December 14, 2018

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of	)	
	)	
Exelon Generation Company, LLC	)	Docket Nos. 50-277-SLR
	)	50-278-SLR
Peach Bottom Atomic Power Station,	)	
Units 2 and 3	)	

Exelon's Answer Opposing
Beyond Nuclear Inc.'s Hearing Request and Petition to Intervene

I. INTRODUCTION

Exelon Generation Company, LLC ("Exelon") hereby answers and opposes Beyond Nuclear Inc.'s Hearing Request and Petition to Intervene (Nov. 19, 2018) ("Petition" or "Pet."). The Petition should be denied because neither of the two contentions proposed by Beyond Nuclear, Inc. ("Beyond Nuclear") meets the NRC standards for admissibility.

Contention 1 seeks to graft onto the existing NRC rules and authoritative guidance a new standard requiring definition of a "critical mass" of industry operating experience ("OE") in what appears to be advocacy for long-term research that is already ongoing. The contention fails, however, to challenge the adequacy of any of the specific aging management programs ("AMP") in the application or demonstrate any genuine material dispute with the robust process described in the application for reviewing OE and maintaining the effectiveness of the AMPs. Contention 2 impermissibly challenges the generic findings codified in the NRC rules on the environmental impacts of accidents. Consequently, both contentions and the Petition must be dismissed.

II. PROCEDURAL BACKGROUND

By application dated July 10, 2018, Exelon requested the subsequent (i.e., second) license renewal ("SLR") of Renewed Facility Operating Licenses Nos. DPR-44 and DPR-56 for the Peach Bottom Atomic Power Station, Units 2 and 3 ("Peach Bottom").[1] On September 6, 2018, the Nuclear Regulatory Commission ("NRC" or "Commission") published a notice of opportunity to request a hearing and to petition for leave to intervene ("Notice"). 83 Fed. Reg. 45,285 (Sept. 6, 2018). The Notice permitted any person whose interest may be affected to file a request for hearing and petition for leave to intervene within 60 days of the Notice. *Id.* at 45,286.

The Notice directs that any petition must explain why intervention should be permitted, with particular reference to the nature of the petitioner's right under the Atomic Energy Act to be made a party to the proceeding, the nature and extent of the petitioner's property, financial, or other interest in the proceeding, and the possible effect of any decision or order which may be entered in the proceeding on the petitioner's interest (i.e., standing), as well as the specific contentions sought to be litigated. *Id.* The Notice states:

> Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the petitioner must provide a brief explanation of the bases for the contention and a concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing. The petitioner must also provide references to the specific sources and documents on which the petitioner intends to rely to support its position on the issue. The petition must include sufficient information to show that a genuine dispute exists with the applicant or licensee on a material issue of law or fact. Contentions must be limited to matters within the scope of the proceeding. The contention must be one which, if proven,

[1] The Peach Bottom application for SLR is available in the NRC's Agency-wide Documents Access and Management System ("ADAMS") at Accession No. ML18193A689, and on the NRC's website at https://www.nrc.gov/reactors/operating/licensing/renewal/applications/peach-bottom-subsequent.html#application. It includes several documents referred to collectively herein as the "Application." The portion of the Application providing the general and technical information required by 10 C.F.R. §§ 54.19 and 54.21, including the description of the aging management programs, is available at ADAMS Accession No. ML18193A773, and hereinafter cited as the "SLRA." The main part of the environmental report is available at ADAMS Accession No. ML18201A219, and hereinafter cited as the "ER."

would entitle the petitioner to relief. A petitioner who fails to satisfy the requirements at 10 CFR 2.309(f) with respect to at least one contention will not be permitted to participate as a party.

Id.

III. BEYOND NUCLEAR'S CONTENTIONS DO NOT MEET THE COMMISSION'S STANDARDS FOR ADMISSIBILITY

To be admitted to a proceeding, Beyond Nuclear must demonstrate standing and plead at least one admissible contention. 10 C.F.R. § 2.309(a). Exelon does not challenge Beyond Nuclear's standing to participate in the proceeding, but submits that Beyond Nuclear has proffered no admissible contentions. Therefore, the Petition must be denied.

A. Standards for Contentions

1. Contentions Must Be Within The Scope Of The Proceeding And May Not Challenge NRC's Rules

As a fundamental requirement, a contention is only admissible if it addresses matters within the scope of the proceeding and does not seek to attack the NRC's regulations governing the proceeding. This fundamental limitation is particularly important in a license renewal proceeding because the Commission has conducted extensive rulemaking to define the technical and environmental showing that an applicant must make.

10 C.F.R. Part 54 governs the health and safety matters that must be considered in a license renewal proceeding. The Commission has specifically limited this safety review to the matters specified in 10 C.F.R. §§ 54.21 and 54.29(a):[2] the management of aging of certain systems, structures and components, and the review of time-limited aging evaluations. *See*

[2] The Commission has stated that the scope of review under its rules determines the scope of admissible issues in a license renewal hearing. 60 Fed. Reg. 22,461, 22,482 n.2 (May 8, 1995). "Adjudicatory hearings in individual license renewal proceedings will share the same scope of issues as our NRC Staff review, for our hearing process (like our Staff's review) necessarily examines only the questions our safety rules make pertinent." *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 N.R.C. 3, 10 (2001).

