impermissible attempt to litigate a safety issue otherwise outside the scope of this license renewal proceeding, see NRC Staff Answer at 21–24 (citing Tenn. Valley Auth. (Sequoyah Nuclear Plant, Units 1 and 2), LBP-13-8, 78 NRC 1, 11–12 (2013)), it provides the sort of alternative analysis of flooding risks that the Commission has found inadequate to support an admissible contention absent a discussion addressing the substance of the regulatory analysis made in support of the agency’s NEPA determination, which is the agency’s post-2011 Safety Evaluation Fukushima-related review. See Nextera Energy Seabrook, LLC (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 323–24 (2012).

Evaluation's findings and requirements or made additional "adequate protection" findings to support reduced flood height and altered reduced height flood response measures, Petitioners maintain that the January 2011 Safety Evaluation remains "an open and unresolved safety issue" that creates a "significant gap or deficit" in the NRC's safety-based regulatory program and in its ability to make a DSSEIS finding of "SMALL" environmental impacts associated with reactor accidents. Id.

c. Licensing Board's Analysis

In our view, Petitioners' "adequate protection"-footed claim regarding the insufficiency of the NRC Staff's post-2011 Safety Evaluation/Fukushima-related efforts to assess ONS flood hazard risks fails as the basis for an admissible contention under section 2.309(f)(1) for precisely the same reasons outlined by the prior licensing board in its 2022 decision rejecting Petitioners' section 2.335 waiver petition. In asserting that the Staff must invoke these missing words to support its findings regarding ONS flood hazard risks,⁴⁹ Petitioners again fail to acknowledge or address pertinent events following the January 2011 Safety Evaluation,⁵⁰

⁴⁹ In response to a Board question during the initial prehearing conference discussion about the admissibility of Petitioners' contention, Petitioners' counsel indicated that if in any of its post-January 2011 Safety Evaluation assessments of ONS flood hazards the NRC Staff had employed the term "adequate protection," that likely would have addressed the "missing wording" concern embodied in Contention 1. See Redacted Tr. at 97–98 (Curran). Also in this regard, responding to a Board question Petitioners' counsel indicated that the missing words component of Contention 1 likely would constitute a legal contention. See Redacted Tr. at 98 (Curran). While this contention's "hodge podge of claims," as Duke's counsel characterized them, Redacted Tr. at 100 (Lighty), weighs against admitting Contention 1 on this basis, we also conclude that allowing additional briefing on this matter, a recognized benefit of admitting a legal contention, see U.S. Dep't of Energy (High-Level Waste Repository), CLI-09-14, 69 NRC 580, 590–91 (2009), would not be of assistance here given that this particular argument has now been extensively aired twice, once in 2022 before the prior licensing board and now again before this Board.

⁵⁰ As Duke points out, see Duke Answer at 19, an attachment to a 2020 NRR memorandum providing Commission-directed guidance on the post-Fukushima process for reevaluating flooding and seismic hazards at operating nuclear power plants states that if the

which led the prior licensing board to conclude this wording distinction failed to “carry the regulatory significance” assigned by Petitioners. Oconee, LBP-22-1, 95 NRC at 91. We note that per that licensing board’s discussion in LBP-22-1, 95 NRC at 87–93, this encompasses, among other things, Petitioners’ failure to engage with the substance of two separate documents that were central to the NRC Staff’s post-Fukushima analysis and conclusions regarding the sufficiency of ONS flood protection measures. One is the March 2015 FHRR, which includes Duke’s compensatory measures to address possible dam-break related flooding and which served as a basis for the Staff’s June 2016 letter closing the June 2010 Staff CAL. See id. at 87. The other is an addendum to the Staff’s April 2016 final FHRR assessment that compared the differing circumstances associated with the Staff’s January 2011 safety evaluation and its September 2015 evaluation conducted consistent with the agency’s post-Fukushima directions and 10 C.F.R. Part 52 regulatory guidance. See id. at 87–88.

Petitioners’ continuing lack of engagement with the substance of the post-January 2011 Safety Evaluation regulatory history associated with the NRC Staff’s assessment of ONS flood risk,⁵¹ particularly in the context of the Fukushima-related section 50.54(f) process for evaluating

response to a section 50.54(f) RFI indicated an undue level of risk to the public, consideration will be given to “regulatory actions to maintain or restore adequate protection” if supported by a 10 C.F.R. § 50.109 backfit analysis. Memorandum from Craig G. Erlanger, Division Director, NRR, NRC, to Ho K. Nieh, Director, NRR, NRC, encl. at 8 (Mar. 2, 2020) (NRC Staff Guidance, Revision to the Regulatory Decision-Making Process for Reevaluated Flooding and Seismic Hazards for Operating Nuclear Power Plants) (ADAMS Accession No. ML20043D958). Duke makes the point, not unpersuasively, that this provides an “adequate protection” basis for the post-Fukushima section 50.54(f) process, which in turn would make the DSSEIS-cited November 2020 Fukushima review close-out letter disparaged by Petitioners the functional equivalent of an “adequate protection” finding relative to the matter of ONS flooding risk. See Duke Answer at 19–20.

⁵¹ About the closest Petitioners come in this regard is their assertion that, notwithstanding any later regulatory developments, because of the findings made and the measures prescribed in the 2011 Safety Evaluation, the “environmental significance” of that document should have been discussed in the DSSEIS. See Redacted Corrected Hearing

the need for potential licensing revisions regarding flooding and other external hazards, see supra pp. 16–17, likewise leads us to conclude that Contention 1 is not litigable. In this instance the contention cannot be admitted because it fails to establish the existence of a genuine dispute on a material issue of law or fact as required for admission under section 2.309(f)(1)(vi).

Nor do Petitioners' claims of various errors, omissions, and misleading statements lend any meaningful support to their contention admissibility argument that the DSSEIS discussion of flood hazards is deficient. Petitioners assert that the initial ONS licensing process was deficient because the NRC and Duke failed to consider a Jocassee Dam failure credible and therefore did not act to protect the reactors' safety equipment from floods. See Redacted Corrected Hearing Request at 12–13. That argument, however, amounts to an AEA design-basis safety challenge that is outside the scope of this SLR proceeding and so fails to satisfy section 2.309(f)(1)(iii).⁵² In addition, Petitioners' claims involving an August 2008 Staff section 50.54(f) letter concerning SSF flood protection adequacy and an April 2009 Staff letter regarding the need for Duke to address Jocassee Dam failures deterministically, see id. at 13, do not demonstrate a genuine dispute on a material legal or factual issue in the face of Petitioners' utter failure to engage with the substance of the agency's years of post-Fukushima review of ONS flooding hazards that came well after these two documents.⁵³ And likewise unavailing is

Request at 6–7, 15. But given Petitioners' failure to explain exactly why the substance of the subsequent regulatory analyses and determinations were inadequate (other than the lack of an "adequate protection" finding denominated as such), this is nothing more than a variation on the "alternative input" approach that the Commission has found wanting as the basis for an admissible contention. See Seabrook, CLI-12-5, 75 NRC at 323–24.

⁵² See Sequoyah, LBP-13-8, 78 NRC at 11–13 (citing 10 C.F.R. 54.30(b) and Fla. Power & Light Co. (Turkey Point Nuclear Generating Station, Units 3 and 4, CLI-01-17, 54 NRC 3, 8–9 (2001))).

⁵³ Petitioners' reliance on both these items also highlights their continued misapprehension of the regulatory significance of certain NRC Staff issuances, further undercutting their referenced support for Contention 1. As part of a process that the NRC can

Petitioners' challenge to the DSSEIS statement about the nature of its post-Fukushima review of ONS facility flooding hazards as containing the incorrect claim that the Staff's November 2020 letter constituted a "design basis review." See supra note 43 and accompanying text (citing DSSEIS at F-4). While Petitioners maintain that the Staff wrongly characterizes its November 2020 close-out letter as constituting an ONS design-basis review, see id., as Duke points out that assertion fails to account for the language in the March 2012 section 50.54(f) RFI indicating that a reevaluation of the licensees' design basis for external hazards was exactly what was contemplated.⁵⁴

employ to bring a facility into compliance with the agency's regulatory requirements, a section 50.54(f) RFI and any resulting Staff evaluation of the information received provide the basis for further agency action to obtain such compliance, e.g., a CAL or a section 2.202 enforcement order. In this regard, as the previous Oconee licensing board observed, the April 2009 letter, in conjunction with another 2010 document cited in Mr. Mitman's report in that proceeding (though not referenced in his report submitted in this proceeding), appear to be part of a Staff effort to set the stage for a possible enforcement order regarding ONS flood protection measures that ultimately was not issued. See Oconee, LBP-22-1, 95 NRC at 91–92. Instead, the Staff turned to the June 2010 CAL, a Duke response to which was the subject of the January 2011 Safety Evaluation and its appendix with the "adequate protection" reference that is the focus of Contention 1. See id. at 92. Moreover, as the 2022 licensing board noted there, see id. at 92–93, and as Duke reiterates here, see Duke Answer at 29–30, the regulatory significance of any "safety findings" in such a document is not readily apparent.

⁵⁴ See Duke Answer at 22–23 (citing Letter from Eric J. Leeds, Director, NRR, NRC, and Michael R. Johnson, Director, Office of New Reactors, NRC, to All Power Reactor Licensees and Holders of Construction Permits in Active or Deferred Status at 2 (Mar. 12, 2012) (ADAMS Accession No. ML12053A340)).

Likewise gaining no purchase is Petitioners' assertion that this DSSEIS provision made the incorrect claim that the March 2012 50.45(f) letter "ordered" the submittal of external event hazards information. See Redacted Corrected Hearing Request at 9. Even assuming the materiality of Petitioners' argument, but see Duke Answer at 21, it nonetheless is based on a misreading of section 50.54(f) (by perhaps misinterpreting courtesy as a lack of authority), which indicates that a licensee "shall . . . upon request" submit to the agency any information being sought, a clear directive that such information is required, id. at 21–22 (quoting 10 C.F.R. § 50.54(f)); see Gen. Pub. Utils. Nuclear Corp. (Oyster Creek Nuclear Generating Station), LBP-97-1, 45 NRC 7, 14 n.10 (1997) (observing that section 50.54(f) reporting requirement in generic letter would constitute a requirement, in contrast with a compliance request to conform with guidance recommendations on handling heavy loads using cranes).

In sum, we conclude that Petitioners' Contention 1 does not meet one or more of the contention admissibility precepts set forth in section 2.309(f)(1) and thus cannot be accepted as a litigable issue in this proceeding.

