UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	Docket Nos. 50-269-SLR 50-270-SLR and
DUKE ENERGY CAROLINAS, LLC	)	50-287-SLR
(Oconee Nuclear Station, Units 1, 2 and 3)	)	October 22, 2021

APPLICANT'S ANSWER OPPOSING REQUEST FOR HEARING, PETITION TO INTERVENE, AND PETITION FOR WAIVER SUBMITTED BY BEYOND NUCLEAR AND SIERRA CLUB

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I. INTRODUCTION

Pursuant to 10 C.F.R. §§ 2.309(i)(1) and 2.335(b), Duke Energy Carolinas, LLC ("Duke" or "Applicant") submits this Answer opposing the Hearing Request and Petition to Intervene ("Hearing Request") and Petition for Waiver ("Waiver Request") (together, the "Petition")[1] filed by Beyond Nuclear and Sierra Club ("Petitioners") on September 27, 2021, regarding the subsequent license renewal ("SLR") application ("SLRA") for Oconee Nuclear Station, Units 1, 2 and 3 ("Oconee").[2] The Hearing Request proposes three contentions purporting to challenge Applicant's environmental report ("ER").[3]

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1 Hearing Request and Petition to Intervene by Beyond Nuclear and Sierra Club and Petition for Waiver of 10 C.F.R. §§ 51.53(c)(3)(i), 51.53(c)(3)(ii)(L), 51.71(d), 51.95(c)(1), and 10 C.F.R. Part 51 Subpart A, Appendix B, Table B-1 to Allow Consideration of Category 1 NEPA Issues (Sept. 27, 2021) (Package ML21270A249) ("Petition"). The Petition is accompanied by multiple attachments, including Attachment 1, "Declaration of Jeffrey T. Mitman in Support of Beyond Nuclear and Sierra Club Hearing Request" ("Mitman Decl.").

2 *See* Letter from Steven M. Snider, Duke, to NRC Document Control Desk, "Duke Energy Carolinas, LLC (Duke Energy), Oconee Nuclear Station (ONS), Units 1, 2, and 3, Docket Numbers 50-269, 50-270, 50-287, Renewed License Numbers DPR-38, DPR-47, DPR-55, Application for Subsequent Renewed Operating Licenses" (June 7, 2021) (Package ML21158A193). The application package contains multiple enclosures. The SLRA is Enclosure 3, which consists of two attachments: the Safety Report (ML21158A194) and Appendix E, which is the Environmental Report ("ER") (ML21158A195 to ML21158A200).

3 The Applicant does not challenge Petitioners' standing claim in this proceeding.

In sum, the proposed contentions claim that the ER does not consider certain information regarding the environmental impacts of Severe Accidents caused by a hypothetical failure of the Jocassee Dam,[4] and therefore does not satisfy the National Environmental Policy Act of 1969, as amended ("NEPA")[5] or the U.S. Nuclear Regulatory Commission's ("NRC's") NEPA-implementing regulations in 10 C.F.R. Part 51.

More specifically, Proposed Contention 1 asserts that Duke "incorrectly" relies on 10 C.F.R. § 51.53(c)(3) to "excuse" it from needing to discuss such impacts because, according to Petitioners, that regulation does not apply to SLRAs.[6] However, as Petitioners correctly acknowledge, their claim is contrary to controlling law.[7] Furthermore, the ER does not take the position that Duke is "excused" from evaluating such impacts; rather, the impacts of Severe Accidents were analyzed generically in the NRC's Generic Environmental Impact Statement ("GEIS") for license renewal,[8] which the ER explicitly incorporates by reference.[9] Thus, Proposed Contention 1 is factually and legally erroneous, and wholly inadmissible.

Proposed Contentions 2 and 3 effectively seek to challenge the GEIS analysis of Severe Accidents, which is codified in 10 C.F.R. Part 51, Subpart A, Appendix B ("Appendix B"), by claiming the ER fails to consider certain new and significant information ("NSI"), as required by 10 C.F.R. § 51.53(c)(3)(iv). But NRC regulations (including the codified GEIS analyses) cannot be challenged in adjudicatory proceedings absent a waiver. Accordingly, Petitioners submitted the corollary Waiver Request, asking that the application of certain NRC environmental

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4 *See* Petition at 2-3.

5 *See* Pub. L. 91–190, §2, Jan. 1, 1970, 83 Stat. 852 (codified at 42 U.S.C. §§ 4321 et seq.).

6 Petition at 11.

7 *Id*. at 12.

8 10 C.F.R. Part 51, App. B.

9 *See* 10 C.F.R. § 51.53(a); ER at 4-2.

regulations be set aside in this proceeding. Petitioners correctly recognize that their Proposed Contentions 2 and 3 cannot be admitted unless the Waiver Request is granted.

As explained in detail below, Proposed Contentions 2 and 3 must be denied because neither the Waiver Request nor the proposed contentions satisfy the legal requirements governing this Petition. As a general matter, the arguments Petitioners seek to advance in the Petition lack even the minimum clarity and precision required for contentions. Moreover, both the Waiver Request and the Hearing Request suffer from Petitioners' fundamental failure to engage with either: (1) the analyses in the GEIS, which squarely evaluate Severe Accidents; or (2) the framework for the identification and screening of new information for potential significance to the Severe Accidents issue. Instead, Petitioners point to now fully-resolved current licensing basis ("CLB") *safety issues* and (incorrectly) assume such information presents new and significant *environmental issues*.

Furthermore, the Petition relies primarily on a declaration from Jeffrey T. Mitman ("Mitman Declaration"), who purports to provide an opinion on "safety" matters as the basis for the Hearing Request and Waiver Request, which instead raise environmental claims. In fact, the first 18 pages of the Mitman Declaration focus on what he characterizes as "serious safety issues" that he admits are "exclude[d]" from the scope of license renewal.[10]

More troublingly, however, the Mitman Declaration contains multiple clear and significant factual errors, omissions, and mischaracterizations. Most notably, Petitioners rely on these errors to claim that there exists an "outstanding and unresolved safety issue" at Oconee.[11] As explained below, that claim is patently false.

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[10] Petition at 18.

[11] *Id*. at 3.

Furthermore, in terms of contention admissibility, an even more fundamental problem with the Mitman Declaration—upon which the proposed contentions and the Waiver Request all rely—is that it faults the ER for not considering certain information that relates to "bounding" and "worst case" flooding analyses. It is well-settled that NEPA is governed by a "rule of reason" and does not mandate consideration of "bounding" or "worst case" accident scenarios.[12] Thus, as a matter of bright-line law, the fundamental premise of the Petition is legally defective, and the Petition must be summarily denied.

II. BACKGROUND

A. Procedural History

The Applicant filed its SLRA with the NRC on June 7, 2021, to renew Oconee's operating licenses for an additional 20-year period. As part of the SLRA, and as required by Part 51, the Applicant submitted an ER that considers the potential environmental impacts of the requested extension. On July 28, 2021, the NRC published a notice in the *Federal Register* docketing the Oconee SLRA and providing an opportunity for interested persons to request a hearing by September 27, 2021.[13] On September 27, 2021, Petitioners filed their Petition seeking to intervene in this SLR proceeding, requesting a hearing, and seeking a waiver to challenge the GEIS conclusions codified in Appendix B. The Applicant timely files this Answer thereto.[14]

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12 *Holtec Int'l* (HI-STORE Consolidated Interim Storage Facility), CLI-20-4, 91 NRC 167, 180 (2020) (citing *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 354 (1989)).

13 *See* Duke Energy Carolinas, LLC; Oconee Nuclear Station, Units 1, 2, & 3; Subsequent License Renewal Application; Opportunity to Request a Hearing and to Petition for Leave to Intervene, 86 Fed. Reg. 40,662 (July. 28, 2021) ("Notice of Hearing Opportunity").

14 10 C.F.R. § 2.309(i).

B. SLR Environmental Review Under 10 C.F.R. Part 51

1. General SLR Environmental Review Framework

The NRC's license renewal environmental regulations in Part 51 are based in large part on the analyses in its GEIS for license renewal, which summarizes the findings of a systematic inquiry (accomplished through notice and comment rulemaking) into the potential environmental consequences of license renewal.[15] Based on these analyses, the GEIS and Appendix B delineate two types of environmental issues:

- Generic "Category 1" issues for which the NRC made "generic conclusions applicable to all existing nuclear power plants"; and
- Plant-Specific "Category 2" issues for which site-specific analyses are required for each individual license renewal proceeding.

For Category 1 issues, the GEIS assigns impact levels (SMALL, MODERATE, or LARGE), based on the GEIS analyses, which are codified in Appendix B. As part of an application for original or subsequent license renewal,[16] applicants must submit an ER considering all Category 2 issues on a plant-specific basis.[17] Applicants need not replicate the GEIS analyses of Category 1 issues in the ER,[18] but may incorporate by reference those analyses and the codified impact findings from Appendix B.[19]

In promulgating this license renewal environmental regulatory framework, the NRC recognized that new information may need to be considered, to the extent it *materially* impacts

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15 *See* NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (May 1996); Vol. 1, Main Report (ML040690705) ("1996 GEIS"); NUREG-1437, Rev. 1, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (June 2013); Vol. 1, Main Report (ML13106A241) ("GEIS" or "2013 GEIS").

16 *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), CLI-20-3, 91 NRC 133 (2020).

17 *See* 10 C.F.R. §§ 51.41, 51.45, 51.53(c)(3)(ii).

18 *See id.* § 51.53(c)(3)(i).

19 *See id.* § 51.53(a).

the GEIS analyses and conclusions.[20] Accordingly, the NRC promulgated a further requirement that license renewal ERs must consider any "new and significant information" ("NSI") regarding the environmental impacts of license renewal of which the applicant is aware.[21] The NRC Staff draws upon the ER, the GEIS, and any NSI, among other sources of information, to produce a plant-specific Supplemental Environmental Impact Statement ("SEIS") for each license renewal application.[22] Although the GEIS findings are codified, and therefore are not subject to challenge in individual *adjudicatory* proceedings, the NRC publishes a draft version of the SEIS for public comment and invites the public to raise information they deem to be NSI through that process.[23]

2. GEIS Consideration of Severe Accidents

The NRC's assessment of flooding hazards for existing nuclear power plants is a "separate and distinct" process from license renewal.[24] As a *safety* matter, when new information becomes available, the NRC evaluates it to determine if any changes to the plant or

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20 *See* Environmental Review for Renewal of Nuclear Power Plant Operating Licenses; Final Rule, 61 Fed. Reg. 28,467, 28,470 (June 5, 1996) ("1996 Final Rule") (noting a "revised and expanded" "framework for consideration of significant new information" following discussions with the U.S. Environmental Protection Agency and the Council on Environmental Quality after the proposed rule was published).