Turkey Point, CLI-01-17, 54 N.R.C. at 7-8; *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-26, 56 N.R.C. 358, 363 (2002). *See also Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-04-36, 60 N.R.C. 631, 637 (2004) (the potential detrimental effects of aging is essentially the issue that defines the scope of license renewal proceedings).

The rules in 10 C.F.R. Part 54 are intended to make license renewal a stable and predictable process. 60 Fed. Reg. at 22,461, 22,462, 22,463, 22,485. As the Commission has explained, "[w]e sought to develop a process that would be both efficient, avoiding duplicative assessments where possible, and effective, allowing the NRC Staff to focus its resources on the most significant safety concerns at issue during the renewal term." *Turkey Point*, CLI-01-17, 54 N.R.C. at 7.

> To require a full reassessment of [safety issues that are routinely monitored and assessed by ongoing agency oversight and agency-mandated licensee programs] at the license renewal stage, the Commission found, would be both unnecessary and wasteful. Accordingly, the NRC's license renewal review focuses on those potential detrimental effects of aging that are not routinely addressed by ongoing regulatory oversight programs. License renewal reviews are not intended to "duplicate the Commission's ongoing reviews of operating reactors."

Id. (citation omitted).

To this end, the Commission has confined 10 C.F.R. Part 54 to those issues uniquely determined to be relevant to the public health and safety during the period of extended operation, leaving all other safety issues to be addressed by the existing regulatory processes. 60 Fed. Reg. at 22,463. This scope is based on the principle established in the rulemaking proceedings that, with the exception of the detrimental effects of aging and a few other issues related to safety only during the period of extended operation, the existing regulatory processes are adequate to ensure that the licensing bases of currently operating plants provide and maintain an adequate level of

safety. 60 Fed. Reg. at 22,464. Consequently, license renewal does not focus on operational issues, because these issues "are effectively addressed and maintained by ongoing agency oversight, review, and enforcement." *Millstone*, CLI-04-36, 60 N.R.C. at 638 (footnote omitted). "Issues . . . which already are the focus of ongoing regulatory processes . . . do not come within the NRC's safety review at the license renewal stage." *Turkey Point*, CLI-01-17, 54 N.R.C. at 10 (*quoting* 56 Fed. Reg. 64,943, 64,945 (Dec. 13, 1991)).

The NRC rules governing environmental matters in license renewal proceedings – contained in 10 C.F.R. §§ 51.53(c), 51.71(d), 51.95(c), and Appendix B to Part 51 – are similarly intended to produce a more focused and, therefore, more effective review. 61 Fed. Reg. 28,467 (June 5, 1996); *Turkey Point*, CLI-01-17, 54 N.R.C. at 11. To accomplish this objective, the NRC prepared a comprehensive Generic Environmental Impact Statement for License Renewal of Nuclear Plants ("GEIS"), NUREG-1437, and made generic findings in the GEIS, which it then codified in Appendix B to 10 C.F.R. Part 51.[3] Those issues that have been resolved generically for all plants are designated as Category 1 issues. 10 C.F.R. § 51.95(c) provides that in connection with the renewal of an operating license, the NRC will prepare an environmental impact statement which shall be a supplement to the GEIS. 10 C.F.R. § 51.71(d) states:

> The draft supplemental environmental impact statement for license renewal prepared under § 51.95(c) will rely on conclusions as amplified by the supporting information in the GEIS for issues designated as Category 1 in appendix B to subpart A of this part. The draft supplemental environmental impact statement must contain an analysis of those issues identified as Category 2 in appendix B to subpart A of this part that are open for the proposed action.

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[3] The GEIS was updated in 2013, and the Commission amended §§ 51.53(c), 51.71(d), 51.95(c), and Appendix B to Part 51 to reference the revised GEIS and incorporate certain changes to its generic findings. *See* NUREG-1437, "Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Rev. 1 (June 2013), available at ADAMS Accession Nos. ML13106A241, ML13106A242, and ML13106A244. *See also* Final Rule, "Revisions to Environmental Review for Renewal of Nuclear Power Plant Operating Licenses," 78 Fed. Reg. 37,281 (June 20, 2013).

In the same vein, 10 C.F.R. § 51.95(c)(4) provides that in order to make its recommendation regarding the license renewal application in the final supplemental environmental impact statement, the NRC Staff shall integrate the conclusions in the GEIS for issues designated as Category 1 with information developed for those Category 2 issues applicable to the plant under § 51.53(c)(3)(ii) and any new and significant information.

10 C.F.R. § 51.53(c)(3) directs an applicant seeking an initial renewed operating license to address Category 2 issues and provides that analyses of Category 1 issues are not required. While this provision is silent on the content of a subsequent renewal applicant's environmental report, environmental reports are prepared to assist the NRC in preparing its environmental impact statement[4] and thus share the same scope as the NRC Staff's review. Further, in adjudicatory proceedings, a license renewal applicant's environmental report acts as a surrogate for the EIS during the early stages of a relicensing proceeding.[5] Thus, consistent with the scope of the NRC Staff's environmental review pursuant to 10 C.F.R. §§ 51.71(d) and 51.95(c), a subsequent license renewal applicant's environmental report should also necessarily rely on conclusions on Category 1 issues in appendix B to Part 51, which it may adopt and incorporate by reference.[6] Moreover, as the findings on Category 1 issues are codified in Appendix B to 10 C.F.R. Part 51 and apply explicitly to "renewal of any operating license,"[7] any challenge to those

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[4] *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-15-6, 81 N.R.C. 340, 351 (2015) ("The Staff uses the applicant's environmental report as a starting point for its own environmental review of the application. . . ."); *Exelon Generation Co., LLC* (Limerick Generating Station, Units 1 and 2), CLI-13-07, 78 N.R.C. 199, 210 (2013) ("To assist us in the preparation of a supplemental EIS, we require license renewal applicants to prepare an environmental report.").