2. Petitioners' Contention 2

In Contention 2, titled "[DSSEIS] Risk Estimates Fail to Meet NEPA Requirements for Rigor, Accuracy, Completeness, and Consideration of Uncertainties," Petitioners maintain that the DSSEIS "is deficient in other significant respects, which result in the significant understatement of accident risk." Redacted Corrected Hearing Request at 16. Under its subpart A heading "Statement of Contention," citing sections 3.2 and 3.3 of the report submitted by their expert Jeffrey Mitman, Petitioners assert that these deficiencies include (1) an inaccurate all-hazards core damage frequency (CDF) estimate (§ 3.2.1); (2) the significantly underestimated probability of a fire-induced large containment failure (§ 3.2.2); (3) an unsupported assumption regarding the seismic event-associated population dose margin (§ 3.2.3); (4) an underestimated assessment of risk resulting from a failure to aggregate risk changes (§ 3.2.4); (5) reliance on an invalid assumption that boiling water reactor (BWR) and Westinghouse pressurized water reactor (PWR) studies are applicable to the ONS reactors (§ 3.2.5); and (6) the failure of the DSSEIS to address uncertainties in violation of NEPA and NRC PRA guidance (§ 3.3). See id. at 16–17. In support of these assertions, under the subparts B and E headings of "Basis Statement" and "Concise Statement of the Facts or Expert Opinion Supporting the Contention, Along with Appropriate Citations to Supporting Scientific or

Factual Materials,” Petitioners rely principally on the one-page subpart A “Statement of Contention” and the Mitman report’s section 3.4. See id. at 17.

Below we address the efficacy of each of these six claims as support for the admission of Contention 2.⁵⁵

- a. All-Hazards CDF Comparison
 - i. Petitioners’ Position

As the basis for Petitioners’ initial Contention 2 claim that the all-hazards CDF estimate utilized in the Staff’s DSSEIS is inaccurate, the Mitman report challenges the adequacy of the discussion accompanying Table F-4 of DSSEIS section F.3.2, which compares the value of the latest available ONS all-hazards (internal plus external events) CDF and the highest estimated internal events CDF under the 1996 GEIS (as associated with Indian Point Unit 2). See Redacted Corrected Mitman Report at 34. The Staff’s discussion, according to the Mitman

⁵⁵ In challenging this contention’s admissibility, as well as the admissibility of Contention 3, Duke interposes an initial, threshold concern about the efficacy of the hearing petition, asserting that Commission precedent establishes that the petition’s wholesale incorporation of several sections of the Mitman report without elaborating on any legal theories or otherwise explaining why they meet the section 2.309(f)(1) contention admissibility standards requires rejection of the contention at the outset. See Duke Answer at 31–33, 48–49 (citing S.C. Elec. & Gas Co. (Virgil C. Summer Nuclear Station, Units 2 & 3), CLI-10-1, 71 NRC 1, 21–22 (2010); Entergy Nuclear Operations, Inc. (Palisades Nuclear Plant and Big Rock Point Site), CLI-22-8, 96 NRC 1, 100 (2022); Pub. Serv. Co. of N.H. (Seabrook Station, Units 1 and 2), CLI-89-3, 29 NRC 234, 240–41 (1989)). In their reply, Petitioners seek to distinguish the applicability of the cited Commission cases. See Petitioners Redacted Reply at 15–16.

The North Anna licensing board recently addressed the “wholesale incorporation” issue and rejected the admission of a contention on that basis. See North Anna, LBP-24-7, 100 NRC at 66–67; see also id. at 72–73 (faced with the hearing petition’s incorporation by reference of a 37-page report, indicating that it is “neither the Board’s place nor the Board’s duty” to collate the information and assemble a cohesive argument). While Petitioners appear to take a somewhat similar approach here for both Contentions 2 and 3, compare Redacted Corrected Hearing Request at 16–19 (supporting each contention’s admissibility with less than two pages of double-spaced text), with Redacted Corrected Mitman Report at 34–45 (supporting each contention’s admissibility with five and six-and-a-half pages of single-spaced text, respectively), we nonetheless deal with the substance of the claims in the Mitman report.

report, shows that the ONS value remains less than the benchmark 1996 GEIS internal events figure and so the probability-weighted consequences of severe accidents remains “SMALL.” See id. (citing DSSEIS at F-15). The Mitman report asserts, however, that the DSSEIS “significantly understates accident risks” because the “latest available information” set forth in the 2024 GEIS is not used.⁵⁶

ii. Licensing Board’s Analysis

As reflected in the Mitman report, at the root of Petitioners’ concern in this portion of Contention 2 is whether the NRC Staff’s use of the benchmark 1996 GEIS internal events figure to bound the probability-weighted consequences of a severe accident at ONS is sufficient to fulfill the agency’s responsibility to take the NEPA-required hard look at the environmental impacts of such an accident. In this regard, relative to external events, the DSSEIS provides the following explanation of the analytical methodology employed in the 1996 GEIS:

For its severe accident environmental impact analysis for each nuclear power plant, the 1996 [license renewal (LR)] GEIS used very conservative 95th-percentile upper-confidence bound (UCB) estimates for environmental impact whenever available. When dealing with risk assessment, use of 95th percentile values provides a more conservative estimate than 50th percentile or mean values. Using the 95th percentile value reduces the likelihood of underestimating risk. This 95th percentile approach

⁵⁶ Redacted Corrected Mitman Report at 34. In this regard, the Mitman report cites two values, 6.1E-5 and 6.6E-5, in reference to the PWR and BWR mean and median CDF values. See id. (citing 3 NMSS, NRC, NUREG-1437, [GEIS] for License Renewal of Nuclear Plants, Technical Apps., Final Report at E-36, tbl.E.3-12 (rev. 2 Feb. 2024) ([PWR] and [BWR] All Hazards (Full Power) [CDF] Comparison) (ADAMS Accession No. ML23201A226) [hereinafter February 2024 GEIS Vol. 3]).

Although, in conjunction with issuance of the final rule that the updated GEIS supports, the agency in August 2024 republished the February 2024 NUREG-1437 technical appendices volume that is referenced in the Mitman report, the cited Table E.3-12 appears to be unchanged. Compare February 2024 GEIS Vol. 3, at E-36, tbl.E.3-12, with 3 NMSS, NRC, NUREG-1437, [GEIS] for License Renewal of Nuclear Plants, Apps. B-J, Final Report at E-36, tbl.E.3-12 (rev. 2 Aug. 2024) ([PWR] and [BWR] All Hazards (Full Power) [CDF] Comparison) (rev. 2 Aug. 2024) (ADAMS Accession No. ML24086A528) [hereinafter August 2024 GEIS Vol. 3].

provides conservatism to cover uncertainties, as described in Section 5.3.3.2.2 of the 1996 LR GEIS. The 1996 LR GEIS concluded that the probability-weighted consequences of severe accidents, as related to LR are SMALL compared to other risks to which the populations surrounding nuclear power plants are routinely exposed.

DSSEIS at F-6 to -7 (citation omitted). The 1996 GEIS thus “only considered internal events” on a quantitative basis but included a “qualitative assessment of the environmental impacts of accidents initiated by external events” in reaching this impacts conclusion.⁵⁷

But as the DSSEIS acknowledges, “since issuing the 1996 LR GEIS, the NRC’s understanding of severe accident risk has continued to evolve.” Id. at F-7. In this regard, the DSSEIS section on external events information, which also includes the NRC Staff’s analysis of the all-hazards (or total plant) CDF for ONS, indicates that the 2013 GEIS “expanded the scope of the evaluation in the 1996 LR GEIS and used more recent technical information that included both internally and externally initiated event [CDFs].” Id. at F-14. The DSSEIS notes as well that the information used in its external events assessment came from multiple sources, including (1) the 1998 Oconee PRA Level 3-based SAMA analysis generated to support the ONS initial license renewal ER,⁵⁸ (2) the Staff’s plant-specific supplemental EIS for the ONS

⁵⁷ DSSEIS at F-14. Internal event-initiated accidents are those initiated by the failure of plant systems or operator actions. See August 2024 GEIS Vol. 3, at E-17 n.15.

⁵⁸ As explained on the NRC’s website:

PRA for nuclear power plants can estimate risk measures at three different levels of characterization using sequential analyses in which the output from one level serves as a conditional input to the next. Using event trees and fault trees, a Level 1 PRA models various plant and operator responses to initiating events that challenge plant operation to identify accident sequences that result in reactor core damage. The estimated frequencies for all core damage accident sequences are summed to calculate the total [CDF] for the analyzed plant.

A Level 2 PRA models and analyzes the progression of "severe

initial license renewal; and (3) the all-hazard CDF values provided by the March 2021 ONS ER for its SLR application, as supplemented in November 2022. See id. Relying on this information, the Staff states in the DSSEIS:

Although the Combined CDF (All Hazards) increased to 1.26×10^{-4} per reactor-year, the Oconee Station All Hazards CDF is still less than the highest estimated internal events CDF (Indian Point 2 is 3.5×10^{-4} per reactor-year) used in the 1996 LR GEIS. Accordingly, the likelihood of an accident that leads to core damage, including accounting for the contribution from external events, is less for Oconee Station than the highest estimated internal events CDF from the values which were used as the basis for the 1996 LR GEIS.

Id. at F-15. This, in turn, led the Staff to determine that

the sum of the Oconee Station external events CDFs was within the range of PWR internal event CDFs that formed the basis for the 1996 LR GEIS. Therefore, the NRC staff concludes that the probability-weighted offsite consequences of severe accidents initiated by external events during the SLR term would not exceed

accidents"—those Level 1 PRA accident sequences that result in reactor core damage—by considering how the reactor coolant and other relevant systems respond, as well as how the containment responds to the accident

A Level 3 PRA models the release and transport of radioactive material in a severe accident and estimates the health and economic impact in terms of different offsite consequence measures, for example: (1) early fatalities and injuries and latent cancer fatalities resulting from the radiation doses to the surrounding population, and (2) economic costs associated with evacuation, relocation, property loss, and decontamination. Offsite consequences are estimated based on the Level 2 PRA source term characteristics, and on several other factors affecting the transport and impact of the radioactive material, including meteorology, demographics, emergency response, and land use. Combining the results of the Level 1 and Level 2 PRAs with the results of this consequence analysis, only the Level 3 PRA estimates the integrated risk (likelihood times consequences) to the public for the analyzed nuclear power plant.