21 10 C.F.R. § 51.53(c)(3)(iv). *See also* Regulatory Guide 4.2, Supp. 1, Rev. 1, Preparation of Environmental Reports for Nuclear Power Plant License Renewal Applications at 7-8 (June 2013) (ML13067A354). In broad terms, the NSI requirement is rooted in NEPA, which is intended to ensure that agencies consider the *significant* environmental consequences of their proposed actions. *See Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc.*, 462 U.S. 87, 97 (1983).

22 *See* 10 C.F.R. §§ 51.20(a)(1), (b)(2).

23 *See* 1996 Final Rule, 61 Fed. Reg. at 28,470 ("[T]he NRC will review comments on the draft SEIS and determine whether such comments introduce new and significant information not considered in the GEIS analysis."); *id*. at 28,485 ("In both the public scoping process and the public comment process, the Commission will accept comments on all previously analyzed issues and information codified in Table B–1 of appendix B to 10 CFR part 51 and will determine whether these comments provide any information that is new and significant compared with that previously considered in the GEIS. If the comments are determined to provide new and significant information bearing on the previous analysis in the GEIS, these comments will be considered and appropriately factored into the Commission's analysis in the SEIS.").

24 2013 GEIS at 1-16, 3-61.

its licensing basis are needed under the Atomic Energy Act ("AEA").[25] Such issues are addressed on an ongoing basis as part of the plant's CLB, which is beyond the limited scope of license renewal under 10 C.F.R. Part 54.[26] As the GEIS explains:

> The NEPA process focuses on environmental impacts rather than on issues related to safety. Safety issues become important to the environmental review when they could result in environmental impacts, which is why the environmental effects of **postulated accidents** are considered in the GEIS and in plant-specific supplements to the GEIS. Since NEPA regulations do not provide for a safety review, the license renewal process includes an environmental review that is distinct and separate from the safety review. Since the two reviews are separate, **operational safety issues** and safety issues related to nuclear power plant aging **are considered outside the scope for the environmental review**, just as the environmental issues are not considered as part of the safety review.[27]

The NRC's 2013 update to the GEIS also acknowledged the flooding hazard re-analyses related to various post-Fukushima actions, which remained ongoing at the time of the update, but noted that all of these efforts were CLB matters "[u]nrelated to license renewal."[28]

Accordingly, for the separate *environmental* review required for license renewal under NEPA and 10 C.F.R. Part 51, the GEIS considers the environmental consequences of external floods under the broader topic of "Postulated Accidents."[29] As relevant here, the 1996 GEIS generically concluded that the probability-weighted impacts of "Severe Accidents" (*i.e.*, beyond design basis accidents, such as dam failure at Oconee) are SMALL, given their extraordinarily

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25 *See id*. at 3-61.

26 *See id*. The license renewal safety review is limited to certain aging management matters. 10 C.F.R. §§ 54.21, 54.29(a); *see also Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), CLI-01-17, 54 NRC 3, 7-8 (2001). The Commission determined that re-assessments of CLB safety issues at the license renewal stage would be "unnecessary and wasteful" (*id*. at 7) because they are "effectively addressed and maintained by ongoing agency oversight, review, and enforcement." *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-04-36, 60 NRC 631, 638 (2004) (citation omitted).

27 *See* 2013 GEIS at 1-8 (emphasis added).

28 *Id*. at 1-21.

29 *See id*. at 4-158.

low probability.[30] The 1996 GEIS concluded that risks from severe accidents initiated by *external* events (such as floods) are adequately addressed through a consideration of severe accidents initiated by an *internal* event (such as a loss of cooling water).[31] "Therefore, an applicant for license renewal need only analyze the environmental impacts from an internal event in order to adequately characterize the environmental impacts from either type of event."[32] The 2013 GEIS re-affirmed the 1996 conclusion based on further evaluation of additional information, particularly as to external events, again noting that the impacts from external events are "comparable"[33] to those from internal events.[34]

Notwithstanding this generic *impact* conclusion, the NRC also codified a requirement that "alternatives to mitigate severe accidents must be considered for all plants that have not considered such alternatives."[35] For plants that have already performed these severe accident mitigation alternatives ("SAMA") analyses, such as Oconee, this is the functional equivalent of a Category 1 issue;[36] for all other plants, it is a Category 2 issue.[37] Furthermore, all license

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30 *See* 1996 GEIS at 5-114 to 5-116; Appendix B, tbl. B-1 ("Severe accidents" issue).

31 2013 GEIS at E-5 (emphasis added).

32 *Id*.

33 2013 GEIS at E-47, tbl. E-19.

34 When the NRC updated the GEIS in 2013, it substantially re-evaluated the environmental impacts from externally-initiated Severe Accidents based on new information and analysis techniques. *See* 2013 GEIS, Vol. 3, App. E at E-16 to E-24. As part of this re-evaluation, the NRC considered various analyses of accident risks (expressed in quantitative terms of CDF). *Id*. at E-16. The NRC staff focused its re-evaluation on those external events that "contribute the most to plant risk[,]" explaining that its position in the GEIS is "consistent with the results obtained from the IPEEEs and the perspectives articulated in NUREG-1742. *Id*.; *see* NUREG-1742, Perspectives Gained From the Individual Plant Examination of External Events (IPEEE) Program, Vol. 1, Final Report, at 4-20 (April 2002) (ML021270070).

35 Appendix B, tbl. B-1 ("Severe accidents" issue) (emphasis added).

36 10 C.F.R. § 51.53(c)(3)(ii)(L) excuses plants that have already performed SAMAs from the need to do so again. The Commission has explained that this renders the issue "the functional equivalent of a Category 1 issue" for such plants. *Exelon Generation Co., LLC* (Limerick Generating Station, Units 1 & 2), CLI-13-7, 78 NRC 199, 203 (2013) (citation omitted). *See also* GEIS, Supp. 2, Re: Oconee Nuclear Station, Units 1, 2, and 3, Final Report § 5.2 (Dec. 1999) (ML003670518) (addressing SAMAs for Oconee as part of the plant's initial license renewal).

37 Appendix B, tbl. B-1 ("Severe accidents" issue).

renewal ERs (regardless of whether this is a Category 1 or 2 issue for a given plant) must consider NSI potentially relevant to either the generic impact conclusion or the SAMAs.[38]

3. ER Consideration of Severe Accidents

Applicant's ER fully complies with 10 C.F.R. Part 51 and considers the full spectrum of environmental impacts from postulated flood-related external events via a comprehensive analysis that consists of both generic analyses from the GEIS, and additional evaluations performed by the Applicant. The analysis consists of three primary components:

- First, the Applicant incorporated by reference the generic "Category 1" analyses from the GEIS into the ER.[39] As relevant here, that includes the analyses and conclusions from the GEIS and Appendix B as to the "Severe Accidents" issue.[40]

- Second, the Applicant undertook a comprehensive NSI review related to the "impacts" discussion in the "Severe Accidents" issue. Among other things, Duke considered operational and accident analysis developments related to external events such as flooding.[41] For the Oconee initial license renewal, Duke used a probabilistic risk assessment ("PRA") model (which calculates a probability-weighted risk of core damage frequency ("CDF") in events per year). The ER notes that Duke later developed an external flood PRA model (which feeds into the master PRA model), and that the external flood PRA was considered in the SLRA NSI review.[42] Duke noted that the current internal events CDF of 2.4E-5/year is approximately 8 percent lower than the internal events CDF of 2.6E-5/year from the initial renewal; and that no new and significant information (including from the new external flood PRA) was identified related to the NRC's conclusion that probability-weighted impacts from severe accidents caused by internal events are "comparable" to those from external events, or that those impacts remain SMALL.[43]

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38 10 C.F.R. § 51.53(c)(3)(iv). The NRC has approved specific guidance for the SLR NSI review for SAMAs. *See* NEI-17-04, "Model SLR New and Significant Assessment Approach for SAMA," Rev. 1 (Aug. 2019) (ML19316C718) ("NEI 17-04"); Letter from A. Bradford, NRC, to C. Earls, NEI, "Interim Endorsement of NEI 17-04, 'Model SLR New and Significant Assessment Approach for SAMA, Revision 1'" (Dec. 11, 2019) (ML19323E740).

39 *See* ER at 4-2.

40 *Id.* at E-4-84 to E-4-87.

41 *Id.* at E-4-76 to E-4-78.

42 *Id*.

43 *Id*.

- Third, the Applicant undertook a comprehensive SAMA NSI review, consistent with NRC-approved guidance in NEI 17-04.[44] To determine the level of significance of new information, the Applicant used its PRA model reflecting "the most up-to-date understanding of plant risk at the time of analysis," including from the external flood PRA.[45] This robust analysis, which is described across several pages of the ER, did not identify any NSI relevant to the original SAMA analysis for Oconee.[46]

Collectively, these analyses fully satisfy the requirements of Part 51.

C. Brief History of CLB Flooding Matters Governed by 10 C.F.R. Part 50 at Oconee from 2008 to Present

By way of background, no dam failures were postulated in the original licensing and design basis for Oconee.[47] Thus, dam failure is considered a beyond-design-basis event for the plant. However, on August 15, 2008, the NRC issued a letter to Duke requesting information under the NRC's *safety* regulations at 10 C.F.R. § 50.54(f) related to site external flooding at Oconee due to, among other things, a hypothetical failure of the Jocassee Dam.[48] More specifically, the NRC asked Duke to perform a "bounding" deterministic external flood hazard analysis assuming a failure of the Jocassee dam.[49] Meanwhile, Duke committed to implementing a series of fifteen interim compensatory measures ("ICMs") to mitigate potential external flooding hazards until the analysis was reviewed and approved by the NRC.[50] Those

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44 *See id.* at E-4-74 to E-4-78.