[5] *Exelon Generation Co., LLC* (Limerick Generating Station, Units 1 and 2), LBP-12-08, 75 N.R.C. 539, 553 (2012), quoting *Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), LBP-08-26, 68 N.R.C. 905, 931 (2008).

[6] *Turkey Point*, CLI-01-17, 54 N.R.C. at 11-12.

[7] *See* 10 C.F.R. Part 51, Appendix B ("Table B–1, subject to an evaluation of those issues identified in Category 2 as requiring further analysis and possible significant new information, represents the analysis of the

findings is barred (absent waiver or suspension of the rule by the Commission based on new and significant information). 10 C.F.R. § 2.335. *See also* 61 Fed. Reg. at 28,468, 28,470, 28,474; *Turkey Point*, CLI-01-17, 54 N.R.C. at 12.

10 C.F.R. § 2.309(f)(1)(iii)-(iv) requires a petitioner to demonstrate that the issue raised by each of its contentions is within the scope of the proceeding and material to the findings that the NRC must make. Licensing boards "are delegates of the Commission" and, as such, they may "exercise only those powers which the Commission has given [them]." *Public Service Co. of Indiana, Inc.* (Marble Hill Nuclear Generating Station, Units 1 and 2), ALAB-316, 3 N.R.C. 167, 170 (1976) (footnote omitted). Accordingly, it is well established that a contention is not cognizable unless it is material to a matter that falls within the scope of the proceeding for which the licensing board has been delegated jurisdiction. *Id.* at 170-71.

It is also well established that a petitioner is not entitled to an adjudicatory hearing to attack generic NRC requirements or regulations. *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2 and 3), CLI-99-11, 49 N.R.C. 328, 334 (1999). "[A] licensing proceeding . . . is plainly not the proper forum for an attack on applicable statutory requirements or for challenges to the basic structure of the Commission's regulatory process." *Philadelphia Electric Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 A.E.C. 13, 20, *aff'd in part on other grounds*, CLI-74-32, 8 A.E.C. 217 (1974) (footnote omitted). Thus, a contention that collaterally attacks a Commission rule or regulation is not appropriate for litigation and must be rejected. 10 C.F.R. § 2.335; *Potomac Electric Power Co.* (Douglas Point Nuclear Generating Station, Units 1 and 2), ALAB-218, 8 A.E.C. 79, 89 (1974). A contention that "advocate[s]

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environmental impacts associated *with renewal of any operating license* and is to be used in accordance with § 51.95(c).") (emphasis added).

stricter requirements than those imposed by the regulations" is "an impermissible collateral attack on the Commission's rules" and must be rejected. *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), LBP-82-106, 16 N.R.C. 1649, 1656 (1982); *see also Duke Energy Carolinas, LLC* (William States Lee II Nuclear Station, Units 1 and 2), 68 N.R.C. 431, 455 (2008). Likewise, a contention that seeks to litigate a generic determination established by Commission rulemaking is "barred as a matter of law." *Pacific Gas & Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-93-1, 37 N.R.C. 5, 29-30 (1993).

These limitations are controlling in this proceeding in that the scope of admissible environmental contentions is constrained by 10 C.F.R. §§ 51.53(c), 51.71(d), 51.95(c), and Appendix B to Part 51; and the scope of technical contentions is constrained by 10 C.F.R. Part 54. *See Turkey Point*, CLI-01-17, 54 N.R.C. at 11-13; *see also Florida Power & Light Co.* (Turkey Point Units 3 and 4), CLI-00-23, 52 N.R.C. 327, 329 (2000).

2. Contentions Must Be Specific And Supported By A Basis Demonstrating A Genuine, Material Dispute

In addition to the requirement to address issues within the scope of the proceeding and material to the findings that the NRC must make, a contention is admissible only if it provides:

- a "specific statement of the issue of law or fact to be raised or controverted;"
- a "brief explanation of the basis for the contention;"
- a "concise statement of the alleged facts or expert opinions" supporting the contention together with references to "specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue;" and
- "sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact," which showing must include "references to specific portions of the application (including the applicant's environmental report and safety report) that the petitioner disputes and the supporting reasons for each dispute, or, if the petitioner believes that the application fails to contain information on a relevant matter as required by

> law, the identification of each failure and the supporting reasons for the petitioner's belief."

10 C.F.R. § 2.309(f)(1)(i), (ii), (v) and (vi). The failure of a contention to comply with any one of these requirements is sufficient grounds for dismissing the contention. *Palo Verde*, CLI-91-12, 34 N.R.C. at 155-56.