Level 3 PRA Project, NRC (Oct. 11, 2022), <https://www.nrc.gov/about-nrc/regulatory/research/level3-pra-project.html>.

the probability-weighted consequences predicted in the 1996 or 2013 LR GEIS. For these issues, the 1996 and 2013 LR GEIS predicted that the probability-weighted consequences of severe accidents would be SMALL for all nuclear plants. The NRC staff identified no new and significant information regarding external events during its review of Duke Energy's ER, during the SAMA audit, through the [EIS] scoping process, or through the evaluation of other available information. Thus, the NRC staff finds [Duke's] conclusion acceptable that no new and significant information exists for Oconee Station concerning offsite probability-weighted consequences of severe accidents initiated by external events that would alter the conclusions that for Oconee Station, the probability-weighted consequences of atmospheric releases, fallout onto open bodies of water, releases to groundwater, and societal and economic impacts from severe accidents remains SMALL for the SLR period.

Id. at F-17.

This NRC Staff finding is consistent with the agency's approach, set forth in both the 2013 and 2024 GEISs, of utilizing the highest estimated internal events CDF from the 1996 GEIS as a bounding measure in determining for a license renewal term of operation whether the probability-weighted consequences of severe accidents remain SMALL.⁵⁹ In contrast, the

⁵⁹ See 3 NRR, NRC, NUREG-1437, [GEIS] for License Renewal of Nuclear Plants, App. A, Final Report at E-24 (rev. 1 June 2013) (Table E-19 (Summary of Conclusions) (ADAMS Accession No. ML13106A244) [hereinafter 2013 GEIS Vol. 3]) (“[T]he CDFs from severe accidents initiated by external events . . . are comparable to those from accidents initiated by internal events but lower than the CDFs that formed the basis for the 1996 GEIS.”); August 2024 GEIS Vol. 3, at E-23 to -24 (indicating that based on an analysis of the all-hazards CDF from the SAMA analyses for the 28 PWRs and BWRs considered in the 1996 GEIS, “the likelihood of an accident that leads to core damage, including accounting for the contribution from external events, is generally less for both PWRs and BWRs than the likelihood used as the basis for the 1996 LR GEIS, and all are appreciably less than the highest estimated CDF used in the 1996 LR GEIS.”); see also 2 NMSS, NRC, NUREG-1437, [GEIS] for License Renewal of Nuclear Plants, App. A, Final Report at A-137 to -138 (rev. 2 Aug. 2024) (noting in response to Petitioners' rulemaking comment that, on a generic basis, a Table E.3-12 comparison of the CDF mean values for the 28 plants analyzed for the 1996 GEIS showing those facilities' recent plant-specific SAMAs and risk-informed license amendment requests reflected a 35 percent increase that “cannot reasonably be considered small, given that this presumably will lead to a comparable increase in fatalities and land contamination” and that “[t]he 1996 LR GEIS based the determination that the impact of severe accidents is SMALL on estimates for probability-weighted consequences to the environment, not CDFs. Furthermore, the LR GEIS is

Mitman report urges the adoption of a different methodology comparing the ONS all-hazards CDF with the PWR and BWR all-hazards mean and medium values set forth in the recently adopted 2024 GEIS, which purportedly will show that the DSSEIS approach “significantly understates accident risks.” Redacted Corrected Mitman Report at 34. But it is not enough merely to imply that additional or different information should be considered. Lacking in Petitioners’ claim is engagement with the critical parallel point of why the bounding analysis employed by the Staff is insufficient as an appropriate line of demarcation for assessing accident risk and its impacts, and particularly why the finding of SMALL impacts associated with this methodology is not reasonable. See Seabrook, CLI-12-5, 75 NRC at 323–24. The Mitman report thus provides the type of alternative analysis that the Commission has indicated does not meet the standard for establishing a section 2.309(f)(i)(vi) genuine dispute on a material legal or factual issue.

b. Multiplier for Externally Initiated Fire Events

i. Petitioners’ Position

In support of the second portion of Petitioners’ Contention 2, referencing DSSEIS section F.3.2.1 concerning fire event consequences, the Mitman report claims that Duke’s use of an external events multiplier underestimates the impact of a “significantly larger containment failure probability for fire,” which is the largest external event contributor to risk. Redacted Corrected Mitman Report at 34–35. The report asserts that this underestimate leads to a significantly underrepresented population dose risk (PDR). See id. at 35. And to confirm why

not a plant-specific assessment but rather draws its conclusions based on available plant-specific information and other relevant information. Specifically, the probability-weighted consequences estimated in the 1996 LR GEIS remain bounding after consideration of new and applicable plant-specific information and other relevant information.”) (ADAMS Accession No. ML24086A527) [hereinafter August 2024 GEIS Vol. 2].

aggregating all the external hazards together underestimates the PDR, the Mitman report compares the DSSEIS external events multiplier methodology with a proposed alternative that uses only the external fire hazard to determine the PDR.⁶⁰ The Mitman report asserts that using the external events multiplier method is inadequate because it underestimates the PDR by aggregating the external hazards. See id. According to the Mitman report, the alternative external fire risk approach is better because the higher calculated PDR is an appropriate reflection of the impact of a significantly larger containment failure probability for fire. See id.

ii. Licensing Board's Analysis

As explained by the NRC Staff in the DSSEIS, the 1998 ONS Level 3 PRA PDR calculated in conjunction with Duke's initial license renewal application included the quantitative contribution from internal event-initiated severe accidents. See DSSEIS at F-18. And to account for externally initiated events as well, a multiplier was used that consisted of the ratio of the total plant CDF (for both externally and internally initiated events) to the internally initiated events CDF. See id. at F-19. This figure, in turn, is multiplied by the estimated PDR for internally initiated events to develop the total plant PDR estimate used in the 1998 Level 3 PRA analysis for the ONS initial license renewal. See id. But, as the Staff observes in the DSSEIS, using the higher external event multipliers associated with the more recent increased fire core

⁶⁰ See Redacted Corrected Mitman Report at 34–35. According to the Mitman report, the external events multiplier is obtained by dividing the all-hazards CDF by the internal events CDF. See id. (citing DSSEIS at F-19). The Mitman report's alternative method is based on the large early release frequency (LERF) data in Table 4.15-2 of the March 2021 initial ER supporting the ONS SLR application, which the report asserts shows that LERF values for externally initiated fire events are disproportionately larger than LERF values for internal events, which can be seen by deriving the conditional containment failure probability (CCFP). See id. (citing Oconee SLR Application, encl. 3, attach. 2 (Appendix E, Applicant's [ER], Subsequent Operating License Renewal Stage, [ONS] Units 1, 2, and 3, at 4-89 to -109, tbl.4.15-2 (Mar. 2021) (Bounding Quantitative Reduction of CDF and Significant [Source Term Category] Group Frequencies)) (ADAMS Package Accession No. ML21158A193); Redacted Corrected Mitman Report at 31, tbl.5 (LERF and CCFP from 2021 SAMA) (providing data extracted from 2021 ER's table 4.15-2)).

damage values in the March 2021 ONS SLR ER's external events PRA, a significant margin still exists between the cumulative population dose results from the 1998 ONS license review SAMA analyses and the cumulative 95th percentile UCB population dose results from the 1996 GEIS. See id. The Staff thus concluded that the increased external event values in the March 2021 ER did not undermine the use of the 95th percentile estimates in the 1996 LR GEIS as a basis for the finding that environmental impacts of a severe accident will be SMALL.⁶¹

As was the case concerning Petitioners' arguments regarding the all-hazards CDF comparison, Petitioners provide an alternative analysis without directly challenging the reasonableness of the NRC Staff's central assertion that the 1996 GEIS bounding analysis provides an appropriate measure for assessing accident risk and its environmental impacts, which would be SMALL. See supra section III.B.2.a.ii. Accordingly, Petitioners' concern about the sufficiency of the fire event multiplier likewise is inadequate to establish the section 2.309(f)(1)(vi) genuine dispute on a material legal or factual issue necessary for an admissible contention.

⁶¹ See DSSEIS at F-19; see also August 2024 GEIS Vol. 2, at A-139 (in response to Petitioners' rulemaking comment that external event multipliers are a source of non-conservatism, referencing footnote 15 of the 2024 GEIS appendix E as explaining why this non-conservatism is unlikely to affect overall appendix E conclusions regarding accident risk and impacts); August 2024 GEIS Vol. 3, at E-12 n.12 ("Information from several of the SAMA analyses (i.e., for the Oconee, McGuire, Catawba, and Columbia plants) show that the PDR for different hazards is not linear relative to their contribution to CDF. For example, these analyses show that the relative contribution to total plant PDR is somewhat higher than the relative contribution to total plant CDF for seismic events and is somewhat lower for internal events. This result is consistent with NRC staff experience with the risk results from plant-specific seismic PRAs where the contribution to large early release is generally higher than the corresponding results from internal events PRAs. However, this non-linear relationship likely introduces a small non-conservatism in the total plant PDR. This non-conservatism is not significant to the conclusions of this LR GEIS supplement because of the significant conservatism in the 1996 LR GEIS analyses.").

c. Seismic Events Multiplier

i. Petitioners' Position

In support of this claim about the seismic events multiplier employed by the Staff, the Mitman report references DSSEIS section F.3.2.2. See Redacted Corrected Mitman Report at 35. There the Staff's discussion indicates that the significant margin existing between cumulative population dose results from the 1998 SAMA analysis associated with ONS initial license renewal and the cumulative 95th percentile UCB population risk results from the 1996 GEIS does not undercut the 1996 GEIS population risk estimates as an appropriate accident risk bounding analysis. See Redacted Corrected Mitman Report at 35. The Mitman report presumes that this comparison relies on the same external event multiplier employed to assess fire events.⁶² As a consequence, the report claims that the "same fallacy" would exist with this seismic analysis as with the report's fire results concern, arguing that the seismic CDF values relied upon for calculating the multiplier fail to incorporate the difference in CCFPs and make it "far from clear" that the assumed population dose margin exists. Id.

ii. Licensing Board's Analysis

We find ourselves in agreement with Petitioners' acknowledgment in their reply that their claim contesting the propriety of the use of an external events multiplier for assessing the seismic event-initiated severe accident impacts parallels their allegation concerning the adequacy of using such a multiplier for evaluating fire event impacts. See Petitioners Redacted Reply at 20; see also supra section III.B.2.b.i. And we similarly conclude that because

⁶² See Redacted Corrected Mitman Report at 35 (citing DSSEIS at F-19). As Duke observes, the DSSEIS quotation and citation set out in the Mitman report refer to a discussion of fire, not seismic, risk. See Duke Answer at 38. But as Petitioners note in their reply, a substantially similar quote is found in the DSSEIS seismic risk analysis. See Petitioners Redacted Reply at 20 n.38 (citing DSSEIS at F-21).