45 *See id*. at E-4-79.

46 *See id*. at E-4-82.

47 Letter from S. Batson, Duke, to NRC Document Control Desk, "Revised Flood Hazard Reevaluation Report per NRC's Request for Additional Information" at 59, tbl. 13, n.3 (Mar. 6, 2015) (ML15072A106, cover letter) (ML16272A217 & ML16272A218, report) ("2015 FHRR").

48 Letter from J. Giitter, NRC, to D. Baxter, Duke, "Information Request Pursuant to 10 CFR 50.54(f) Related to External Flooding, Including Failure of the Jocassee Dam, at Oconee Nuclear Station, Units 1, 2, and 3, (TAC Nos. MD8224, MD8225, and MD8226) (Aug. 15, 2008) (ML081640244).

49 *Id*. at 2.

50 Letter from D. Baxter, Duke, to NRC Document Control Desk, "Oconee External Flood Commitments" (June 3, 2010) (ML101610083).

commitments, along with the requirement to submit the "bounding" analysis were formally documented via NRC Corrective Action Letter ("CAL") 2-10-003 on June 22, 2010.[51]

Duke provided the analysis to the NRC on August 2, 2010 (the "2010 Licensee Evaluation").[52] The NRC evaluated and accepted that analysis on January 28, 2011 (the "2011 NRC Evaluation"), concluding that the parameters used by Duke "bound the inundation of the [Oconee] site resulting from a potential failure of the Jocassee Dam."[53]

Meanwhile, on March 12, 2012, the NRC issued letters to power reactor licensees, including Duke, again under the NRC's *safety* regulations at 10 C.F.R. § 50.54(f), requesting additional information in response to the 2011 Fukushima Dai-ichi accident.[54] As relevant here, that letter instructed licensees to "reevaluate" flood hazards for their sites using updated, "present-day" analysis techniques and guidance.[55] Accordingly, Duke submitted its final Flood Hazard Reevaluation Report to the NRC on March 6, 2015 (the "2015 FHRR").[56] The NRC accepted the 2015 FHRR in a letter issued on April 14, 2016 (the "2016 NRC Evaluation").[57]

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51 Letter from L. Reyes, NRC, to D. Baxter, CAL 2-10-003, "Confirmatory Action Letter – Oconee Nuclear Station, Units 1, 2, and 3 Commitments to Address External Flooding Concerns (TAC Nos. ME3065, ME3066, and ME3067)" (June 22, 2010) (ML12363A086) ("CAL").

52 Letter from D. Baxter, Duke, to NRC Document Control Desk, "Oconee Response to Confirmatory Action Letter (CAL) 2-10-003" (Aug. 2, 2010) (ML102170006) ("2010 Licensee Evaluation").

53 Letter from E. Leeds, NRC, to P. Gillespie, Duke, "Staff Assessment of Duke's Response to Confirmatory Action Letter Regarding Duke's Commitments to Address External Flooding Concerns at the Oconee Nuclear Station, Units 1, 2, and 3 (ONS) (TAC Nos. ME3065, ME3066, and ME3067)" at 1 (Jan. 28, 2011) (ML110280153) ("2011 NRC Evaluation").

54 Letter from E. Leeds & M. Johnson, NRC, to All Power Reactor Licensees and Holders of Construction Permits in Active or Deferred Status, "Request for Information Pursuant to Title 10 of the *Code of Federal Regulations* 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident" (Mar. 12, 2012) (ML12053A340).

55 *Id*. at 4.

56 *See* 2015 FHRR (this version superseded an initial FHRR for ONS submitted by Duke on March 12, 2013, (ML13079A227)).

57 Letter from J. Davis, NRC, to S. Batson, Duke, "Oconee Nuclear Station, Units 1, 2, and 3 – Staff Assessment of Response to Request for Information Pursuant to 10 CFR 50.54(f) Flood-Causing Mechanisms Reevaluation (CAC Nos. MF1012, MF1013, and MF1014) and Path Forward on Confirmatory Action Letter" (Apr. 14, 2016) (ML15352A207 cover letter) (Encl. 1, Staff Assessment, and Encl. 2, Addendum, available as enclosure to FOIA response at ML20288A414) ("2016 NRC Evaluation").

Enclosure 2 to the 2016 NRC Evaluation provides an instructive comparison of the 2010 Licensee Evaluation and the 2015 FHRR. For example, while the 2010 Licensee Evaluation "only considered the potential for sunny-day failure" of the Jocassee dam, the 2015 FHRR "considered the potential for hydrologic [*i.e.*, overtopping], seismic, *and* sunny-day failures of Jocassee dam."[58] As another example, the NRC summarized the two analyses by noting that the 2010 Licensee Evaluation reflects a highly conservative "bounding" analysis, whereas the 2015 FHRR presents a more "reasonable" analysis without excessive conservatism.[59]

Notably, in the 2016 NRC Evaluation, the NRC concluded that the 2015 FHRR provided an "acceptable alternative to the licensee's August 2, 2010 flood hazards analysis for the purpose of meeting the terms of the June 22, 2010, NRC [CAL]."[60]

In 2016, Duke agreed to permanently maintain certain ICMs,[61] and completed the CAL-required permanent flooding modifications at the site consistent with the 2015 FHRR.[62] The NRC inspected those modifications and, on June 16, 2016, issued a letter confirming that Duke had implemented and satisfied all of the CAL commitments, including implementation of mitigative measures based on the 2015 FHRR ("CAL Closeout Letter").[63] The NRC also concluded, as part of its post-Fukushima beyond-design-basis efforts, that Duke had gone even

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58 2016 NRC Evaluation, Encl. 2 at 3 (emphasis added).

59 *Id*.

60 *Id*. (cover letter at 2).

61 *See id*.

62 Letter from S. Batson, Duke, to NRC Document Control Desk, "Notification of External Flood Modifications Completion" (Apr. 29, 2016) (ML16131A671) ("The modifications are: Relocation of the 100kV (FANT) Back-up Power Line, East Slope Scour Protection, Intake Dike Scour Protection, Discharge Diversion Wall, and Turbine Building Drain Isolation.").

63 Letter from C. Haney, NRC, to S. Batson, Duke, "Oconee Nuclear Station – Confirmatory Action Letter Followup Inspection Report 05000269/2016009, 05000270/2016009, and 05000287/2016009," (June 16, 2016) (ML16168A176) ("CAL Closeout Letter"). That letter also noted that the NRC would address ongoing external flooding oversight through the Fukushima framework. Ultimately, the NRC concluded that Duke had demonstrated effective flood protection at Oconee for beyond-design-basis external flooding events and documented Duke's completion of all required actions. *See also infra* note 63.

further and "demonstrated the availability of physical margin above the [2015 FHRR] reevaluated dam failure flood-causing mechanism, which provides *additional assurance*."[64] For example, Duke has explicit procedures for deploying "a backup method of core cooling independent of the [Standby Shutdown Facility ("SSF")], using portable equipment, in case the SSF is unable to cope with [a hypothetical and beyond design basis] dam failure flood event."[65]

In sum: there are no outstanding regulatory or corrective actions on the part of either the NRC or Duke related to a postulated failure of the Jocassee dam; and Oconee has additional safety margin—above and beyond that provided by the actions taken in response to the CAL—related to a hypothetical flood.

D. Significant Factual Errors, Omissions, and Mischaracterizations in the Mitman Declaration and the Petition

As a preliminary matter, the Mitman Declaration, upon which the Petition relies as its sole basis of support, contains multiple and significant factual errors, omissions, and mischaracterizations. The problems summarized below are not subjective differences of opinion and do not purport to weigh the merits. Rather, clear and unequivocal factual information *in the NRC public record* contradicts several false, misleading, and alarmist assertions by Mr. Mitman, thereby depriving the Petition of the requisite *support* and ability to demonstrate a *genuine* dispute, as required at the contention admissibility stage.[66]

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64 Letter from J. Uribe, NRC, to E. Burchfield, Duke, "Oconee Nuclear Station, Units 1, 2, and 3 – Staff Assessment of Flooding Focused Evaluation (CAC Nos. MG0265, MG0266, MG0267, and EPID L-2017-JLD-0029)," Encl. 2 at 10 (June 18, 2018) (ML18141A755) ("2018 NRC Flooding FE Assessment"). *See also* Letter from R. Bernardo, NRC, to E. Burchfield, Duke, "Oconee Nuclear Station, Units 1, 2, and 3 – Documentation of the Completion of Required Actions Taken in Response to the Lessons Learned from the Fukushima Dai-ichi Accident" (Nov. 17, 2020) (ML20304A369) (closing out Duke's actions related to the NRC's Fukushima 50.54(f) Request).

65 2018 NRC Flooding FE Assessment, Encl. at 9.

66 As Mr. Mitman worked for the NRC during the record period, he was (or should have been) well aware of this information. Further, he cites to many of these public records in his declaration but omits key facts and conclusions.

1. Ongoing Regulatory Effect of the 2011 NRC Evaluation

Mr. Mitman claims that the 2011 NRC Evaluation "required" Duke to implement certain "flood protection measures" to maintain adequate protection, as required by NRC safety regulations.[67] Specifically, he argues that the 2011 NRC Evaluation imposes an ongoing but *unfulfilled* requirement "to protect the Oconee site from random sunny day failures of the Jocassee Dam to a flood depth of 19.5 feet,"[68] which is based on the 2010 Licensee Evaluation and which he characterizes as the "licensing basis" for Oconee. Mr. Mitman also claims that the NRC has "kept silent" by neither withdrawing nor repudiating the 2011 NRC Evaluation nor requiring Duke to implement mitigative actions.[69]

These assertions are demonstrably incorrect because they are directly contrary to the administrative record and the NRC's long-established regulatory regime. As a legal matter, an NRC safety evaluation, standing alone, lacks the capacity to "require" anything. It is precisely that—an "evaluation." As a basic precept of administrative law, federal agencies impose requirements through regulations and orders.[70] Furthermore, as explained by the NRC:

> Staff positions in **safety evaluations are not requirements**; rather, they are the NRC's regulatory bases for its decisions or interpretations. A safety evaluation (or safety evaluation report) provides the staff position on why an affected entity's proposed means of implementing or complying with a governing requirement is acceptable and results in compliance with the requirement. The safety evaluation is **not part of the licensing basis** unless specifically incorporated by the licensee or required as a condition of approval by the staff.[71]

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67 *See, e.g.*, Mitman Decl. at 1.