These pleading standards governing the admissibility of contentions are the result of a 1989 amendment to 10 C.F.R. § 2.714, now § 2.309, which was intended "to raise the threshold for the admission of contentions." 54 Fed. Reg. 33,168 (Aug. 11, 1989); *see also Oconee*, CLI-99-11, 49 N.R.C. at 334; *Palo Verde*, CLI-91-12, 34 N.R.C. at 155-56. The Commission has stated that the "contention rule is strict by design," having been "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.'" *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 N.R.C. 349, 358 (2001) (citation omitted). The pleading standards are to be enforced rigorously. "If any one . . . is not met, a contention must be rejected." *Palo Verde*, CLI-91-12, 34 N.R.C. at 155 (citation omitted). A licensing board is not to overlook a deficiency in a contention or assume the existence of missing information. *Id.*

The Commission has explained that this "strict contention rule" serves multiple purposes, which include putting other parties on notice of the specific grievances and assuring that full adjudicatory hearings are triggered only by those able to proffer at least some minimal factual and legal foundation in support of their contentions. *Oconee*, CLI-99-11, 49 N.R.C. at 334. By raising the threshold for admission of contentions, the NRC intended to obviate lengthy hearing delays caused in the past by poorly defined or supported contentions. *Id.* As the Commission reiterated in incorporating these same standards into the new Part 2 rules, "[t]he threshold

standard is necessary to ensure that hearings cover only genuine and pertinent issues of concern and that the issues are framed and supported concisely enough at the outset to ensure that the proceedings are effective and focused on real, concrete issues." 69 Fed. Reg. 2,182, 2,189-90 (Jan. 14, 2004).

Under these standards, a petitioner is obligated "to provide the [technical] analyses and expert opinion" or other information "showing why its bases support its contention." *Georgia Institute of Technology* (Georgia Tech Research Reactor, Atlanta, Georgia), LBP-95-6, 41 N.R.C. 281, 305, *vacated in part and remanded on other grounds*, CLI-95-10, 42 N.R.C. 1, *aff'd in part*, CLI-95-19, 42 N.R.C. 191 (1995). Where a petitioner has failed to do so, "the [Licensing] Board may not make factual inferences on [the] petitioner's behalf." *Id.*, *citing Palo Verde*, CLI-91-12, 34 N.R.C. 149. *See also Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), LBP-98-7, 47 N.R.C. 142, 180 (1998) (a "bald assertion that a matter ought to be considered or that a factual dispute exists . . . is not sufficient"; rather "a petitioner must provide documents or other factual information or expert opinion" to support a contention's "proffered bases") (citations omitted).

Further, admissible contentions "must explain, with specificity, particular safety or legal reasons requiring rejection of the contested [application]." *Millstone*, CLI-01-24, 54 N.R.C. at 359-60. In particular, this explanation must demonstrate that the contention is "material" to the NRC's findings and that a genuine dispute on a material issue of law or fact exists. 10 C.F.R. § 2.309(f)(1)(iv), (vi). The Commission has defined a "material" issue as meaning one where "resolution of the dispute *would make a difference in the outcome* of the licensing proceeding." 54 Fed. Reg. at 33,172 (emphasis added).

As the Commission has observed, this threshold requirement is consistent with judicial decisions, such as *Conn. Bankers Ass'n v. Bd. of Governors*, 627 F.2d 245, 251 (D.C. Cir. 1980), which held that:

> [A] protestant does not become entitled to an evidentiary hearing merely on request, or on a bald or conclusory allegation that . . . a dispute exists. The protestant must make a minimal showing that material facts are in dispute, thereby demonstrating that an "inquiry in depth" is appropriate.

Id. (footnote omitted); *see also Baltimore Gas & Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-14, 48 N.R.C. 39, 41 (1998) ("It is the responsibility of the Petitioner to provide the necessary information to satisfy the basis requirement for the admission of its contentions. . . ."). A contention, therefore, is not to be admitted "where an intervenor has no facts to support its position and where the intervenor contemplates using discovery or cross-examination as a fishing expedition which might produce relevant supporting facts." 54 Fed. Reg. at 33,171.[8] As the Commission has emphasized, the contention rule bars contentions where petitioners have what amounts only to generalized suspicions, hoping to substantiate them later, or simply a desire for more time and more information in order to identify a genuine material dispute for litigation. *Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-03-17, 58 N.R.C. 419, 424 (2003).

Therefore, under the Rules of Practice, a statement "that simply alleges that some matter ought to be considered" does not provide a sufficient basis for a contention. *Sacramento Municipal Utility District* (Rancho Seco Nuclear Generating Station), LBP-93-23, 38 N.R.C.

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[8] *See also Duke Power Co.* (Catawba Nuclear Station, Units 1 and 2), ALAB-687, 16 N.R.C. 460, 468 (1982), *vacated in part on other grounds*, CLI-83-19, 17 N.R.C. 1041 (1983) ("[A]n intervention petitioner has an ironclad obligation to examine the publicly available documentary material pertaining to the facility in question with sufficient care to enable [the petitioner] to uncover any information that could serve as the foundation for a specific contention. Stated otherwise, neither Section 189a. of the Act nor Section 2.714 [now 2.309] of the Rules of Practice permits the filing of a vague, unparticularized contention, followed by an endeavor to flesh it out through discovery against the applicant or staff.").

200, 246 (1993), *review denied*, CLI-94-2, 39 N.R.C. 91 (1994). Similarly, a mere reference to documents does not provide an adequate basis for a contention. *Baltimore Gas & Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 N.R.C. 325, 348 (1998).