Petitioners provide an alternative approach without directly challenging the reasonableness of the NRC Staff's pivotal premise that the 1996 GEIS bounding analysis provides an appropriate measure for assessing accident risk and its environmental impacts, which would be SMALL, their concern about the adequacy of the seismic events multiplier necessarily fails to establish the requisite section 2.309(f)(1)(vi) genuine dispute on a material legal or factual issue needed to obtain this contention's admission. See Seabrook, CLI-12-5, 75 NRC at 323–24.

d. Risk Aggregation

i. Petitioners' Position

Citing the DSSEIS evaluation concerning how the 1996 GEIS's accident risk conclusions might be affected by changes between the 1996 GEIS and the 1998 ONS initial license renewal SAMA analysis (such as changes in fire or seismic CDF values) for various accident/risk scenario impacts, the Mitman report maintains that the DSSEIS's approach to risk aggregation has a "fundamental problem." Redacted Corrected Mitman Report at 35–36 (citing DSSEIS at F-21). According to the report, that approach, in which each accident/risk scenario is viewed in isolation without compounding their effects on each other, causes a serious underestimation of the total risk increase associated with operations during the SLR term. See id. at 36. The report then seeks to demonstrate the parameters of this deficiency by providing a table in which the risks associated with six accident scenarios are aggregated. See id. tbl.6 (Aggregation of Changes in Risk) [hereinafter Redacted Corrected Mitman Report Table 6]. The result of this aggregation, according to the Mitman report, is a risk factor that "swamps" the individual scenario risk factors. Id. at 36–37. While recognizing that its own mathematical aggregation method, i.e., multiplying the individual risk factors, "is inaccurate," the Mitman report nonetheless asserts that this approach is legitimate because (1) it illustrates "the scale on which the NRC is underestimating the effect of individual CDF changes on overall risk"; and (2) using

multiplication was the only option available given that publicly available data from ONS-related sources are “insufficient to the task” of conducting a mathematically correct aggregation. Id. at 37. Instead, according to the report, “[t]he NRC should provide the necessary data and conduct the analysis in order to provide a reasonable estimate of how changes in CDF estimates for multiple scenarios affect overall risk.” Id.

ii. Licensing Board’s Analysis

In claiming a DSSEIS deficiency based on the NRC Staff’s failure to aggregate severe accident scenario impacts, the Mitman report does not raise a cognizable NEPA deficiency but rather merely offers an alternative approach that may be no more meaningful than the analysis the Staff has provided. Moreover, the report does so using information that is highly suspect, if not wholly speculative. As Duke points out, the report’s table, which purports to show the impact of the aggregation of change in risk, is a “hodge-podge” of figures. Duke Answer at 40. As the table reflects, some items are based on event frequencies and others on conditional consequence measures of PDR, while ONS-specific scenarios (e.g., ONS PRA-associated seismic and fire CDFs) are listed with generic evaluations (e.g., 2013 GEIS power uprate and higher burnup fuel scenarios), all without any attempt to explain how or why these are compatible or interchangeable. See Redacted Corrected Mitman Report Table 6. And added to this is the report’s methodology of multiplying rather than adding the risk factors, an approach that NRC guidance indicates is mathematically suspect.⁶³ While acknowledging that the table’s mathematical aggregation of risks is “inaccurate” given that the risks relate to different risk

⁶³ See Regulatory Guide 1.174, An Approach for Using [PRA] in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis at 23 (rev. 3 Jan. 2018) (“Because the hazards and plant operating states are independent, addition of the mean value risk results (also referred to as ‘aggregation’ of the results) of the contributions is mathematically correct.”) (ADAMS Accession No. ML17317A256) [hereinafter Regulatory Guide 1.174].

analysis elements that “may not” be directly compared to achieve “an accurate result,” the report seeks to justify this imprecision as owing to a lack of access to the necessary information. Id. at 37. Yet, lacking any explanation about what information was unavailable or why it was not available, we are unable to find the proffered analysis (which the Mitman report acknowledges is otherwise mathematically challenged) provides the grounds for an admissible contention.⁶⁴

Given all this, as well as the complete absence of any showing that this aggregation claim would lead to the conclusion that the severe accident environmental impacts would be something other than SMALL, this Contention 2 subpart does not meet the material dispute standard of section 2.309(f)(1)(vi).⁶⁵

e. Applicability of BWR and PWR Studies to ONS

i. Petitioners’ Position

The DSSEIS section F.3.2.2 discussion of the State-of-the-Art Reactor Consequence Analysis (SOARCA) regarding the consequences of a seismically-initiated severe accident is deficient, the Mitman report maintains, because the SOARCA work was on a General Electric

⁶⁴ See Oconee, LBP-22-1, 95 NRC at 91 n.89 (indicating that petitioners’ explanation that their lack of engagement with post-Fukushima Duke and Staff evaluation documents was caused by a significant portion of those documents having excised information did not relieve petitioners of responsibility to address, to the extent possible, the adequacy of those evaluation documents based on whatever relevant public information was available).

⁶⁵ Nor do we find persuasive the assertion in Petitioners’ reply that the Mitman report put forth the Table 6 information only “to illustrate” the seriousness of NRC’s underestimation of the compounding of accident risks, Petitioners Redacted Reply at 21, which seems an attempt to justify what is little more than the type of expert speculation that is not a permissible basis for an admissible contention. See USEC Inc. (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006) (“an expert opinion that merely states a conclusion . . . without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the Board of the ability to make the necessary, reflective assessment of the opinion” (quoting Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181, aff’d, CLI-98-13, 48 NRC 26 (1998)); S. Nuclear Operating Co. (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 253 (2007)) (“[N]either mere speculation nor bare or conclusory assertions, even by an expert, . . . will suffice to allow the admission of a proffered contention.”).

BWR and two Westinghouse PWRs. See Redacted Corrected Mitman Report at 37. The report describes the ONS reactors as Babcock and Wilcox PWRs with once-through steam generators, which makes them significantly different from the SOARCA facilities that employ the more common u-tube steam generators. According to the Mitman report, this difference in design, as well as other ONS-unique features such as the lack of reliance on emergency diesel generators as the required source of onsite emergency power in the event of loss of offsite power (LOOP) and the absence of main steam isolation valves (MSIV) between its steam generators and turbines, could impact population dose and makes it “unclear how . . . useful” SOARCA report insights are absent additional NRC Staff analysis about the relevance of a SOARCA report to ONS. Id.

ii. Licensing Board’s Analysis

As Duke notes, the SOARCA project is an agency attempt to “develop the best estimates of the offsite radiological health consequences for potential severe reactor accidents based on a review of certain pilot plants,” the published results of which are discussed in DSSEIS section F.3.2.2 relative to seismic events. Duke Answer at 42. The SOARCA studies analyzing the consequences of seismically-initiated station blackout/LOOP severe accident scenarios at the Surry (Westinghouse PWR), Peach Bottom (General Electric BWR), and Sequoyah (Westinghouse PWR) facilities recognize that their general application must take into consideration the “differences [that] exist in plant-specific designs, procedures, and emergency response characteristics.”⁶⁶ The Mitman report, however, fails to provide any information about

⁶⁶ Office of Nuclear Regulatory Research (RES), NRC, NUREG-1935, [SOARCA] Report at xi (Nov. 2012) (ADAMS Accession No. ML12332A057); see RES, NRC, NUREG/CR-7262, [SOARCA] Project, Uncertainty Analysis of the Unmitigated Short-Term Station Blackout of the Surry Power Station at 7-1 (Dec. 2022) (“The SOARCA analyses were completed for specific accident scenarios at specific plants. Thus, the application of results must be tempered with the understanding of the reactor type, scenario for which results were produced, and site-specific

how the differences it identifies in the ONS design (Babcock & Wilcox PWR) relative to the comparative plants undermine in any material way the NRC Staff's observation that these studies show that the station-blackout/LOOP severe accident scenarios, even when not mitigated to avoid core damage and the release of radioactive material to the environment, nonetheless would result in "essentially zero risk . . . of early fatality for an individual." DSSEIS at F-22.

While asserting that because the ONS design lacks emergency diesel generators the station-blackout/LOOP is a dominant contributor to population dose that must be accounted for in determining a SOARCA report's applicability to ONS, the Mitman report does not account for the fact that the 2022 Surry SOARCA report discussed in the DSSEIS (at F-22) assumes that an unmitigated "seismic event causes a loss of offsite power and failure of onsite emergency AC power resulting in a [station blackout] where neither onsite nor offsite AC power are recoverable." Surry Unmitigated SOARCA Report at 2-1. Likewise, the statement from the 2022 Surry SOARCA report that "[o]nce there is a [steam generator tube rupture], MSIV leakage is the primary environment bypass leakage path," *id.* at 6-25, appears to be in line with the Mitman report's observation that the lack of MSIVs between the ONS steam generator and the turbine "[has] an impact on population dose," Redacted Corrected Mitman Report at 37. Nor does the Mitman report provide any analysis explaining how the releases from the Sequoyah

characteristics.") (ADAMS Accession No. ML22194A066) [hereinafter Surry Unmitigated SOARCA Report]; see also RES, NRC, NUREG/CR-7245, [SOARCA] Project, Sequoyah Integrated Deterministic and Uncertainty Analyses at xxiii (Oct. 2019) ("Rare reactor accidents can involve reactor fuel melting, a failure of the reactor coolant system, and challenges to the containment structure and its function as a barrier to the release of radioactive materials. The challenges to the containment function vary with containment designs, the specific scenario, and the associated accident progression phenomena posing that challenge. For this reason, the NRC has chosen to study challenging severe accident scenarios for a variety of containment design approaches.") (ADAMS Accession No. ML19296B786).

SOARCA station blackout/LOOP accident scenario associated with MSIV leakage differ from any purported station blackout/LOOP-related releases from ONS.