68 *Id*. at 13.

69 *Id*. at 1.

70 *See generally* Administrative Procedure Act, Pub.L. 79–404, 60 Stat. 237 (1946) (codified at 5 U.S.C. §§ 500 *et seq*.), as amended.

71 NUREG-1409, Rev. 1, "Backfitting Guidelines" at 1-5 (Mar. 31, 2021) (ML21006A433) (This final report is awaiting Commission approval and has not formally been issued. But the Applicant does not cite the

Here, the "requirement" to take certain actions arises from the "regulatory commitments" made by Duke.[72] As noted above, the NRC approved the 2015 FHRR as an "acceptable alternative" to the 2010 Licensee Evaluation "for the purpose of meeting the terms of the NRC Confirmatory Action Letter (CAL) dated June 22, 2010."[73] This important superseding NRC conclusion is conspicuously absent from the regulatory history discussion in the Mitman Declaration. Furthermore, Duke's "regulatory commitment" was to implement flooding modifications based on the 2015 FHRR (calculating realistic inundation levels), not the 2010 Licensee Evaluation (assuming extraordinarily conservative inundation levels).[74] Mr. Mitman fails to disclose those material facts as well. Finally, and perhaps most importantly, he fails to mention the NRC's CAL Closeout Letter confirming that Duke implemented each and every action required by the CAL, and therefore "satisfied all of the commitments" therein.

This publicly-available information directly contradicts Mr. Mitman's erroneous assertions regarding any continuing regulatory effect of the 2011 NRC Evaluation and allegedly outstanding safety issues or corrective actions. And, clearly, the NRC has not "kept silent" on this issue.

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document for its legal effect, but rather for the general proposition quoted above, which simply provides a concise historical summary of the agency's treatment of safety evaluations).

72 *See, e.g.*, NRC, Office of Nuclear Reactor Regulation, Office Instruction LIC-100, "Control of Licensing Bases for Operating Reactors" (Jan. 7, 2004) (ML033530249) (noting that licensee regulatory commitments are considered enforceable obligations).

73 2016 NRC Evaluation (cover letter at 2).

74 Letter from S. Batson, Duke, to NRC Document Control Desk, "Establish the Fukushima Flood Response as the Basis to Govern Flood Mitigation Modifications from Postulated Upstream Dam Failure" (Aug. 8, 2014) (ML14225A540) ("based on the recognition that the flood basis in the FHRR for an upstream dam failure will supplant the 2010 CAL flood basis, the related flood mitigation modifications for ONS are now based on the FHRR rather than the CAL.").

2. Probabilistic Flooding Discussion

Mr. Mitman correctly observes that PRA can be used to evaluate Severe Accidents and SAMAs under NEPA. In fact, that is entirely consistent with the GEIS, which considers the *probability-weighted* impacts of a hypothetical severe accident, as opposed to the impacts of *bounding* accident scenarios.[75] It is important to note that "probabilistic" analysis (*e.g.*, as used in the GEIS or in a PRA) is quite different from "deterministic" analysis (*e.g.*, as performed in the 2010 Licensee Evaluation and 2015 FHRR). The NRC contrasts "deterministic" with "probabilistic" as follows:

> As applied in nuclear technology, [**deterministic**] generally deals with evaluating the safety of a nuclear power plant in terms of the consequences of a predetermined **bounding** subset of accident sequences. The term "**probabilistic**" is associated with an evaluation that explicitly accounts for the **likelihood** and consequences of possible accident sequences in an integrated fashion.[76]

Indeed, Mr. Mitman admits that "PRA is *always* intended to be a 'best estimate' analysis,"[77] (*i.e.*, using realistic inputs as opposed to bounding ones). Nevertheless, Mr. Mitman improperly uses *generic, bounding* and *worst-case* input values to speculate that the *probability* (*i.e.*, "reasonable best estimate") of core damage from a Jocassee dam failure is 2.8E-4 per year.[78]

Clearly, the use of bounding and worst case inputs for a PRA purporting to be a "reasonable best estimate" is mathematically disingenuous and yields grossly mischaracterized results. Indeed, that is the primary reason why the Commission declines to consider **bounding**

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[75] These evaluations consider CDF (in events per year), calculated by multiplying an initiating event frequency ("IEF") (*e.g.*, dam failure frequency in this case), in events per year, and a conditional core damage probability ("CCDP") (*i.e.*, the likelihood of core damage if that initiating event occurs).

[76] NRC, Deterministic (probabilistic), https://www.nrc.gov/reading-rm/basic-ref/glossary/deterministic-probabilistic.html (emphasis added).

[77] Petition at 19 (emphasis added).

[78] Mitman Decl. at 23.

or **worst case** analyses of postulated accidents[79] in environmental reviews—because it "creates a distorted picture of a project's [environmental] impacts."[80]

Mr. Mitman arrives at his CDF number by using a dam failure frequency of 2.8E-4 and simply *assuming* that core damage automatically would occur.[81] However, Mr. Mitman failed to note his use of generic, bounding, and worst case values, rather than realistic, "best estimate" inputs to arrive at this value.

First, the 2.8E-4 dam failure frequency used by Mr. Mitman is an "estimated generic dam failure rate[] for large rockfill dams."[82] As the NRC has explained, "generic" values are typically used to "estimate **bounding** values of dam failure frequency."[83] The NRC noted that this generic value, developed from generalized assessments of dams (many of which were dissimilar to Jocassee), "might"[84] be appropriate as a generic *proxy* in the absence of more realistic data—*i.e.*, an actual, probabilistic, best estimate calculation specific to the Jocassee dam. But, as Mr. Mitman is aware, Duke has, in fact, developed an actual, probabilistic, "best estimate" calculation of dam failure frequency specific to the Jocassee dam that is *two orders of magnitude* lower than his imprecise, generic, and obviously bounding estimate.[85] Yet, neither he nor Petitioners dispute (or even acknowledge) that information.

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79 *Holtec*, CLI-20-4, 91 NRC at 180.

80 *Private Fuel Storage, LLC* (Indep. Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348 (2002) (citing *Methow Valley*, 490 U.S. at 354-55).

81 Mitman Decl. at 22.

82 Memorandum from J. Mitman, NRC, to M. Cunningham, NRC, "Generic Failure Rate Evaluation for the Jocassee Dam" at 1 (Mar. 16, 2010) (ML14058A060).

83 NRC Information Notice 2012-02 at 2 (Mar. 5, 2012) (ML090510269) (emphasis added).

84 Memorandum to File from J. Boska, "Oconee Nuclear Station, Units 1, 2, and 3, Documentation of Staff Decision Regarding Implementation of Permanent Modifications for Protection from External Flooding," Encl. at 6 (Mar. 19, 2013) (ML16070A287).

85 D. Bowles, et al., RAC Engineers & Economists, "Initial Hazard Curve for Flooding at the Safe Shutdown Facility at Oconee Nuclear Station Resulting from a Random Failure of Jocassee Dam" (Feb. 28, 2010) (calculating "best estimate" probability of failure of the Jocassee dam from all failure modes is 2.6E-6 per

Second, Mr. Mitman's assumption that core damage automatically would occur in the event of a dam failure[86] is imported from a deterministic "**worst case**"[87] hypothetical scenario that simply *assumed* such a failure but did not attempt or purport to calculate the probability of core damage.[88] Quite obviously, the use of "worst case" assumptions is antithetical to the notion of calculating *risk probability*. At bottom, Mr. Mitman's claim that 2.8E-4 is a "reasonable best estimate" risk probability value is misleading and plainly erroneous.

Finally, Petitioners claim (based on the Mitman Declaration) that the ER "relied on the same probability estimates [Duke] used in its first license renewal application in 1998."[89] But that statement is demonstrably untrue. As plainly noted in the ER, "external flood PRA models have been developed" "since the first license renewal," and were "utilized in the quantitative PRA calculation that demonstrated the absence of any potentially significant SAMAs."[90]

3. Consideration of Seismic and Overtopping Events

Mr. Mitman states that the 2011 NRC Evaluation considered only "random sunny-day" failure mechanisms, but "was silent to other relevant Jocassee Dam failure mechanisms including seismic and overtopping."[91] He goes on to claim that "Duke ignores seismic and overtopping failures" in its risk analysis.[92] Petitioners incorporate this claim in their

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year) (available at PDF page 284 to 308 of FOIA/PA No. 2012-0325 (ML15156A702)). Mr. Mitman himself cited this FOIA response multiple times in his Declaration. *See* Mitman Decl. at 2, 7, 14, 19, and 21.

86 Mitman Decl. at 22 (using a CCDP of 1.0 based on a quote noting the use of a deterministic "assumed" failure from a 1992 inundation study submitted to the Federal Energy Regulatory Commission ("FERC")).

87 *Id*. at 12 (acknowledging and not disputing that the 1992 study was based on a "worst case" analysis).

88 Letter from B. Hamilton, Duke, to NRC Document Control Desk, "Significance Determination for a White Finding and Reply to a Notice of Violation; EA-06-199," Attach. 1 at 2 (Dec. 20, 2006) (ML063620092) ("FERC methodology focuses on worst case dam failure consequences, not probability of failures.")

89 Petition at 15 n.26 (citing Mitman Decl. at 21).

90 ER at 4-77. *See also supra* note 84 (noting the post-initial license renewal development of "best estimate" inputs for the external flood PRA model).

91 Mitman Decl. at 13.

92 *Id.* at 25.

contentions.[93] Nevertheless, as noted above, while the 2010 Licensee Evaluation "only considered the potential for sunny-day failure" of the Jocassee dam (as directed by the NRC), the 2015 FHRR "considered the potential for hydrologic [*i.e.*, overtopping], seismic, *and* sunny-day failures of Jocassee dam."[94] As is evident from the plain text of the publicly-available administrative record, while Mr. Mitman may not agree with the outcome, neither the NRC nor Duke has "ignored" these scenarios.