Rather, the NRC's pleading standards require a petitioner to read the pertinent portions of the license application, including the safety analysis report and the environmental report, state the applicant's position and the petitioner's opposing view, and explain why it has a disagreement with the applicant. 54 Fed. Reg. at 33,171; *Millstone*, CLI-01-24, 54 N.R.C. at 358. If the petitioner does not believe these materials address a relevant issue, the petitioner is "to explain why the application is deficient." 54 Fed. Reg. at 33,170; *Palo Verde*, CLI-91-12, 34 N.R.C. at 156. A contention that does not directly controvert a position taken by the applicant in the license application is subject to dismissal. *See Texas Utilities Electric Co.* (Comanche Peak Steam Electric Station, Unit 2), LBP-92-37, 36 N.R.C. 370, 384 (1992), *appeal dismissed*, CLI-93-10, 37 N.R.C. 192, *stay denied*, CLI-93-11, 37 N.R.C. 251 (1993). Furthermore, an allegation that some aspect of a license application is "inadequate" or "unacceptable" does not give rise to a genuine dispute unless it is supported by facts and a reasoned statement of why the application is unacceptable in some material respect. *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-90-16, 31 N.R.C. 509, 521 & n.12 (1990).

B. Beyond Nuclear' Contentions Are Inadmissible

As explained below, none of the proposed contentions meet the applicable standards for the admission of contentions in NRC licensing proceedings.

1. Contention 1 Is Inadmissible

Contention 1 is inadmissible because it (1) is vague and generalized, failing to challenge any portion of the Application or identify any specific deficiency in any of the aging

management programs described in the Application, (2) lacks a basis and support demonstrating any genuine, material dispute, and (3) is based on vague speculation. Contention 1 alleges that the Application fails to meet the NRC's license renewal rules because it does not address the degree to which Exelon's aging management programs depend on external OE, how Exelon will determine what amount of OE is sufficient, and how OE will be augmented if deemed insufficient.[9] Pet. at 4. The gravamen of this contention appears to be that Exelon must define a "critical mass" of operating reactors providing OE supporting the adequacy of aging management programs, and must identify alternative sources if this critical mass is not met because of plant shutdowns. Pet., Att. 4 ("Lochbaum Report") at 33.

Beyond Nuclear, however, does not identify a single aging management program in the Application alleged to be inadequate. Nor does Beyond Nuclear justify the need for such a hypothetical and impractical analysis. Beyond Nuclear ignores much of the existing infrastructure surrounding aging management, including the already robust aging management and operational experience programs in place, both at Peach Bottom and industry-wide, and the multiple sources of OE evaluated under these programs, as described in the Application. Instead, Beyond Nuclear's expert merely speculates that plant shutdowns will somehow impact a theoretical "critical mass" of OE. Thus, Contention 1 is inadmissible because it is not specific (as required by 10 C.F.R. §§ 2.309(f)(1) and 2.309(f)(1)(i)), lacks a basis (as required by10 C.F.R. § 2.309(f)(1)(iii)), fails to demonstrate an issue material to the findings that the NRC must

[9] Beyond Nuclear cites 10 C.F.R. § 54.31(a)(1) as one of the rules allegedly not met (Pet. at 4), but there is no such provision in the NRC rules. Beyond Nuclear does not cite any rule or guidance that requires a license renewal applicant to undertake the activities that Beyond Nuclear advocates.

make (as required by 10 C.F.R. § 2.309(f)(1)(iv)), and fails to demonstrate a genuine dispute with the applicant on a material issue (as required by 10 C.F.R. § 2.309(f)(1)(vi)).[10]

a. Contention 1 Is Inadmissible Because It Makes Vague, Generalized Assertions That Fail To Challenge Any Specific Portion Of The Application

Contention 1 is inadmissible because it makes vague generalized assertions that fail to challenge any specific portion of the Application. 10 C.F.R. § 2.309(f)(1) requires contentions to be set forth "with particularity," and 10 C.F.R. § 2.309(f)(1)(i) requires them to be specific. Further, to demonstrate a genuine dispute with the application, 10 C.F.R. § 2.309(f)(1)(vi) requires the petitioner to include references to specific portions of the application that the petitioner disputes and the supporting reasons for each dispute, or if the petitioner believes that the application fails to contain information on a relevant matter as required by law, to identify each such failure and the supporting reasons for petitioner's belief. Contention 1 does not meet any of these requirements.

Here, Beyond Nuclear does not provide any reference to specific aging management programs in the Application alleged to be inadequate, thus failing to put the applicant on notice regarding the programs it would be required to defend. The absence of any citation to or discussion of the specific portions of the Application believed to be insufficient makes the contention inadmissible, notwithstanding an expert's statement generally challenging the adequacy of analysis. *Entergy Nuclear Operations, Inc.* (Palisades Nuclear Plant), CLI-15-23, 82 N.R.C. 321, 328 (2015).

> Petitioners must "explain the basis for the contention and read the relevant parts of the license application *and show where the application is lacking*"; an assertion

[10] Exelon notes that in purporting to address whether Contention 1 meets some of these standards, Beyond Nuclear refers instead to Contention 2. *See* Pet. at 6.

> that additional analysis is necessary, without further support (e.g., a basis to support the need for additional physical testing), is not sufficient.

Id. at 328-29 (emphasis added). Where a petition raises only generalized concerns and does not identify any specific portion of the application that it seeks to challenge, it lacks the specificity that the contention admissibility rules require. *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-15-21, 82 N.R.C. 295, 306 (2015).