The Commission has made clear that it expects a licensing board “to review the material offered by a petitioner as support for a contention,” which should be scrutinized “both for what it does and does not show.”⁶⁷ Relative to the SOARCA reports referenced by the Mitman report and the information those documents contain as outlined above, the Mitman report has not provided any analysis that would frame a genuine dispute with the DSSEIS conclusion that while “the reevaluated [ONS seismic PRA seismic CDF] for SLR is higher than the [ONS seismic PRA seismic CDF] value during initial license renewal, this increase does not challenge the 95th percentile UCB for population dose estimates used in the 1996 LR GEIS.” DSSEIS at F-23. Thus, the Mitman report contains no significant new information regarding the probability-weighted consequences to the environment of seismic external events. This Contention 2 subpart’s concern regarding the relevance of these SOARCA documents to ONS (which the Mitman report only categorizes as being “unclear” in terms of the insights they afford, Redacted Corrected Mitman Report at 37) therefore fails to establish the requisite 2.309(f)(1)(vi) genuine dispute on a material legal or factual issue needed for its admission.

f. Uncertainties

i. Petitioners’ Position

Petitioners claim that the DSSEIS fails to address uncertainties as required under NEPA and NRC guidance, citing the decision of the United States Court of Appeals for the Third Circuit in Limerick Ecology Action, Inc. v. NRC, 869 F.2d 719, 744 (3d Cir. 1989), and Mitman report

⁶⁷ NextEra Energy Seabrook, LLC (Seabrook Station, Unit 1), CLI-18-4, 87 NRC 89, 107 & n.131 (quoting Yankee Atomic Elec. Co. (Yankee Nuclear Power Station), LBP-96-2, 43 NRC 61, 90, rev’d in part on other grounds, CLI-96-7, 43 NRC 235 (1996)).

section 3.3. See Redacted Corrected Hearing Request at 17. The Mitman report expresses a concern about DSSEIS section F.3.9 and its discussion of uncertainties associated with the 1996 GEIS. Specifically, the Mitman report argues that the DSSEIS' reliance on the "very conservative 95th percentile, UCB estimates for environment[al] impact" does not constitute a "comprehensive uncertainty analysis" because they are estimates of total population dose.⁶⁸ Citing the agency's 1995 PRA policy statement and 2017 guidance on the treatment of PRA-associated uncertainties in risk-informed decision-making, the Mitman report asserts that the NRC's regulatory judgments must include appropriate consideration of uncertainties to demonstrate the agency's degree of confidence in its predictions.⁶⁹

The Mitman report also maintains that, like the need for PRAs for reactor risk analysis, an uncertainty analysis is equally important in agency NEPA assessments.⁷⁰ The Mitman report asserts that the Duke SAMA analysis CDF of 1.2E-4 (as reflected in the Mitman report's Table 1) as well as the ONS LERF values of 1.9E-5 (for units 1 and 2) and 1.75E-5 (for unit 3) exceed the NRC Regulatory Guide thresholds and so require serious consideration of uncertainty information.⁷¹ Providing a proposed methodology for undertaking such an

⁶⁸ Redacted Corrected Mitman Report at 37–38 (quoting DSSEIS at F-29). We note that the quoted language does not come from DSSEIS section F.3.9 concerning uncertainties, but rather from section F.4 regarding population sensitivity. See DSSEIS at F-28 to -29.

⁶⁹ See Redacted Corrected Mitman Report at 38 (citing Final Policy Statement, Use of PRA Methods in Nuclear Regulatory Activities, 60 Fed. Reg. 42,622 (Aug. 16, 1995); RES, NRC, NUREG-1855, Guidance on the Treatment of Uncertainties Associated with PRAs in Risk-Informed Decisionmaking (rev. 1 Mar. 2017) (ADAMS Accession No. ML17062A466)).

⁷⁰ See id. (citing NMSS, NRC, NUREG-1555, Standard Review Plans for Environmental Reviews for Nuclear Power Plants, Supp. 1: Operating License Renewal at 5-3, 5-5, 5-7 (drft. rev. 2 Feb. 2023) (ADAMS Accession No. ML22165A070)).

⁷¹ See id. at 38–39 (citing Redacted Corrected Mitman Report at 10, tbl.1 ([CDF] for External Events)). In this regard, NRC Regulatory Guide 1.174 includes a discussion indicating that a total CDF and an LERF "considerably" higher than the thresholds of 1E-4 and 1E-5 per reactor-year, respectively, should place the focus "on finding ways to decrease rather than

analysis,⁷² the Mitman report concludes that not having done anything like this, the DSSEIS is “deficient and unacceptable as it never calculates probabilistic uncertainties” and therefore does not provide a basis for confidence in its risk estimates to allow an assessment of environmental risk or safety goal compliance. Id. at 39.

ii. Licensing Board’s Analysis

On its face, Petitioners’ “adequate probabilistic analysis” is an alternative analysis. Generally, simply suggesting additional information or inputs that must be introduced into an existing analytical framework is insufficient to support contention admissibility without also identifying a deficiency in the analysis.⁷³ Petitioners go further, however, to criticize the DSSEIS-endorsed evaluation of uncertainty based on the 1996 GEIS bounding analysis that “provides conservatism to cover uncertainties” by employing the 95th percentile UCB estimates of severe accident environmental impacts. DSSEIS at F-28. What Petitioners offer through the Mitman report is an entirely different approach based on an agency guidance statement. The purpose of that guidance statement is to outline an NRC Staff-acceptable approach for an

increase risk.” Regulatory Guide 1.174, at 28; see also Regulatory Guide 1.174, at 32 (stating that if CDF and LERF should “considerably” exceed the respective 1E-4 and 1E-5 limits, “the licensee may need to show why steps should not be taken to reduce CDF or LERF.”)

⁷² See Redacted Corrected Mitman Report at 39 (“An adequate probabilistic risk analysis would include parametric uncertainty data on all input parameters and calculate the corresponding CDF and LERF with uncertainty bounds (e.g. a CDF or LERF of 1E-5 per year with a 90% confidence band of 1E-6 to 5E-5 per year). The analysis would then propagate those CDF and LERF values with their uncertainty bands through the Level 2 and Level 3 PRA evaluations ending with estimates of both prompt and latent cancer fatalities with uncertainty bands. Finally, the analysis would compare [those] calculated values with their corresponding uncertainties against the decision thresholds, i.e., safety goals.”).

⁷³ See Seabrook, CLI-12-5, 75 NRC at 323 (“Given the quantitative nature of the SAMA analysis, where the analysis rests largely on selected inputs, it may always be possible to conceive of alternative and more conservative inputs, whose use in the analysis could result in greater estimated accident consequences. . . . We have long held that contentions admitted for litigation must point to a deficiency in the application, and not merely ‘suggestions’ of other ways an analysis could be done, or other details that could have been included.”).

applicant's use of PRAs "for developing risk-informed applications for a licensing basis change that considers engineering issues and applies risk insights." Regulatory Guide 1.174, at 1. Here, however, no licensing basis change is proposed by the applicant (nor could any licensing basis issues be the subject of review in this proceeding, see 10 C.F.R. § 54.30).

A contention seeking to substitute a different approach to that taken in an environmental impact analysis must show that the analysis being utilized is not "reasonable under NEPA." Seabrook, CLI-12-5, 75 NRC at 323. Simply asserting that the NRC Staff's analysis "using the 95th percentile of the final results does not constitute comprehensive uncertainty analysis," as the Mitman report does, Redacted Corrected Mitman Report at 38, fails to address the reasonableness of the analysis the Staff performed. Both the 2013 and 2024 versions of NUREG-1437, which provide the technical basis for the final GEIS rule by which the agency periodically seeks to account for and address the generic environmental impacts of both initial and subsequent license renewals.⁷⁴ And as is evident in both, the significance and applicability of the "very conservative" 95th percentile benchmark first adopted in the context of the 1996 GEIS has been consistently recognized as appropriate for assessing both the impacts associated with individual severe accident initiating events and impact estimate uncertainties.⁷⁵

⁷⁴ See Renewing Nuclear Power Plant Operating Licenses—Environmental Review, 89 Fed. Reg. 64,166, 64,166 (Aug. 6, 2024) [hereinafter 2024 GEIS Rulemaking].

⁷⁵ See August 2024 GEIS Vol. 3, at E-37 (in analyzing impacts of severe accidents initiated by external events, concluding "that the new information from the external events PRAs is not significant for the purposes of this LR GEIS revision, that external event risk is being effectively addressed and reduced by the various NRC Orders and other initiatives, and therefore, external event risk is not expected to challenge the 1996 LR GEIS 95th percentile UCB risk metrics during the initial LR or SLR time period."); id. at E-93 (in summarizing uncertainties in estimated impacts of severe accidents, indicating that "the 1996 LR GEIS contained an assessment of uncertainties in the information used to estimate the environmental impacts. Section 5.3.4 of the 1996 LR GEIS discusses the uncertainties and concludes that they could cause the impacts to vary anywhere from a factor of 10 to a factor of 1,000. This range of uncertainties bounds the uncertainties discussed in Section E.3.9 [of this GEIS], as

While Petitioners have expressed a pronounced preference for what they consider a more “comprehensive uncertainty analysis,” Redacted Corrected Mitman Report at 38, nothing they have provided suggests that the agency’s longstanding conservatism-based approach is in any way unreasonable under NEPA.

We thus find Petitioners’ challenge to the DSSEIS discussion of impact uncertainties is not a basis for admitting Contention 2 because it fails to frame a genuine dispute on a material legal or factual issue.⁷⁶ See 10 C.F.R. § 2.309(f)(1)(vi).

well as the uncertainties brought in by the other sources of new information, by one or more orders of magnitude.”); 2013 GEIS Vol. 3, at E-24 (in analyzing impacts of severe accidents initiated by external events, concluding “that the CDFs from severe accidents initiated by external events . . . are comparable to those from accidents initiated by internal events but lower than the CDFs [generated using 95th percentile [UCB] estimates] that formed the basis for the 1996 GEIS. The environmental impacts from externally initiated events are generally significantly lower (one or more orders of magnitude) than those used in the 1996 GEIS.”); id. at E-47 (in summarizing impacts uncertainties in estimated impacts of severe accidents, stating that “the 1996 GEIS contained an assessment of uncertainties in the information used to estimate the environmental impacts. Section 5.3.5 of the 1996 GEIS discusses the uncertainties and concludes that they could cause the impacts to vary anywhere from a factor of 10 to a factor of 1,000. This range of uncertainties bounds the uncertainties discussed in Section E.3.9 [of this GEIS], which ranged from a factor of 3 to 10, as well as the uncertainties brought in by the other sources of new information.”); see also August 2024 GEIS Vol. 2, at A-188 (noting in response to Petitioners’ rulemaking comment regarding a lack of detailed uncertainty analysis in the draft GEIS that “[i]n the 1996 LR GEIS, because limited information was available, very conservative 95th percentile UCB values were used to account for uncertainty for determining the probability-weighted consequences to the public and environment. There was still a large margin compared to the NRC safety goals. The SOARCA uncertainty analyses also identified a large margin compared to the [quantitative health objective] limits (for the important class of [station blackout] scenarios studied), which confirms the 1996 LR GEIS determination. No changes were made in the LR GEIS, final rule, or guidance as a result of these comments.”).