III. THE BOARD SHOULD DENY THE WAIVER REQUEST BECAUSE IT FAILS TO SATISFY THE COMMISSION'S WAIVER STANDARD

The NRC's regulations at 10 C.F.R. § 2.335(a) include a general prohibition that "no rule or regulation of the Commission, or any provision thereof . . . is subject to attack by way of discovery, proof, argument, or other means in any adjudicatory proceeding subject to this part."[95] However, Section 2.335(b) also provides that "[a] participant to an adjudicatory proceeding subject to this part may petition that the application of a specified Commission rule or regulation or any provision thereof . . . be waived or an exception be made for the particular proceeding."[96] As detailed in Section IV.A., below, the Commission's threshold for granting such waivers is "stringent by design."[97]

Petitioners acknowledge that a waiver is "necessary" for admission of their proposed contentions.[98] Accordingly, they request a waiver of five regulations—10 C.F.R. §§ 51.53(c)(3)(i), 51.53(c)(3)(ii)(L), 51.71(d), 51.95(c)(1), and 10 C.F.R. Part 51, Subpart A,

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93 Petition at 14-17.

94 2016 NRC Evaluation, Encl. 2 at 3 (emphasis added).

95 10 C.F.R. § 2.335(a).

96 *Id.* § 2.335(b) (emphasis added).

97 *Limerick*, CLI-13-7, 78 NRC at 207.

98 Petition at 18 ("a waiver of 10 C.F.R. §§ 51.53(c)(3)(i) is necessary in order to allow admission of [] Contentions 2 and 3").

Appendix B, Table B-1 (collectively the "GEIS Regulations").[99] In sum, the first two regulations excuse a license renewal applicant from the need to consider Category 1 issues in its ER because those issues already have been analyzed in the GEIS, and applicants may incorporate those analyses by reference; the next two regulations require the NRC Staff to consider the generic analyses and conclusions from the GEIS (as codified in Appendix B), among other sources of information, in preparing the draft and final SEIS; and the final regulation contains the codified conclusions from the GEIS analyses. As explained below, Petitioners have not satisfied the Commission's "stringent" requirements to justify a waiver of these regulations. Thus, their Waiver Request must be rejected as a matter of law.

A. Legal Standard for Waivers

As the Commission has explained, Section 2.335(b) provides only a "limited exception" to the NRC's general prohibition against challenges to NRC rules or regulations in adjudicatory proceedings.[100] As a general matter, when the Commission decides to "carv[e] out issues from adjudication," it does so carefully and deliberately pursuant to its broad statutory discretion to "transact its business broadly, through rulemaking, or case-by-case, through adjudication."[101] Thus, to challenge the generic application of a rule, a petitioner seeking waiver must show that "there is something **extraordinary** about the subject matter of the proceeding such that the rule should not apply."[102] More specifically, to litigate an issue that otherwise would be outside the scope of an adjudication, a petitioner must show that "special circumstances with respect to the subject matter of the particular proceeding are such that the application of the rule or regulation

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99 *See id*.

100 *Limerick*, CLI-13-7, 78 NRC at 206.

101 *Id*. at 207 (citations omitted).

102 *Id.* (citations omitted) (emphasis added).

would not serve the purposes for which . . . [it] was adopted."[103] The waiver petitioner must include an affidavit that states "with particularity" the special circumstances that justify waiver of the rule.[104]

In 2005, in the *Millstone* license renewal proceeding, the Commission set forth a four-part test that it has "long used" in ruling on waiver petitions.[105] That test requires the petitioner to show that:

> (1) The rule's strict application would not serve the purposes for which it was adopted;
>
> (2) Special circumstances exist that were not considered, either explicitly or by necessary implication, in the rulemaking proceeding leading to the rule sought to be waived;
>
> (3) Those circumstances are unique to the facility rather than common to a large class of facilities; and
>
> (4) Waiver of the regulation is necessary to reach a significant safety (or environmental) problem.[106]

All four *Millstone* elements must be met to justify a rule waiver.[107] The Commission has noted that this purposefully places a "substantial burden" on waiver petitioners because the agency "will not set aside a duly-promulgated regulation lightly," and because the Commission's longstanding view is that "in general, challenges to regulations are best evaluated through

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103 *Id.* at 206-07 (quoting 10 C.F.R. § 2.335(b)).

104 *Id.* at 207 (quoting 10 C.F.R. § 2.335(b)).

105 *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-05-24, 62 NRC 551, 559-60 (2005).

106 *See id.*

107 *See Limerick*, CLI-13-7, 78 NRC at 208.

generic means."[108] In the context of a Part 51 waiver, the Commission has held that a petitioner must present "specific, fact-based claims . . . not mere allegations."[109]

B. Petitioners Fail to Identify Any "Special Circumstances" Specific to Oconee That Justify a Waiver (*Millstone* Elements 2 and 3)

Petitioners' "special circumstances" argument is that "no previous environmental impact statement has considered the new and significant information presented in Mr. Mitman's Expert Report and Petitioners' [proposed contentions 2 and 3]."[110] As noted above, the information therein pertains to "bounding" or "worst case" accident scenarios, the analysis of which NEPA clearly does not require.[111] Accordingly, that information is not *material* to the Staff's NEPA review, much less could it be considered a "special circumstance" justifying the extreme action of setting aside a codified Commission regulation.

A Commission ruling in the *Diablo Canyon* license renewal proceeding considered and rejected a waiver request presenting a slightly different, but equally deficient, claim. The petitioners in that proceeding asserted that "special seismic circumstances," including the "recent discovery" of a seismic fault near the plant, had not been considered in the 1996 GEIS.[112] The Commission explained that the absence of an analysis of that *specific* information in the GEIS "does not, without more, suggest a deficiency in the GEIS."[113] So too here. Petitioners fail to provide anything "more" because they fail to disclose their reliance on "bounding" accident

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108 *Id.* (citation omitted).

109 *Interim Storage Partners LLC* (WCS Consolidated Interim Storage Facility), CLI-20-15, 92 NRC __, __ (Dec. 17, 2020) (slip op. at 22 n.111) (quoting *Private Fuel Storage, LLC* (Indep. Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 134 (2004)).

110 Petition at 21.

111 *Holtec*, CLI-20-4, 91 NRC at 180 ("NEPA does not require a 'worst case' analysis for potential accident consequences").

112 *Pac. Gas & Elec. Co.* (Diablo Canyon Nuclear Power Plant, Units 1 & 2), CLI-11-11, 74 NRC 427, 451 n.133 (2011).

113 *Id*.

scenarios, much less explain why or how such information could be relevant (much less, "special") in the NEPA context or otherwise suggest a deficiency in the GEIS. Nor have they demonstrated that such (non-existent) circumstances are unique to Oconee, rather than common to a large class of facilities.[114] Accordingly, the Waiver Request should be denied for failing to satisfy the second and third *Millstone* elements.

C. Petitioners Fail to Identify Any Regulation That, If Applied Here, Would Defeat the Commission's Purpose For Enacting It (*Millstone* Element 1)

Petitioners argue that strict application of the GEIS Regulations would defeat the purposes for which these regulations were adopted. Petitioners quote from the 1996 statement of considerations for the Part 51 rulemaking and conclude that its purposes included "increasing efficiency, saving costs, and improving the quality of both generic and site-specific environmental analyses."[115] However, Petitioners fail to articulate a reasoned explanation of how the application of the GEIS Regulations in this proceeding would undermine these goals. In fact, litigating a fully-resolved CLB safety issue through an environmental contention in a license renewal proceeding diametrically contradicts these goals.

The federal courts have approved the NRC's legitimate efficiency[116] goal and acknowledged that requiring generic issues to be analyzed "afresh" with each application would be counterproductive to administrative efficiency and consistency of decision.[117] Here,

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114 As a general matter, the existence of "bounding" analyses of severe accident risks associated with external events is not unique to Oconee. Indeed, the entire industry considered such issues as part of the Commission's post-Fukushima efforts.

115 Petition at 20.

116 As the Commission noted in 2013, the purpose of using generic analyses of Category 1 issues was to "improve the efficiency of the license renewal process." Revisions to Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, Final Rule, 78 Fed. Reg. 37,282, 37,314 (June 20, 2013) ("2013 Final Rule").

117 The First Circuit has observed that the preparation of an EIS "poses a significant task for the NRC," and noted that the NRC relies on generic analyses of Category 1 issues to "streamline the license renewal process" and dispense with the need to analyze broadly-applicable issues "afresh" with each license renewal application.

Petitioners argue that application of these regulations would defeat the Commission's purposes "by barring consideration" of NSI related to a hypothetical external flood event from an assumed failure of the Jocassee Dam.[118] Petitioners claim that Part 51 somehow excuses or prohibits the Applicant, the NRC Staff, or both, from considering such information to the full extent required by NEPA. Indeed, Petitioners go so far as to describe Appendix B as providing a "categorical exclusion" from NEPA review.[119] But that is factually and legally incorrect.

As noted above in Section II.B.1 and II.B.2., the GEIS analyses are not static. The Commission squarely recognized the possibility that circumstances could arise that may materially alter the generic analyses and codified impact conclusions in the GEIS and Appendix B. Accordingly, it also codified the NSI mechanism to require applicants[120] and the NRC Staff[121] to consider "new" information (and determine whether it is "significant") and provided an opportunity for the public to raise potential NSI—which the Staff must consider.[122] Far from "excluding" such information from NEPA review, or "barring consideration" of new information material to NEPA compliance, the NRC's existing framework explicitly *requires* it.

To the extent Petitioners' repeated assertion that NRC regulations "bar consideration"[123] of an external flood event caused by failure of the Jocassee Dam is intended as an acknowledgment that the Commission has exercised its "broad authority" to preclude *adjudicatory challenges* to codified GEIS conclusions and the Applicant's or Staff's *evaluation*

Massachusetts v. United States, 522 F.3d 115, 119-120 (1st Cir. 2008). *See also id*. at 127 (quoting *Balt. Gas & Elec. Co.*, 462 U.S. at 101) (noting Supreme Court precedent for the same premise).