Exelon and the Board should not be forced to parse through Contention 1 and Mr. Lochbaum's lengthy expert report to identify Petitioner's specific challenge to the Application. The petitioner may not "expect the Board on its own to discern what particular issue a petitioner is raising, including what section of the application, if any, is being challenged as deficient and why." *USEC Inc.* (American Centrifuge Plant), CLI-06-10, 63 N.R.C. 451, 457 (2006). It is also petitioner's obligation to raise an issue with the specific facility in question, *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 N.R.C. 125, 129 (2004), as petitioners may not "use a specific adjudicatory proceeding to . . . 'express generalized grievances about NRC policies,'" *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 3), CLI-08-17, 68 N.R.C. 231, 233 (*quoting Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 40 N.R.C. 328, 334 (1999)). "'Bald or conclusory allegation[s]' of a dispute with the applicant" are not enough. *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 N.R.C. 349, 358 (2001).

Because Beyond Nuclear fails to raise an issue with any specific portion of the Application, or any of the analysis that is specific to Peach Bottom, and instead raises generalized concerns regarding an industry-wide reduction in OE, Contention 1 is inadmissible for lacking specificity and particularity and failing to raise a genuine dispute with the Application.

b. Contention 1 Is Inadmissible Because It Provides No Basis Or Information Supporting The Need To Define A Critical Mass Of OE And Demonstrates No Genuine Material Dispute

Contention 1 is also inadmissible because it is not supported by a basis and does not provide supporting information to demonstrate that there is a need to define a "critical mass" of industry OE. For this reason too, Contention 1 fails to demonstrate any *genuine, material* dispute with the Application. In particular, Beyond Nuclear does not address or dispute the existing use of OE at Peach Bottom, including the Application's compliance with the comprehensive and ongoing regime for the evaluation of OE established by NUREG-2192, "Standard Review Plan for Review of Subsequent License Renewal Applications for Nuclear Power Plants" ("SRP-SLR") and NUREG-2191, "Generic Aging Lessons Learned for Subsequent License Renewal (GALL-SLR) Report" ("GALL-SLR Report") – guidance that provides reasonable assurance that aging will be adequately managed. Nor does Beyond Nuclear provide any basis demonstrating that the robust OE program described in the Application in conformance with this guidance, which evaluates multiple sources of OE and includes periodic effectiveness reviews of the aging management programs, will be insufficient. Contention 1 therefore fails to demonstrate any material issue or genuine dispute with the Application.

(i) Contention 1 Does Not Challenge Compliance With The Regime For Evaluating OE In The GALL-SLR Report

Beyond Nuclear fails to provide a basis challenging the Application's compliance with the GALL-SLR Report and companion SRP-SLR, which includes comprehensive guidance on how the Application should address OE and provides reasonable assurance that the effects of aging will be adequately managed. The Application is structured to address the guidance provided in the GALL-SLR Report, which along with the SRP-SLR is used to determine the adequacy of existing programs for purposes of managing aging and to determine which existing

programs should be augmented for second license renewal. SLRA at 1-9. The NRC Staff prepared the GALL Report (which has been revised several times, with the GALL-SLR Report prepared specifically to support subsequent license renewal) to identify generic AMPs that the Staff has found acceptable, based on experience and analyses. *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-23, 68 N.R.C. 461, 467 (2008). An applicant may reference the GALL Report to demonstrate that the programs at the applicant's facility correspond to those reviewed and approved therein. *Id.* at 468. As the Commission has stated, use of an AMP consistent with the GALL Report constitutes reasonable assurance that the targeted aging effect will be adequately managed during the renewal period. *Id. See also Entergy Nuclear Vermont Yankee, L.L.C.* (Vermont Yankee Nuclear Power Station), CLI-10-17, 72 N.R.C. 1, 36 (2010); *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 N.R.C. 301, 315 (2012). Consequently, the Commission has endorsed license renewal applicants' practice of noting their AMPs' consistency with the contents of the GALL Report:

> The GALL Report provides that one way a license renewal applicant may demonstrate that an AMP *will* effectively manage the effects of aging during the period of extended operation is by stating that a program is "consistent with" or "based on" the GALL Report.

Vermont Yankee, CLI-10-17, 72 N.R.C. at 37 (emphasis in original) (footnote omitted).

In preparing the GALL-SLR Report, and the companion SRP-SLR, the NRC reviewed OE extensively:

> The NRC staff reviewed domestic operating experience (OE) as reported in licensee event reports and NRC generic communications related to failures and degradation of passive components. Similarly the NRC staff reviewed the following international OE databases: (i) International Reporting System, jointly operated by the IAEA; (ii) IAEA's International Generic Ageing Lessons Learned Programme; (iii) Organisation for Economic Co-operation and Development (OECD)/Nuclear Energy Agency (NEA) Component Operational Experience and Degradation and Ageing Programme database; and (iv) OECD/NEA Cable Aging Data and Knowledge database.

> The NRC staff reviewed the results from AMP audits, findings from the [Expanded Materials Degradation Assessment], domestic and international OE, and public comments to identify technical issues that need to be considered for assuring the safe operation of NRC-licensed nuclear power plants (NPPs). By letter dated August 6, 2014 (ADAMS Accession No. ML14253A104), NEI documented the industry's views and recommendations for updating NUREG–1801, Revision 2, "Generic Aging Lessons Learned (GALL) Report," and NUREG–1800, Revision 2, "Standard Review Plan for Review of License Renewal Applications for Nuclear Power Plants," to support SLR.