⁷⁶ As we noted above, see supra p. 43, Petitioners cite the Third Circuit’s decision in Limerick Ecology Action, 869 F.2d at 744, as supporting their claim that the NRC violated NEPA with the DSSEIS’s failure to address uncertainties, albeit without providing any analysis or explanation as to why the case supports that assertion. See Corrected Hearing Request at 17. We note, however, that the cited portion of the decision appears to be inapplicable here because it deals with an agency determination to exclude a subject (i.e., sabotage risk) from NEPA consideration, not an instance such as this one in which the agency has addressed a subject, but a different analytical approach for doing so has been proposed.

3. Petitioners' Contention 3

a. Petitioners' Position

As set forth in its subpart A "Statement of Contention," this contention, titled "[DSSEIS] fails to address the effects of climate change on accident risk," challenges the purported failure of the DSSEIS to acknowledge the "increased frequency and severity of extreme weather events" due to climate change that "inevitably affect the likelihood and severity of reactor accidents." Redacted Corrected Hearing Request at 18. Further, according to Contention 3, "[c]onsideration of climate change effects is particularly important for Oconee, which was never designed to withstand a significant flood from failure or overtopping of the Jocassee Dam." Id. Petitioners also contend that because climate change effects are "reasonably foreseeable and potentially significant," these effects must be considered now for the SLR term, not later, as the DSSEIS indicates. Id. (citing DSSEIS at 3-35 to -36). According to Petitioners, such possible future action does not excuse the agency from analyzing these effects now unless there is a showing, which Petitioners maintain was not made here, that the effects are "so small as to be remote and speculative." Id. And in support of these assertions, in subparts B and E providing, respectively, a "Basis Statement" and a "Concise Statement of the Facts or Expert Opinion Supporting the Contention, Along with Appropriate Citations to Supporting Scientific or Factual Materials" for the contention, Petitioners again indicate that the support for this contention can be found chiefly in the contention's one-page subpart A "Statement of Contention" and section 3.4 of the Mitman report. See id. at 18, 19.

Regarding Contention 3, the Mitman report asserts that the various 1980s and early 1990s FERC and NRC Oconee-related external risk evaluations, including flooding risks, referenced and discussed in section 2.4 of the Mitman report, were done without any consideration of the then largely-unanticipated impacts of climate change on the likelihood and

severity of extreme weather events that are not only apparent today, but are likely to increase with the passage of time. See Redacted Corrected Mitman Report at 39. At the same time, the report challenges the NRC Staff's DSSEIS assertion that the impacts of natural phenomena, such as earthquakes and intense or prolonged precipitation-induced flooding, whether attributable to climate change or otherwise, are outside the scope of the NRC's license renewal environmental review because they involve plant systems, structures, and components that are assessed as a safety rather than an environmental matter. See id. at 39–40 (citing DSSEIS at 3-30); see also DSSEIS at 3-208. According to the Mitman report, this runs counter to both 2023 Council on Environmental Quality (CEQ) guidance and a 2024 Government Accountability Office (GAO) report that indicate NEPA requires agencies, and in the case of the GAO report, the NRC in particular, to consider the impact on proposed federal actions, such as the approval of reactor license renewals, of climate change-exacerbated natural hazards such as floods, hurricanes, and wildfires.⁷⁷

The Mitman report also maintains that the GAO report is not strong enough because that report failed to reference the dangers of climate change-enhanced high-wind and tornado hazards. See Redacted Corrected Mitman Report at 41. This, according to the Mitman report, is a significant phenomenon also not assessed in the DSSEIS notwithstanding the fact that for ONS high-wind hazards are more than 50 percent of the external CDF according to the calculation provided in Table 1 of the report. See id. The Mitman report claims as well that the DSSEIS fails to provide the necessary NEPA impacts analysis despite the fact that the NRC,

⁷⁷ See Redacted Corrected Mitman Report at 40–41 (referencing [NEPA] Guidance on Consideration of Greenhouse Gas Emissions and Climate Change, 88 Fed. Reg. 1196, 1208–09 (Jan. 9, 2023); U.S. Gov't Accountability Off., GAO-24-106326, Nuclear Power Plants, NRC Should Take Actions to Fully Consider the Potential Effects of Climate Change at 1, 13 n.21, 34, 39 (Apr. 2024) (<https://www.gao.gov/assets/gao-24-106326.pdf>) [hereinafter 2024 GAO Report]).

and the federal government generally, already are well aware of these potential climate change impacts. See id. at 42. And as the basis for this assertion, the report references (1) the NRC's post-Fukushima assessments of external hazards such as high winds and flooding; (2) presentations at the agency's yearly Regulatory Information Conference (RIC); (3) incidents such as the 2020 derecho-associated LOOP event at the Duane Arnold facility that caused the facility to be permanently shut down; and (4) the NRC's participation in National Oceanic and Atmospheric Administration (NOAA)-sponsored projects to modernize the methodology for assessing probable maximum precipitation (PMP) estimates, which are a significant input in calculating the probable maximum flood and local intense precipitation values that are important in NRC's evaluations of Oconee flooding events. See id. at 42–44.

Additionally, the Mitman report claims that the DSSEIS fails to assess Duke's own 2015 FHRR that highlighted flood threats associated with climate change and precipitation events.⁷⁸ Similarly, the Mitman report criticizes the NRC's failure to assess the impacts of climate change on ONS in the context of the critical "cliff-edge" effect, in which small flooding-related hazard increases can cause a dramatic and overwhelming structural impact. See id. at 43. This effect, according to the Mitman report, is unlike other hazards in which the stress on a system is increased somewhat proportionally to the increase in the hazard. See id. In the case of ONS, the Mitman report asserts that climate-change-exacerbated flooding can induce such "cliff-edge" effects, including (1) above-grade flooding that will enter the turbine building and its lower levels, putting at risk significant safety-related equipment such as the high- and low-pressure service water and the emergency feedwater system; (2) an above-grade rise that will disable the

⁷⁸ See id. at 41–42 (citing HDR Engineering, Inc. of the Carolinas, Flooding Hazard Reevaluation Report, ONS, at 58, tbl.13 (rev. 1 Jan. 29, 2015) (Current licensing basis and reevaluation flood evaluations) (ADAMS Accession No. ML16272A217)).

emergency distribution system and the entire alternating current-driven emergency core cooling system; and (3) a water level that overtops the wall protecting the SSF, thus disabling the last line of permanently-installed equipment capable of dealing with the impacts of flooding on safe shutdown. See id. at 44. In addition, the report questions whether the current “freeboard” or margin that exists between the estimated maximum flood elevation behind the Jocassee Dam and the elevation of the top of the dam is sufficient in the face of a climate-change-exacerbated PMP. See id.

In sum, the Mitman report claims the DSSEIS “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 Oconee” to “perform the NEPA required hard look at environmental impacts.” Id. at 45. The report thus indicates its agreement with what it asserts is a similar conclusion in the GAO report such that the NRC “cannot claim to have a reasonable basis for concluding that the environmental impacts of accidents during a license renewal term are ‘SMALL.’” Id.

b. Licensing Board’s Analysis

In considering this contention’s admissibility, we again acknowledge at the outset that we do not write on an entirely clean slate. Very recently, the admissibility of three contentions similar in many respects to Petitioners’ Contention 3, each of which asserts that climate change brings an increased risk of accidents due to the increased frequency and intensity of weather events, has been the subject of consideration by two different licensing boards.⁷⁹ And while those boards’ rulings, two of which are pending before the Commission, are not binding on us,

⁷⁹ See Fla. Power & Light Co. (Turkey Point Nuclear Generating Units 3 and 4), LBP-24-8, 100 NRC 95, 125–29 (2024), appeal pending; North Anna, LBP-24-7, 100 NRC at 69–73; Turkey Point, LBP-24-3, 99 NRC at 67–69.

we nonetheless can refer to or rely upon them if we find the boards' reasoning and analyses persuasive.⁸⁰

Relative to the Mitman report, which contains the sum and substance of the support provided by Petitioners for Contention 3, we begin by noting that it contains several general assertions Mr. Mitman previously made in support of similar climate change contentions in the Turkey Point and North Anna SLR proceedings. These include claims regarding NRC awareness of potential climate change impacts relative to its post-Fukushima assessments of external hazards, RIC presentations, the 2020 Duane Arnold facility LOOP event, and NOAA-sponsored PMP estimate methodology modernization efforts.⁸¹ Also presented previously were concerns about the cliff-edge effect. See Mitman Turkey Point Declaration at 3; Mitman North Anna Declaration at 17. In both instances, however, these claims were found to lack sufficient support for an admissible contention because they were either too speculative or lacked insufficient information to establish a genuine, material factual dispute with the draft SEIS at issue in those proceedings. See Turkey Point, LBP-24-3, 99 NRC at 68–69 (citing 10 C.F.R. § 2.309(f)(1)(v)–(vi)); North Anna, LBP-24-7, 100 NRC at 71–72. For the same reasons, we agree.

⁸⁰ See S. Cal. Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3), CLI-13-10, 78 NRC 563, 569 n.42 (2013) (“Unreviewed board decisions are not binding on future boards” although they may be referenced “as persuasive authority”).

⁸¹ See Request for Hearing and Petition to Intervene Submitted by Miami Waterkeeper, Fla. Power & Light Co. (Turkey Point Nuclear Generating Units 3 and 4), Dkt. Nos. 50-250-SLR-2/50-251-SLR-2 (Nov. 27, 2023), ex. 18, at 2–4 (Decl. of Jeffrey T. Mitman (Nov. 27, 2023)) [hereinafter Mitman Turkey Point Declaration]; Hearing Request and Petition to Intervene by Beyond Nuclear and the Sierra Club, Va. Elec. and Power Co. (North Anna Power Station, Units 1 and 2), Dkt. Nos. 50-338-SLR-2/50-339-SLR-2 (Mar. 28, 2024), attach. 1, at 15–16, 17 (Decl. of Jeffrey T. Mitman (Mar. 27, 2024)) [hereinafter Mitman North Anna Declaration].