118 Petition at 20-21.

119 *Id.* at 13.

120 *See* 10 C.F.R. § 51.53(c)(3)(iv).

121 *See id.* § 51.95(c)(3)-(4).

122 *See* 1996 Final Rule, 61 Fed. Reg. at 28,470, 28,485.

123 Petition at 20-21.

of potential NSI, without a waiver, that assertion is correct. However, Petitioners have not identified, with requisite specificity, any circumstances necessitating an opportunity to do so.

Petitioners' only further argument in this section is their assertion that the potential for a core melt accident caused by an assumed worst case failure of the Jocassee Dam is significantly higher than estimated by Duke in its SAMA analysis and therefore constitutes NSI that must be considered under NEPA.[124] But, as noted above, a "bounding" flooding hazards analysis is not required under NEPA. To the contrary, the Commission's goals of "efficiency, saving costs, and improving the quality" of environmental reviews are well-served by avoiding the need to adjudicate environmental claims that are immaterial to, and clearly beyond the bounds of, NEPA. Expending resources on an unnecessary analysis is precisely the inefficient result the Commission has sought to avoid. And Petitioners have not demonstrated why such a result is warranted here. Accordingly, the first *Millstone* element remains unsatisfied.

D. Petitioners Fail to Identify a "Significant Environmental Problem" (*Millstone* Element 4)

Petitioners' theory that a waiver is necessary to address a "significant environmental problem" is based on their erroneous characterization of the regulatory status of this issue and erroneous claim that Duke has not implemented the mitigation measures deemed necessary by the NRC in the CAL.[125] Petitioners' assertion blatantly ignores the relevant regulatory record.[126] Specifically, the 2016 NRC Evaluation confirmed that the 2015 FHRR provided an acceptable analysis for purposes of CAL compliance,[127] and the CAL Closure Letter confirmed the

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124 *See id.* at 21.

125 *Id.* at 22.

126 *See supra* Section II.D.1.

127 2016 NRC Evaluation (cover letter at 2) (stating the 2015 FHRR provides an "acceptable alternative to the licensee's August 2, 2010 flood hazards analysis *for the purpose of meeting the terms of the June 22, 2010, NRC [CAL]*") (emphasis added)).

Applicant completed all actions required by the CAL.[128] In sum, Petitioners do not engage with the relevant GEIS analyses and disregard the factual evidence present in the record. Moreover, the factually- and legally-erroneous claims advanced in the Petition clearly fail to identify a "significant environmental problem."

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The Commission "will not set aside a duly-promulgated regulation lightly."[129] And Petitioners identify no reason to do so here, where they have not satisfied any—much less, all four—of the *Millstone* elements. Thus, the Waiver Request should be denied.

IV. THE BOARD SHOULD DENY THE HEARING REQUEST BECAUSE IT DOES NOT PROPOSE AN ADMISSIBLE CONTENTION

Petitioners propose three contentions. As a preliminary matter, because Petitioners have not satisfied the Commission's "stringent" waiver requirements, the proposed contentions are inadmissible on their face. But even if the Waiver Request is granted, the proposed contentions still fall far short of satisfying all six admissibility criteria in 10 C.F.R. § 2.309(f)(1), as detailed below. Because Petitioners failed to propose at least one admissible contention, the Hearing Request must be denied.

A. Legal Requirements for Hearing Requests and Petitions to Intervene

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

> (i) Provide a **specific statement** of the issue of law or fact to be raised or controverted;

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[128] CAL Closure Letter, Encl. at 3 ("The NRC has determined that Duke has satisfied all of the commitments of the CAL.").

[129] *Limerick*, CLI-13-7, 78 NRC at 208.

(ii) Provide a brief explanation of the **basis** for the contention;

(iii) Demonstrate that the issue raised is within the **scope** of the proceeding;

(iv) Demonstrate that the issue raised is **material** to the findings the NRC must make to support the action that is involved in the proceeding;

(v) Provide a concise statement of the alleged **facts or expert opinions**, including references to the specific sources and documents that support the petitioner's position and upon which the petitioner intends to rely; and

(vi) Provide sufficient information to show that a **genuine dispute** exists with the applicant on a material issue of law or fact.

Failure to comply with any one of these six admissibility requirements is grounds for rejecting a proposed contention.[130] Indeed, these requirements are "strict by design."[131] The rules were "toughened…in 1989 because in prior years 'licensing boards had admitted and litigated numerous contentions that appeared to be based on little more than speculation.'"[132] The purpose of the six criteria is to "focus litigation on concrete issues and result in a clearer and more focused record for decision."[133] The Commission has explained that it "should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing."[134]

The petitioner alone bears the burden to meet the standards of contention admissibility.[135] Thus, where a petitioner neglects to provide the requisite support for its contentions, the Board

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130 *See* Changes to Adjudicatory Process; Final Rule, 69 Fed. Reg. 2,182, 2,221 (Jan. 14, 2004); *see also Private Fuel Storage, LLC* (Indep. Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999).

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

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

133 Changes to Adjudicatory Process, 69 Fed. Reg. at 2,202; *see also Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 & 3), LBP-08-13, 68 NRC 43, 61 (2008).

134 Changes to Adjudicatory Process, 69 Fed. Reg. at 2,202.

135 *See Entergy Nuclear Operations, Inc.* (Palisades Nuclear Plant), CLI-15-23, 82 NRC 321, 325, 329 (2015) (stating "[t]he proponent of a contention is responsible for formulating the contention and providing the necessary support to satisfy the contention admissibility requirements" and "it is Petitioners' responsibility, not the Board's, to formulate contentions and to provide 'the necessary information to satisfy the basis

may not cure the deficiency by supplying the information that is lacking or making factual assumptions that favor the petitioner to fill the gap.[136]

At the most basic level, a contention must articulate the specific legal or regulatory requirement that it claims to be unsatisfied, and explain the basis for that claim because the parties are "entitled to be told at the outset, *with clarity and precision*, what arguments are being advanced and what relief is being" sought.[137] The Board and the parties "cannot be faulted for not having searched for a needle that may be in a haystack."[138] A contention that merely states a conclusion, without reasonably explaining why the application is inadequate, cannot provide a basis for the contention.[139] A "material issue" is one that would "make a difference in the outcome of the licensing proceeding."[140] The petitioner must demonstrate that "the subject matter of the contention would impact the grant or denial of a pending license application."[141] Furthermore, as noted above, a contention that challenges an NRC rule is outside the scope of the proceeding because, absent a waiver, "no rule or regulation of the Commission…is subject to attack…in any adjudicatory proceeding."[142]

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requirement' for admission") (citation omitted); *see also DTE Elec. Co.* (Fermi Nuclear Power Plant, Unit 2), CLI-15-18, 82 NRC 135, 149 (2015) ("the Board may not substitute its own support for a contention or make arguments for the litigants that were never made by the litigants themselves.") (citation omitted).

136 *See id.*

137 *Kansas Gas & Elec. Co.* (Wolf Creek Generating Station, Unit No. 1), ALAB-279, 1 NRC 559, 576 (1975) (emphasis added).

138 *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 & 2), CLI-89-3, 29 NRC 234, 241 (1989).

139 *See USEC, Inc.* (Am. Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006).

140 *Oconee*, CLI-99-11, 49 NRC at 333-34 (citation omitted).

141 *Indian Point*, LBP-08-13, 68 NRC at 62 (citation omitted).

142 10 C.F.R. § 2.335(a).

With respect to the requirement to provide adequate support, a licensing board should examine documents to confirm that they support the proposed contention(s).[143] A petitioner's imprecise reading of a document cannot be the basis for a litigable contention.[144]

Equally important, the Commission has stated further that the petitioner must "read the pertinent portions of the license application . . . state the applicant's position and the petitioner's opposing view," and explain why it disagrees with the applicant.[145] If a petitioner believes the license application fails to adequately address a relevant issue, then the petitioner is to "explain why the application is deficient."[146] A contention that does not directly controvert a position taken by the applicant in the application is subject to dismissal.[147] For example, if a petitioner submits a contention of omission, but the allegedly missing information is indeed in the license application, then the contention does not raise a genuine dispute.[148]

B. Proposed Contention 1 (Applicability of § 51.53(c)(3) to SLR) Is Inadmissible

Proposed Contention 1 must be rejected as inadmissible on multiple grounds. This contention presents two distinct claims: a contention of omission and a legal contention. As to the contention of omission, Petitioners assert that Duke's ER:

> Fails to satisfy 10 C.F.R. § 51.53(c)(2) because it fails to fulfill that provision's requirement to discuss "the environmental impacts of

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143 *See Vt. Yankee Nuclear Power Corp.* (Vt. Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989), *vacated in part on other grounds and remanded*, CLI-90-4, 31 NRC 333 (1990).

144 *See Ga. Inst. of Tech.* (Ga. Tech Research Reactor, Atlanta, Ga.), LBP-95-6, 41 NRC 281, 300 (1995).

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

146 Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,170; *see also Ariz. Pub. Serv. Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, & 3), CLI-91-12, 34 NRC 149, 156 (1991).

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

148 *See Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), LBP-04-15, 60 NRC 81, 95 (2004).

> alternatives and any other matters described in [10 C.F.R.] § 51.45."[149]

Petitioners specify that the allegedly-missing information is set forth in their Proposed Contentions 2 and 3 (namely, information regarding bounding or worst case analyses of severe accident impacts related to a hypothetical failure of the Jocassee dam), which they incorporate by reference in this Proposed Contention 1.[150] As explained in Sections IV.C and IV.D, below, those contentions fail to identify any information that is required to be considered by NEPA, but that has not been addressed in the ER or GEIS (because, among other reasons, NEPA does not require consideration of bounding or worst case accident analyses). The Applicant incorporates here, by reference, those portions of this Answer. Thus, the contention of omission presented in Proposed Contention 1 is inadmissible for the same reasons.