GALL-SLR Report, Vol. 1, at xxviii. In addition, the NRC identified how an SLR applicant should address OE.

> An applicant may reference this report in an SLR application to demonstrate that the AMPs at the applicant's facility correspond to those described in the GALL-SLR Report. If an applicant credits an AMP in the GALL-SLR Report, it is incumbent on the applicant to ensure that the conditions and operating experience (OE) at the plant are bounded by the conditions and OE for which the GALL-SLR Report program was evaluated. If these bounding conditions are not met, it is incumbent on the applicant to address any additional aging effects and augment the AMPs for SLR.

Id. at iii; *see also id.* at xxv, xli; SRP-SLR at 1.2-4 to 1.2-5.

Each of the aging management programs, contained in Appendix B to the Application, includes a discussion of OE to address the NRC guidance and demonstrate the effectiveness of the programs (or identify enhancements to the programs where warranted). *See generally*, SLRA, App. B. Beyond Nuclear does not identify any non-compliance with this NRC guidance. Indeed, Mr. Lochbaum acknowledges that the Application describes how OE has been used. Lochbaum Report at 28-30 ("The use of operating experience for aging management at Peach Bottom is extensively described in Appendix B to the subsequent license renewal application"). *See also id.* at 34 ("The subsequent license renewal application for Peach Bottom describes how operating experience *has demonstrated the effectiveness* of aging management programs for specific components and structures.") (emphasis added).

Appendix B to the GALL-SLR Report and Appendix A.4 to SRP-SLR also include considerable guidance on how OE should be considered on a continuous basis. The SRP-SLR states that SLR applicants are required to implement programs for ongoing review of OE. SRP-SLR at A.4-1.

> The systematic review of plant-specific and industry OE, including relevant research and development concerning aging management and age-related degradation ensures that the SLR AMPs are, and will continue to be, effective in managing the aging effects for which they are credited. The AMPs should either be enhanced or new AMPs developed, as appropriate, when it is determined through the evaluation of OE that the effects of aging may not be adequately managed. AMPs should be informed by the review of OE on an ongoing basis, regardless of the AMP's implementation schedule.

Id. *See also* GALL-SLR Report at B-1. All interim staff guidance documents and revisions to the GALL-SLR Report are to be considered as sources of OE. SRP-SLR at A.4-2; GALL-SLR Report at B-2. In addition, all incoming plant-specific and industry OE should be screened to determine whether it may involve age-related degradation or impacts to aging management activities. SRP-SLR at A.4-2; GALL-SLR Report at B-2. Further,

> Relevant research and development information should be reviewed to determine whether it might involve age-related degradation or impacts to aging management activities. Relevant foreign and domestic research and development would generally be subject to a consensus process, and would have used materials and test conditions typical of operating power reactors, including actual operating and environmental conditions. Examples of relevant research and development sources are: (a) industry consensus standards development organizations (e.g., ASME, IEEE, ACI, API, NACE, International Organization for Standardization); (b) Electric Power Research Institute (EPRI); (c) generic communications issued by the staff based on research conducted by national labs used by the NRC; and (d) nuclear steam supply system vendor and owner's groups.
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> * * *
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> Operating experience, including relevant research and development items identified as potentially involving aging should receive further evaluation. . . . If it is found through evaluation that any effects of aging may not be adequately managed, then a corrective action should be entered into the 10 CFR Part 50, Appendix B, program to either enhance the AMPs or develop and implement new AMPs.

SRP-SLR at A.4-2; GALL-SLR Report at B-2.

Moreover, the required ongoing consideration of OE includes periodic effectiveness reviews of aging management programs.

> Assessments should be conducted on the effectiveness of the AMPs and activities. These assessments should be conducted on a periodic basis that is not to exceed once every 5 years. They should be conducted regardless of whether the acceptance criteria of the particular AMPs have been met. The assessments should also include evaluation of the AMP or activity against the latest NRC and industry guidance documents and standards that are relevant to the particular program or activity. If there is an indication that the effects of aging are not being adequately managed, then a corrective action is entered into the 10 CFR Part 50, Appendix B, program to either enhance the AMPs or develop and implement new AMPs, as appropriate.

SRP-SLR at A.4-2; GALL-SLR Report at B-2.

Exelon's program for continuous evaluation of OE in conformance with the NRC guidance is described in Section B.1.4 of the Application (with a summary also added to the Final Safety Analysis Report by Section A.1.6 of the Application). Consistent with NRC's guidance, Exelon's process requires AMP effectiveness reviews at least once within each five-year period. SLRA at B-7. Again, Beyond Nuclear does not provide any showing that Exelon's continuing program for evaluating OE fails to meet the GALL-SLR Report or SRP-SLR, and indeed Mr. Lochbaum acknowledges that the Application addresses how OE will be used. Lochbaum Report at 30. Nor does Beyond Nuclear challenge the adequacy of the GALL-SLR Report or SRP-SLR with anything more than general assertions that there must be a "quantitative or qualitative criteria" for operating experience. Lochbaum Report at 12.