Additionally, to the extent the Mitman report raises issues regarding ONS-specific climate-change-associated impacts, these appear to rely on the basic premise that the DSSEIS “is already inadequate as a general matter for making broad generalizations about external event CDF based on extrapolations from internal event CDF values and limited actual plant-specific values for external event impact on population dose.” Redacted Corrected Mitman Report at 42. Yet, this concern about the ONS external hazards analysis fails to address the fact that the 1996 GEIS, as reaffirmed in the 2013 and 2024 GEISs, concludes that the impacts from external events are comparable to those from internal events.⁸² Accordingly, as was the case with several of the claims posited in connection with Contention 2, see supra section III.B.2, this asserted basis for Contention 3 does not identify any legal or regulatory noncompliance with the GEIS conclusion and therefore does not establish a litigable genuine dispute.

Finally, the Mitman report maintains that the NRC’s approach to climate change consideration is contrary both to the conclusions reached in a 2024 GAO report and to 2023 CEQ guidance on NEPA consideration of climate change. Regarding the Mitman report’s assertion that the recent GAO report concerning NRC’s consideration of climate change

⁸² See 1 RES, NRC, [GEIS] for License Renewal of Nuclear Plants, NUREG-1437, Main Report, Final Report at 5-18 (May 1996) (concluding that “the risk from sabotage and beyond-design-basis earthquakes at existing nuclear power plants is small and additionally, that the risks [from] other external events, are adequately addressed by a generic consideration of internally initiated severe accidents”) (ADAMS Accession No. ML040690705); 2013 GEIS Vol. 3, at E-47, tbl.E-19 (Summary of Conclusions) (stating “[t]he 1996 GEIS did not quantitatively consider severe accidents initiated by external events in assessing environmental impacts. When the environmental impacts of external events are considered, they can be comparable to those from internal events; however, they are generally lower than the estimates used in the 1996 GEIS for internal events”); August 2024 GEIS Vol. 3, at E-94, tbl.E.5-1 (Summary of Conclusions) (indicating “[n]ew information from the NUREG-1437 supplements about the risk and environmental impacts of severe accidents caused by both internal and external events . . . indicates that total PWR and BWR CDFs for all hazards are, on average, about the same as those forming the basis” of the 1996 GEIS).

provides a sufficient basis for Contention 3, we are persuaded by the Turkey Point licensing board's recent analysis of whether that same report provided an adequate basis for a contention seeking an enhanced NRC climate-change assessment. The Turkey Point board observed that the GAO report, which focused on the NRC's failure to use climate projection data in conducting its nuclear power plant application safety reviews, recommended that the agency assess whether climate change-related gaps existed in its analyses with the goal of addressing any gaps identified. See Turkey Point, LBP-24-8, 100 NRC at 127. The board also noted that the GAO report did not determine that any operating plants were unsafe or lacked measures to address climate change impact-associated risks. See id. at 128. Instead, according to the board, the report provided examples of measures being used at operating plants, such as flood protection barriers and steam generator backup pumps at the Turkey Point facility, to address external events as well as acknowledged instances, including in the license renewal context, where the agency already considers climate change as part of its environmental review.⁸³ See id. Given the GAO report's particular focus, and the intervening party's failure to make any link between the report and the purported gaps in the NRC Staff's environmental analysis, the Turkey Point licensing board concluded that, in and of itself, the GAO report was insufficient to

⁸³ Although the GAO visited the Turkey Point and Palo Verde facilities "because of their exposure to a variety of natural hazards that may be exacerbated by climate change and regional diversity" and then used information gathered to illustrate potential heat, drought, and flooding impacts, 2024 GAO Report at 2, 15, 19, the GAO report was still found by the Turkey Point licensing board to be insufficient to support a climate-change contention regarding that facility, see Turkey Point, LBP-24-8, 100 NRC at 128–29. In contrast, the report's only mention of the ONS facility is in a GAO-generated table outlining the exposure of all operating domestic nuclear power plants to what were identified in the 2018 and 2023 editions of the National Climate Assessment as six natural hazards likely to be exacerbated by climate change, i.e., flooding, hurricane storm surge, wildfire, sea level rise, heat, and cold. See 2024 GAO Report at 3 & nn.2–3, 59 (Appendix III: Nuclear Power Plant Exposure to Selected Natural Hazards). This table listing for ONS does nothing to bolster Petitioners' case for the admissibility of Contention 3.

raise a genuine dispute with the NRC Staff's final supplemental EIS. See id. at 128–29 (citing 10 C.F.R. § 2.309(f)(1)(vi)). We conclude that Petitioners' reliance on the GAO report in this instance has the same shortcomings.

Relative to the 2023 CEQ guidance, we note that the Commission's longstanding position has been that as an independent regulatory agency the NRC is not bound by CEQ regulations or guidance that would "have a substantive impact on the way in which the Commission performs its regulatory functions."⁸⁴ The Commission nonetheless has indicated it will take into consideration such CEQ issuances as "guidance in carrying out our NEPA responsibilities," particularly in determining what actions are reasonable under NEPA.⁸⁵ Putting aside the question whether this CEQ guidance, which the Commission has not adopted as binding,⁸⁶ would have a substantive impact on the agency's regulatory functions so as not to provide a suitable basis for Contention 3,⁸⁷ this CEQ guidance fails as the basis for an

⁸⁴ Pac. Gas and Elec. Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 443–44 (2011) (quoting Environmental Protection Regulations for Domestic Licensing and Related Regulatory Functions and Related Conforming Amendments, 49 Fed. Reg. 9352, 9352 (Mar. 12, 1984)).

⁸⁵ Powertech (USA) Inc. (Dewey-Burdock In Situ Uranium Recovery Facility), CLI-20-9, 92 NRC 295, 299 (2020), petition for review denied, 45 F.4th 291 (D.C. Cir. 2022).

⁸⁶ Because this clearly is the case here, we need not reach the question whether the recent holding of the United States Court of Appeals for the District of Columbia Circuit in Marin Audubon Soc. v. FAA, 121 F.4th 902, 914 (D.C. Cir. 2024), that the CEQ has no lawful authority to issue regulations would have any impact on an instance in which an agency, such as the NRC in issuing its NEPA requirements in 10 C.F.R. Part 51, has adopted a CEQ regulation or incorporated the regulation by reference.

⁸⁷ The NRC Staff asserts, and Duke supports the notion, that Contention 3 is inadmissible as outside the scope of this proceeding because with Contention 3 Petitioners are concerned about the effects of climate change on the ONS facility. See Staff Answer at 40–41 (arguing that Contention 3 is simply a CLB issue outside the scope of a license renewal proceeding because a nuclear plant's ability to cope with natural phenomena hazards is an ongoing operational issue, with information on changing environmental conditions being taken into account to determine whether safety-related changes are needed to ensure safe operations, that lacks any connection to the permissible safety-related issues of aging

admissible contention in that, as was the case with the GAO report, both the CEQ guidance and the Mitman report in referencing that document lack any explanation that would support Petitioners' claim that the Staff's DSSEIS discussion of climate change is inadequate.

Thus, we conclude that Petitioners' showing in support of Contention 3 is insufficient to establish its admissibility under section 2.309(f)(1)(v)–(vi).

IV. CONCLUSION

As we explain in section II above, Petitioners have made the requisite showing to establish their representational standing in this proceeding regarding Duke's SLR application for

management programs and time-limited aging analyses); Duke Answer at 51 (maintaining the Mitman report erroneously asserts that the NRC is arbitrarily attempting to exclude from the scope of license renewal environmental reviews challenges to a facility's CLB because that scope limitation has been adopted through the rulemaking process and is expressly included in the DSSEIS).

We find this claim troubling for many of the reasons expressed by the Turkey Point licensing board and the dissent in the North Anna case regarding the climate-change-associated contentions before them. See Turkey Point, LBP-24-8, 100 NRC at 131 n.204; North Anna, LBP-24-7, 100 NRC at 88–89 (Gibson, A.J., concurring in part and dissenting in part); Turkey Point, LBP-24-3, 99 NRC at 68 n.173. Nonetheless, we note as well the apparent endorsement of the NRC Staff's "scope" position in the context of the now-effective final rule governing the generic environmental review of initial and subsequent license renewal applications. See August 2024 GEIS Vol. 2, at A-220 to -222 (in response to Petitioners' rulemaking comment concerning the need for NEPA consideration of the effects of climate change on accident impacts, stating that "NRC disagrees that impacts of future climate change and mitigation should be considered for postulated accidents. The impacts of future changing natural phenomena on nuclear power plant postulated accidents are outside the scope of this [license renewal] GEIS and rulemaking."); see also 2024 GEIS Rulemaking, 89 Fed. Reg. at 64,167 (indicating updated license renewal GEIS, NUREG-1437, documents the NRC systematic approach to evaluating renewed nuclear facility operating license's environmental impacts and provides the technical basis for Table B-1); id. at 64,182 (describing volume 2 of 2024 GEIS as "NRC's analysis of and response to public comments" on the proposed GEIS); Letter from Christopher T. Hanson, Chair, NRC, to Frank Russo, Director, Natural Resources and Environment, GAO at 1 (Sept. 27, 2024) ("[C]onsidering the conservatisms, safety margins, and depth-in-defense policies described in the [April 2, 2024 GAO] report, the NRC does not agree with the conclusion that the agency does not address the impacts of climate change.") (ADAMS Accession No. ML24274A001).

the ONS facility. Nonetheless, for the reasons set forth in section III above, we conclude Petitioners have failed to meet one or more of the standards in 10 C.F.R. § 2.309(f)(1) that all must be fulfilled to permit the admission of their Contention 1 (Erroneous, Incomplete and Misleading Information Regarding Whether Duke Has Provided the Oconee reactors with “Adequate Protection” From Failure of the Upstream Jocassee Dam), Contention 2 (DSSEIS Risk Estimates Fail to Meet NEPA Requirements for Rigor, Accuracy, Completeness, and Consideration of Uncertainties), and Contention 3 (DSSEIS Fails to Address the Effects of Climate Change on Accident Risk). Consequently, we must deny their hearing request.

For the foregoing reasons, it is this seventeenth day of January 2025, ORDERED, that:

1. The April 29, 2024 hearing request of petitioners Beyond Nuclear, Inc., and the Sierra Club, Inc., as corrected on May 1, 2024, is denied and this proceeding will be terminated before the Licensing Board upon the completion of the activities outlined in paragraphs 3 and 4 below.