Because the first part of Proposed Contention 1 is duplicative of Petitioners' other contentions, the primary issue raised here is Petitioners' legal contention asserting that:

> Duke incorrectly relies on 10 C.F.R. § 51.53(c)(3) to excuse it from discussing significant environmental impacts classified as "Category 1" in 10 C.F.R. Part 51, Part A, Appendix B.[151]

Petitioners assert that Duke's "reliance" on 10 C.F.R. § 51.53(c)(3) is "legally erroneous" because, in Petitioners' view, that provision does not apply to SLR applicants.[152] But, as a matter of settled law, that assertion is incorrect. The Commission has squarely held that 10 C.F.R. § 51.53(c)(3) applies both to initial and subsequent license renewal applications.[153]

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149 Petition at 11.

150 *Id*. ("Relevant information that must be considered is set forth in Contentions 2 and 3, below, which are hereby adopted and incorporated by reference.").

151 *Id*.

152 *Id.* at 12.

153 *Turkey Point*, CLI-20-3, 91 NRC 133. *See also Exelon Gen. Co., LLC* (Peach Bottom Atomic Power Station, Units 2 & 3), CLI-20-11, 92 NRC __ (Nov. 12, 2020) (slip op.).

That decision "is binding precedent that the Board must follow in this proceeding."[154] Indeed, a few sentences after Petitioners claim Duke's interpretation is "legally erroneous," they admit that "the Commission has upheld Duke's interpretation."[155] In other words, Petitioners refute their own claim. At bottom, Petitioners' legal contention is inadmissible for failing to satisfy 10 C.F.R. § 2.309(f)(1)(v)-(vi) because it is unsupported and fails to raise a genuine dispute on a material issue of law or fact.

C. Proposed Contention 2 (Severe Accident Impacts NSI) Is Inadmissible

Proposed Contention 2 is captioned "Failure to Consider New and Significant Information Regarding Significant Impacts of Reactor Accidents Caused by Failure of Jocassee Dam."[156] (In contrast, Proposed Contention 3 relates to SAMA NSI.) Here, Petitioners assert that "Duke has violated NEPA and 10 C.F.R. § 51.53(c)(3)(iv)" because the ER allegedly does not address two items, which Petitioners characterize as new and significant environmental information: (1) unspecified Duke "risk analyses," and (2) the 2011 NRC Evaluation.[157] As detailed below, this proposed contention should be rejected for multiple reasons, including Petitioners' failure to address the relevant standards, their failure to provide the requisite specificity, and because (notwithstanding these failures), the information they identify does not, in fact, qualify as NSI—primarily because it pertains to "bounding" accident analysis, which NEPA does not require.

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154 *Virginia Elec. Power Co.* (North Anna Nuclear Power Station, Units 1 & 2), LBP-21-4, 93 NRC __, __ (Mar. 29, 2021) (slip op. at 5-6 n.11).

155 Petition at 12 (citing *Turkey Point*, CLI-20-3, 91 NRC 133).

156 *Id*. at 13 (emphasis added).

157 *Id.* at 14.

1. Petitioners Fail to Plead the *Prima Facie* Elements for a Challenge Regarding "New and Significant Information"

As a preliminary matter, Petitioners claim to have identified NSI, but fail to engage with the regulatory definition of that term or plead facts purporting to demonstrate satisfaction of the elements thereof. In the context of the NRC's NEPA regulations at 10 C.F.R. § 51.53(c)(3)(iv), "new and significant information" is defined to include two things:

> (1) information that identifies a significant environmental impact issue that was not considered or addressed in the GEIS and, consequently, not codified in Table B-1, "Summary of Findings on NEPA Issues for License Renewal of Nuclear Plants," in Appendix B, "Environmental Effect of Renewing the Operating License of a Nuclear Power Plant," to Subpart A, "National Environmental Policy Act—Regulations Implementing Section 102(2)," of 10 CFR Part 51, or
>
> (2) information not considered in the assessment of impacts evaluated in the GEIS leading to a seriously different picture of the environmental consequences of the action than previously considered, such as an environmental impact finding different from that codified in Table B-1.[158]

However, conspicuously absent from the Petition is any acknowledgment or engagement with this definition OR with any specified baseline analyses in the GEIS. Indeed, it is unclear which prong Petitioners might purport to satisfy because they neither specify their arguments nor provide any corresponding explanation or support.

Furthermore, the second NSI definition requires identifying information so "significant" that it would *alter* the impact finding (SMALL, MODERATE, or LARGE) for the corresponding NEPA issue. These significance levels are expressly defined in Appendix B. Again, Petitioners fail to acknowledge or engage with those significance definitions or contrast their assertions with any particular discussion of significance level in the GEIS.

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[158] Regulatory Guide 4.2, Supplement 1, "Preparation of Environmental Reports for Nuclear Power Plant License Renewal Applications" at 7-8 (June 2013) (ML13067A354).

In simple terms, Proposed Contention 2 is based on a *safety* evaluation (and Petitioners' flawed understanding thereof). Whereas the absence of engagement with the key *environmental* terms of art, regulatory definitions, and baseline GEIS analyses should be viewed as dispositive to any suggestion that Petitioners have met their burden to plead an admissible *environmental* contention.[159] Accordingly, Proposed Contention 2 must be rejected for failure to satisfy 10 C.F.R. § 2.309(f)(1)(ii), (v), and (vi).

2. Petitioners' Claims Regarding Unspecified Duke "Risk Analyses" Lack the Requisite Specificity for an Admissible Contention

The first bullet of Proposed Contention 2 alleges that the ER is deficient because:

> Duke's own risk analyses show that the likelihood of a core melt accident and containment failure caused by a random failure of the Jocassee Dam is significantly higher than presented in Duke's Environmental Report. And even this higher estimate of Jocassee Dam failure frequency is too low, given Duke's failure to consider the additional credible contributors to Jocassee dam failure frequency of seismic events and dam overtopping.[160]

Notably, however, Petitioners do not identify the specific "risk analyses" they claim are NSI. Nor do they identify any portion of the ER that purportedly "presented" an analysis that differs from those unspecified "risk analyses."[161] As NRC regulations make clear, a hearing cannot be convened on the basis of generalized claims; rather, a petitioner "*must* set forth *with*

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[159] Mr. Mitman does not purport to be a NEPA expert, but rather proffers an opinion solely on *safety* issues. Mitman Decl. at 1. Petitioners make an unsupported claim that the 2011 NRC Evaluation *per se* established any and all information related to severe accidents from hypothetical dam failures as a "significant environmental issue." Petition at 14. To the extent that baseless assertion could be interpreted as a claim that such information automatically qualifies as NSI, it contradicts the fundamental notion that NEPA is governed by a "rule of reason" and does not require consideration of every possible bounding accident scenario. *See infra* Section IV.C.3.c.

[160] Petition at 14. As noted above, Petitioners' assertion that Duke has failed to consider "seismic events" and "dam overtopping" in its flooding analyses is patently incorrect. *See supra* Section II.D.3.

[161] Similarly, Petitioners assert that "Duke also fails to consider the risk contribution from shutdown operations." Petition at 15; *see also* Mitman Decl. at 23. But the intended meaning of this statement is unclear, and neither Petitioners nor Mr. Mitman offer any explanation. Moreover, this brief statement fails to engage with the extensive Duke and NRC analyses conducted as part of the CAL and Fukushima processes, much less identify some defect therein that somehow could be relevant to Petitioners' environmental contention.

particularity" the issues it proposes to be resolved at an evidentiary hearing.[162] Parties are "entitled to be told at the outset, *with clarity and precision*, what arguments are being advanced."[163] Petitioners' ambiguous reference to undefined "risk analyses" fails to meet that threshold.[164] Thus, this aspect of the contention, on its face, fails to satisfy the specificity requirement in 10 C.F.R. § 2.309(f)(1)(i).

3. Neither the 2010 Licensee Evaluation Nor the 2011 NRC Evaluation Satisfies the Definition of "New and Significant Information"

Although not required to do so, the Applicant has attempted to decipher Petitioners' reference to "risk analyses" in Proposed Contention 2 and believes Petitioners may have intended to refer to the 2010 Licensee Evaluation.[165] And again, while not required to do so, the Applicant has evaluated both the 2010 Licensee Evaluation and the 2011 NRC Evaluation against the definition of NSI—something Petitioners failed to do in their Petition. To be sure, the burden of pleading an admissible contention falls squarely on the Petitioners; the Applicant does not have a burden to show that a proposed contention is *in*admissible.[166] Nevertheless, as a courtesy to the Board, the Applicant provides the discussion below confirming that neither the 2010 Licensee Evaluation nor the 2011 NRC Evaluation, in fact, satisfies the definition of "new and significant information." As such, even assuming *arguendo* Petitioners *had* satisfied the specificity requirement and *had* analyzed the applicable standard, the proposed contention is inadmissible for the additional reason that it is unsupported and fails to demonstrate a genuine

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162 10 C.F.R. § 2.309(f)(1).

163 *Wolf Creek*, ALAB-279, 1 NRC at 576 (emphasis added).

164 To the extent Petitioners rely on the Mitman Declaration to define the proposed contention, that approach is insufficient because the Board and the parties "cannot be faulted for not having searched for a needle that may be in a haystack." *Seabrook*, CLI-89-3, 29 NRC at 241. In any event, the Mitman Declaration references *multiple* "analyses," so the reference remains unclear.

165 To be clear, as explained above, the 2010 Licensee Evaluation is *not* a risk (*i.e.*, probabilistic) analysis; it is a *deterministic* analysis. But, again, Petitioners do not discuss that key distinction.

166 *See generally Palisades*, CLI-15-23, 82 NRC at 325, 329.

dispute with the Application on a material issue of law or fact, as required by 10 C.F.R. § 2.309(f)(1)(v)-(vi).

a. Neither the 2010 Licensee Evaluation Nor the 2011 NRC Evaluation Are "New" Because Both Were Available Before the Revised GEIS Was Issued in 2013

First, and quite simply, neither the 2010 Licensee Evaluation nor the 2011 NRC Evaluation is "new." The GEIS was updated in 2013.[167] In contrast, the 2010 Licensee Evaluation was submitted to the NRC approximately three years before that, and the 2011 NRC Evaluation was issued the following year. To be admissible, a challenge to an ER's compliance with the requirements of 10 C.F.R. § 51.53(c)(3)(iv) must show the existence of "post-2013 Revised GEIS new and significant information [] that would change the GEIS conclusion."[168] But neither of these documents is "post-2013 Revised GEIS." Both were clearly available and known to the NRC years before the 2013 Revised GEIS was issued. Petitioners offer no explanation as to how this information somehow could be considered "new."

b. Neither the 2010 Licensee Evaluation Nor the 2011 NRC Evaluation Satisfies the First Definition of NSI Because Neither Identifies a New NEPA Issue Not Listed in Table B-1

Furthermore, even if this information could be considered "new," it still does not satisfy the first definition of NSI. As noted above, that definition pertains to identifying an entirely new "NEPA issue" not listed in Appendix B, Table B-1. In contrast, the 2010 Licensee Evaluation and the 2011 NRC Evaluation discuss a hypothetical *severe accident* triggered by a beyond-design-basis external flooding event. Thus, this topic squarely falls within the "Severe Accidents" issue analyzed in the GEIS and listed in Appendix B, Table B-1. Accordingly,

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167 *See generally* 2013 Final Rule, 78 Fed. Reg. 37,282.

168 *North Anna*, LBP-21-4, 93 NRC at __ (slip op. at 32).

Proposed Contention 2 does not (and does not purport) to identify an entirely new "NEPA issue," as contemplated in the first definition of NSI.

c. *Neither the 2010 Licensee Evaluation Nor the 2011 NRC Evaluation Satisfies the Second Definition of NSI Because Both Are "Bounding" Analyses Beyond the Scope of NEPA and Therefore Immaterial to the GEIS Impact Conclusion for Severe Accidents*

As discussed above, it is well settled that NEPA does not require **bounding** or **worst case** analyses of postulated accidents.[169] The Commission has explained that such an inquiry is unnecessary—and furthermore, unhelpful in the context of informed decision-making—because it "creates a distorted picture of a project's impacts and wastes agency resources."[170] Rather, the environmental review mandated by NEPA is subject to a rule of reason.[171] In contrast, the 2010 Licensee Evaluation, as reviewed in the 2011 NRC Evaluation, "reflects a **bounding** analysis."[172] Petitioners do not acknowledge this disconnect. But, in the context of a NEPA contention, it is dispositive.

As a clear matter of public record, the 2010 Licensee Evaluation and 2011 NRC Evaluation discuss a **bounding** external flooding analysis—something that **NEPA does not require**, and which would "distort" the Commission's "hard look" at realistic project impacts. Because these documents are not material to the environmental review required under NEPA,

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169 *Holtec*, CLI-20-4, 91 NRC at 180 ("NEPA does not require a "worst case" analysis for potential accident consequences").

170 *Private Fuel Storage, LLC* (Indep. Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 348 (2002) (citing *Methow Valley*, 490 U.S. at 354-55).

171 *Nat. Res. Def. Council, Inc. v. Morton*, 458 F.2d 827, 834 (D.C. Cir. 1972)).

172 2016 NRC Evaluation, Encl. 2 at 4. *See also* Mitman Decl. at 10 (acknowledging that the NRC letter prompting the 2010 Licensee Evaluation requested the licensee to identify "the bounding external flood hazard at Oconee") and 13 (acknowledging the 2011 NRC Evaluation confirms the "bounding" inundation scenario at Oconee).

they lack the capacity to alter the GEIS impact conclusion for Severe Accidents. Accordingly, this information does not meet the second definition of NSI.[173]

* * *

In sum, even if Petitioners had engaged with the relevant NSI standard—which they clearly did not do—the proposed contention still would be inadmissible for the additional reason that the information identified by Petitioners demonstrably does not qualify as NSI. Ultimately, Proposed Contention 2 is unsupported, immaterial, and fails to demonstrate a genuine dispute with the Application on a material issue of law or fact, as required by 10 C.F.R. § 2.309(f)(1)(iv)-(vi).

D. Proposed Contention 3 (SAMA NSI) Is Inadmissible

Proposed Contention 3 is captioned "Failure to Consider New and Significant Information Affecting Duke's Analysis of Severe Accident Mitigation Alternatives."[174] Therein, Petitioners assert that "Duke does not comply with 10 C.F.R. § 51.53(c)(3)(iv)" because the ER allegedly does not address three items, which Petitioners characterize as new and significant information: (1) unspecified Duke "risk analyses," (2) the 2011 NRC Evaluation, and (3) certain "mitigative measures" briefly mentioned in the Mitman Declaration.[175] As detailed below, this proposed contention should be rejected for lack of factual or legal support and also for the same reasons as Proposed Contention 2—principally, because it faults the ER for failing to consider "bounding" and "worst case" accident scenarios, which NEPA does not require.

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173 Petitioners do not explicitly claim that Mr. Mitman's attempted calculation of "best estimate" CDF constitutes NSI. But even if they had, that claim would be inadmissible for the same reason—because his calculation is a "worst case" or "bounding" scenario not required under NEPA and inappropriate for NEPA analysis. *See supra* Section II.D.2. Likewise, Mr. Mitman's claim that Duke has not considered flooding from overtopping and seismic events is counterfactual and cannot support an admissible contention. *See supra* Section II.D.3.

174 Petition at 16 (emphasis added).

175 *Id.* at 16-17.

1. Proposed Contention 3 Is Inadmissible for the Same Reasons That Proposed Contention 2 Is Inadmissible

Proposed Contention 3 largely repeats the same arguments and suffers from the same fundamental defects as Proposed Contention 2. Namely, Proposed Contention 3 also fails to engage with the definition of NSI, fails to specify the "risk analyses" it claims to be NSI, and because the 2010 Licensee Evaluation and 2011 NRC Evaluation decidedly are not NSI. Proposed Contention 3 also appears to rely on the same implied assertion advanced in Proposed Contention 2 that there exists some obligation under NEPA to evaluate "bounding" severe accident scenarios.[176] As discussed above, that is incorrect as a matter of settled law.[177] Accordingly, the Applicant incorporates by reference here its answer to Proposed Contention 2 and asserts that Proposed Contention 3 should be rejected for the same reasons.

2. Petitioners' Unsupported Assertion that the 2011 NRC Evaluation "Requires" Actions and "Establishes" New SAMAs Is Factually and Legally Unsupported and Incorrect

Petitioners claim that the 2011 NRC Evaluation "required Duke to implement certain measures for protection against a random (*i.e.*, "sunny day") Jocassee Dam failure as a matter of providing 'adequate protection,'"[178] and that those safety measures somehow became SAMAs under Part 51.[179] As explained above in Section II.D, Petitioners' entire premise is counterfactual because the 2011 NRC Evaluation imposes no obligations on Duke. Moreover, all mitigating measures required by the CAL *have*, in fact, been implemented, and all actions required to be taken by Duke have been completed and verified by the NRC.[180] Petitioners'

176 *Compare id*. at 14 *with id*. at 16 (identifying the same bounding analyses as alleged NSI).

177 *Holtec*, CLI-20-4, 91 NRC at 180 ("NEPA does not require a "worst case" analysis for potential accident consequences").

178 Petition at 16.

179 *Id.* at 16-17.

180 *See supra* Section II.C.

assertion to the contrary is unsupported and fails to raise a genuine dispute on a material issue of law or fact, and therefore is inadmissible under 10 C.F.R. § 2.309(f)(1)(v)-(vi).

3. Petitioners Offer No Explanation as to Why or How the "Mitigative Measures" Briefly Mentioned in the Petition and Mitman Declaration Somehow Qualify as NSI Under the Applicable Standards in NEI 17-04, Rev. 1

In his Declaration, Mr. Mitman makes a passing reference to what he calls "ways to reduce the flood hazard from Oconee," namely:

> preemptively shutting down the reactors when reservoir water levels get too high, lowering the water levels in the lake behind the Jocassee and Keowee Dams, or lowering the crest elevation of some of the surround[ing] earthworks such that they overtop before the Jocassee Dam, thus lowering the flood impacts at [Oconee].[181]

Neither Mr. Mitman nor Petitioners provide any further discussion or explanation regarding these off-the-cuff suggestions, much less how or why these musings somehow could satisfy the definition of SAMA NSI. Indeed, in the SAMA context, NSI is screened through a 3-stage process outlined in NEI 17-04 using PRA risk insights and/or risk model quantifications, among other things, to estimate the percent reduction in the maximum benefit associated with a particular SAMA.[182] Neither Mr. Mitman nor Petitioners offer such an analysis here regarding their casual recommendations. Indeed, it does not appear that Petitioners or Mr. Mitman acknowledge the extensive mitigative measures that Duke has already implemented in response to the CAL and the NRC's post-Fukushima requirements.[183] Petitioners fail to engage with this relevant information, much less explain why anything more is required, particularly given the NRC's acceptance of the 2015 FHRR. Accordingly, this information lacks the requisite basis,

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181 Mitman Decl. at 24-25.

182 *See generally* NEI 17-04 (executive summary at PDF page 2).

183 *See, e.g.*, CAL Closeout Letter (NRC's inspection confirming completion of numerous mitigative actions taken by Duke).

specificity, materiality, or support for an admissible contention, and fails to raise a genuine dispute with the application, as required by 10 C.F.R. § 2.309(f)(1)(i)-(ii) and (iv)-(vi).

V. CONCLUSION

As established above, Petitioners have not satisfied the Commission's "stringent" waiver standard. Accordingly, the Board should DENY the Waiver Request. Additionally, regardless of whether the Waiver Request is granted, Petitioners have not proposed an admissible contention. Therefore, the Board also should DENY the Hearing Request.

Respectfully submitted,

Executed in Accord with 10 C.F.R. § 2.304(d)
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Dated in Washington, DC
this 22nd day of October 2021

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:	)	Docket Nos. 50-269-SLR 50-270-SLR and 50-287-SLR
DUKE ENERGY CAROLINAS, LLC	)	
(Oconee Nuclear Station, Units 1, 2 and 3)	)	October 22, 2021

CERTIFICATE OF SERVICE

Pursuant to 10 C.F.R. § 2.305, I certify that, on this date, a copy of the foregoing "Applicant's Answer Opposing Request for Hearing, Petition to Intervene, and Petition for Waiver Submitted by Beyond Nuclear and Sierra Club" was served upon the Electronic Information Exchange (the NRC's E-Filing System), in the above-captioned docket.

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