2. In accordance with the provisions of 10 C.F.R. § 2.311, as this memorandum and order rules upon an intervention petition, any appeal to the Commission from this memorandum and order must be taken within twenty-five (25) days after this issuance is served on the participant lodging the appeal.

3. Because a nonpublic NRC Staff review of this decision is required to identify and redact any SUNSI it may contain,⁸⁸ the decision will be treated as a nonpublic issuance

⁸⁸ As we have noted previously, see supra notes 2, 20, the June 24, 2024 initial prehearing conference transcript and several of Petitioners’ submissions have been identified by the NRC Staff as containing nonpublic SUNSI. Based on our review of the redacted versions of the initial prehearing conference transcript and Petitioners’ filings, we have endeavored in this decision to avoid using any such nonpublic information.

Nonetheless, the possibility exists that our efforts in that regard may not have been fully

identified as subject to previously issued Protective Order A.⁸⁹ And because they have access to the nonpublic portion of the docket of this proceeding, Duke and the NRC Staff will be served with this decision.⁹⁰ Further, so the Board can monitor the progress of the Staff's SUNSI review

successful, particularly given that the 2022 licensing board's decision in LBP-22-1, which we have cited extensively in this decision, see supra section III.B.1.a, has apparently been removed from the public record for redaction and re-release at some currently unknown point in the future. See Board Decision Regarding Public Release of Redacted Documents at 15 n.12.

⁸⁹ See Licensing Board Memorandum and Order (Protective Order A Governing Specific [SUNSI]) (Aug. 19, 2024) ¶ 1 (unpublished) [hereinafter Protective Order A]; see also Licensing Board Memorandum and Order (Regarding Nondisclosure Declaration Filings, Reconsideration/Clarification Motions, Nonpublic Document Redaction, and Marking Nonpublic Documents) (Aug. 26, 2024) at 5 (designating August 19, 2024 SUNSI protective order as Protective Order A) (unpublished). In placing this decision into the nonpublic docket of this proceeding, the Board has provided an appropriate header identifying the decision as subject to Protective Order A. See Protective Order A ¶ 6.

⁹⁰ When, as here, nonpublic information has become part of the adjudicatory record, it is the usual practice when issuing a decision that might involve such information for a Licensing Board post-issuance to make its ruling available to the participants for their review and input concerning possible redactions. See Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), LBP-00-6, 51 NRC 101, 135, aff'd in part and rev'd in part on other grounds, CLI-00-13, 52 NRC 23 (2000); see also Areva Enrichment Servs., LLC (Eagle Rock Enrichment Facility), LBP-11-11, 73 NRC 455, 525 n.36 (2011). An already-in-place protective order generally governs participant access to, and responsibility concerning, the decision during the nonpublic review process. See Eagle Rock, LBP-11-11, 73 NRC at 525 n.36; see also Private Fuel Storage, LBP-00-6, 51 NRC at 134–35. Thereafter, when the review process is completed, a version of the decision containing any redactions is released for the public record.

In this instance, however, this protocol was unavailable because Petitioners declined to become parties to the protective order governing the handling and protection of Staff-identified nonpublic information in this proceeding. See Board Decision Regarding Public Release of Redacted Documents at 17 & n.15. This, in turn, raised the possibility that Petitioners' ability under section 2.311 to seek timely review of an adverse Board determination regarding their hearing petition could be impinged because of the need to await the completion of the Staff's SUNSI review to examine the decision in full.

Seeking to mitigate this circumstance, we considered requesting that the Commission appoint a representative to aid the Board in identifying any nonpublic information for redaction prior to decision issuance, as has been done in other adjudicatory proceedings. See Licensing Board Request to Commission (Seeking Designation of Representative to Advise and Assist Licensing Board With Respect to Classification of Information and Safeguards to Be Observed), GE-Hitachi Global Laser Enrichment LLC (GLE Enrichment Facility), Dkt. No. 70-7016-ML (Aug. 25, 2010) at 1 (unpublished) (citing 10 C.F.R. § 2.904). In this instance, however, because the SUNSI at issue has been identified as CEII, another federal agency, FERC, would

of this decision, beginning on Friday, January 24, 2025, the Staff shall provide for the public docket of this proceeding a weekly status report on its review effort that includes a good faith estimate of the specific date by which that process will be completed. This weekly reporting obligation will continue until the Staff provides for the public record of this proceeding the Board notification set forth in paragraph 4 below.

4. When the NRC Staff has completed its SUNSI review of this decision, as it has done previously in similar circumstances,⁹¹ it shall notify the Board that (1) it has placed a redacted

likely need to be involved in such a review to aid the Commission-appointed NRC representative. Given this would have allowed for review of the Board's draft decision by FERC personnel, who would not be subject to NRC or Board authority, the Board declined to adopt this approach.

Thus, this decision is being provided immediately to the NRC Staff, and to Duke as a party to Protective Order A, for a prompt Staff nonpublic information review under Protective Order A. The Board, however, will not serve the decision upon Petitioners. Bearing in mind that only the Commission can extend the time for filing an appeal under 10 C.F.R. § 2.311 from a licensing board decision granting or denying a hearing request, see Consolidated Edison Co. of N.Y., Inc. (Indian Point Station, Unit No. 3), ALAB-281, 2 NRC 6, 7 (1975), Petitioners nonetheless will have the full 25-day period within which to submit any appeal beginning when they are served with the Board's decision (with or without redactions) upon completion of the Staff's SUNSI review process. See 10 C.F.R. § 2.311(b).

Of course, if Petitioners believe any aspect of this document review procedure will not afford them a fair opportunity to file a timely appeal, they can seek an appropriate extension of time from the Commission.

Finally, and consistent with prior practice, see Private Fuel Storage, LBP-00-6, 51 NRC at 138 n.14; see also Licensing Board Memorandum (Notice Regarding Issuance of Partial Initial Decision on Safety Related Contentions), La. Energy Servs. L.P. (National Enrichment Facility), Dkt. No. 70-3103-ML (May 31, 2006) (unpublished), in a separate issuance this date the Board is providing a synopsis of this ruling so that the public (and Petitioners) will be aware of the general nature of the Board's determination and the post-issuance conventions we establish for the NRC Staff's SUNSI review and for service of this decision. See Licensing Board Memorandum (Notice Regarding Issuance of Decision on Intervention Petition) (Jan. 17, 2025) (unpublished).

⁹¹ See NRC Staff Notification Regarding December 5, 2024, Ex Parte/Separation of Functions Communication Memorandum and Order (Dec. 12, 2024) at 2; NRC Staff Motion Requesting That the Licensing Board Accept the Redacted Documents Identified as Non-Public Attachments A–D to This Motion for Inclusion on the Public Docket (Nov. 21, 2024) at 2.

version of this decision into the nonpublic record of this proceeding that can be made publicly available; or (2) the unredacted version of the decision previously provided in the nonpublic portion of the docket for its review now can be placed into the public record. Thereafter, the Board will ensure that its decision is placed on the public docket of this proceeding docket and served on all the participants to this proceeding, thereupon terminating the proceeding before the Board.

THE ATOMIC SAFETY
AND LICENSING BOARD

/RA/

G. Paul Bollwerk, III, Chair
ADMINISTRATIVE JUDGE

/RA/

Dr. Sue H. Abreu
ADMINISTRATIVE JUDGE

/RA/

Dr. Arielle J. Miller
ADMINISTRATIVE JUDGE

Rockville, Maryland

January 17, 2025

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)
)
DUKE ENERGY CAROLINAS, LLC,) Docket Nos. 50-269 SLR-2
) 50-270 SLR-2
) 50-287 SLR-2
)
(Oconee Nuclear Station Units 1, 2, and 3))

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing **MEMORANDUM AND ORDER (Ruling on Intervention Petition)** have been served upon the following persons by Electronic Information Exchange.

U.S. Nuclear Regulatory Commission
Office of Commission Appellate Adjudication
Mail Stop: O-16B33
Washington, DC 20555-0001
E-mail: ocaamail.resource@nrc.gov

U.S. Nuclear Regulatory Commission
Office of the Secretary of the Commission
Mail Stop: O-16B33
Washington, DC 20555-0001
E-mail: hearingdocket@nrc.gov

U.S. Nuclear Regulatory Commission
Atomic Safety and Licensing Board Panel
Mail Stop: T-3F23
Washington, DC 20555-0001
G. Paul Bollwerk, III, Chairman,
Administrative Judge
Dr. Sue H. Abreu, Administrative Judge
Dr. Arielle J. Miller, Administrative Judge
E-mail: Paul.bollwerk@nrc.gov
Sue.abreu@nrc.gov
Arielle.miller@nrc.gov

U.S. Nuclear Regulatory Commission
Office of the General Counsel
Mail Stop - O-14A44
Washington, DC 20555-0001
David Roth
Susan H. Vrahoretis
Mary Frances Woods
Megan Wright
Kevin Bernstein
E-mail: david.roth@nrc.gov
susan.vrahoretis@nrc.gov
mary.woods@nrc.gov
megan.wright@nrc.gov
kevin.bernstein@nrc.gov

Counsel for Duke Energy Carolinas, LLC
Morgan, Lewis & Bockius, LLC
1111 Pennsylvania Ave NW
Washington, DC 20004
Paul Bessette
Ryan K. Lighty
Scott Clausen
Molly Mattison
E-mail: paul.bessette@morganlewis.com
ryan.lighty@morganlewis.com
scott.clausen@morganlewis.com
molly.mattison@morganlewis.com

Duke Energy Carolinas, LLC (Oconee Nuclear Station Units 1, 2, and 3, Docket Nos. 50-269, 50-270, and 50-287 SLR-2)
MEMORANDUM AND ORDER (Ruling on Intervention Petition)

Duke Energy Corporation
525 South Tryon Street
Charlotte, North Carolina 28202
Tracey M. Leroy
E-mail: tracey.leroy@duke-energy.com

Beyond Nuclear Reactor Oversight Project
7304 Carroll Avenue #182
Takoma Park, MD 20912
Paul Gunter
E-mail: paul@beyondnuclear.org

Counsel for Beyond Nuclear and
Sierra Club
Harmon, Curran, Spielberg, &
Eisenberg, LLP
1725 DeSales Street, N.W.
Suite 500
Washington, DC 20036
Diane Curran
E-mail: dcurran@harmoncurran.com

Office of the Secretary of the Commission

Dated at Rockville, Maryland
this 22nd day of January 2025.