While referencing an AMP in the GALL Report does not insulate the AMP from challenge (*Seabrook*, CLI-12-5, 75 N.R.C. at 315), the guidance in the GALL Report is entitled to special weight (*id.* at 314 n.78), and a contention challenging such an AMP must be

adequately supported (*see id.* at 315). Beyond Nuclear's vague, generalized and conclusory assertions that something more may be needed in the future do not provide such support. Indeed, neither Beyond Nuclear nor Mr. Lochbaum explain how it would be possible or consistent with the NRC rules[11] to define a quantitative or qualitative "critical mass" of OE that must be maintained. "[A]n expert opinion that merely states a conclusion … without providing a reasoned basis or explanation for that conclusion is inadequate. . . ." *Palisades*, CLI-15-23, 82 N.R.C. at 328. In light of the acknowledged compliance of the Application with the GALL-SLR Report and SRP-SLR, Mr. Lochbaum's conclusory report fails to provide such a reasoned basis.

(ii) Contention 1 Lacks A Sufficient Basis To Demonstrate A Need For Defining A Critical Mass Of OE

As discussed above and further below, the OE process used in the industry and at Peach Bottom and described in the SRP-SLR and GALL-SLR is already robust and flexible. Mr. Lochbaum's report fails to address this robust infrastructure surrounding OE. Thus, Mr. Lochbaum provides no real justification for further requirements and no basis to establish a genuine dispute on a material issue of fact or law. In light of the continuous evaluation of AMP through the plant's operating experience and corrective action programs, the periodic AMP effectiveness reviews, and the multiple sources of OE available (including plant-specific OE, foreign OE, and ongoing research programs), Mr. Lochbaum's claim that industry OE "could be significantly reduced," Lochbaum Report at 3, is speculative, unsupported, and otherwise

[11] As the Commission has stated, "'reasonable assurance' is not quantified as equivalent to a 95% (or any other percent) confidence level, but is based on sound technical judgment of the particulars of a case and on compliance with our regulations," and "[n]or does any statute, regulation, or case law require the Commission to assign and apply a precise 'level or degree' of confidence to the 'reasonable assurance' standard." *Entergy Nuclear Generation Company and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-14, 71 N.R.C. 449, 465, 467 (2010).

untethered to the realities of the aging management programs described in the SLRA and NRC oversight of those programs.

As previously discussed, consistent with NRC's guidance, Exelon performs effectiveness reviews of its AMPs at least once every five years. SLRA at B-7. Mr. Lochbaum speculates that "even the total elimination of operating experience reports would not necessarily be flagged" by these assessments (Lochbaum Report at 33), but this is sheer speculation. Nor does Mr. Lochbaum provide any basis for his assumption that there might be "zero operating experience" available. *See id.* OE is not limited to information from other U.S. plants. To the contrary, the most relevant OE is Peach Bottom's own plant-specific OE, which represents the actual observations of the plant-specific materials under the plant-specific conditions at the units.[12] Mr. Lochbaum ignores this primary source of OE.[13] Additionally, OE is only one of a number of elements of AMPs examined as part of effectiveness reviews. *See* NEI-14-12 at 4-7.[14] These reviews give particular attention, for example, to whether detection of aging effects is occurring with sufficient time to implement preventive actions before there is a loss of structure or component-intended function. *Id.* at 4-5. Mr. Lochbaum provides no explanation why these reviews and plant-specific OE are insufficient to confirm the continuing effectiveness of the AMPs.

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[12] Mr. Lochbaum points out that the NRC rules forbid a plant from applying for a renewed license more than 20 years before the expiration of the current license, to ensure that substantial operating experience is accumulated before the application is submitted. Lochbaum Report at 7-8. That requirement requires 20-years of *plant-specific* OE, demonstrating its primary importance.

[13] Exelon's effectiveness review process is consistent with NEI 14-12, "Aging Management Program Effectiveness" (Dec. 14, 2014), available at ADAMS Accession No. ML15090A665 ("NEI 14-12"). SLRA at B-7. One of the key points in that guidance is that "AMP effectiveness is continuously evaluated as part of existing *site-specific* operating experience and corrective action programs." NEI-14-12 at 1 (emphasis added). Mr. Lochbaum discusses NEI 14-12, (Lochbaum Report at 31), but not address or dispute this aspect of the guidance.

[14] The SLRA provides that Exelon's effectiveness review will be consistent with NEI 14-12. SLRA at B-7.

Further, OE is not limited to information from other operating U.S. plants (or for that matter, from nuclear plants). Beyond Nuclear's contention and Mr. Lochbaum's report appear entirely predicated on a decline in the number of operating reactors in the United States, but as the GALL-SLR Report indicates, there are also international OE databases that are maintained and assessed. *See* GALL-SLR Report, Vol. 1, at xxviii. Research and development activities, both foreign and domestic, are also reviewed as OE, including the activities of industry consensus development organizations. GALL-SLR Report, Vol. 2, at B-2. Neither Beyond Nuclear nor Mr. Lochbaum address or explain why these multiple sources of OE could no longer be relied upon, and thus fail to demonstrate any genuine material dispute with the AMP effectiveness assessment process described in the Application, consistent with NRC guidance.

Beyond Nuclear's and Mr. Lochbaum's failure to acknowledge the role of ongoing research (including the NRC's role and regulatory process) or to explain why such research does not provide OE supporting the continuing adequacy of aging management programs is particularly fatal to the admissibility of Contention 1. Mr. Lochbaum refers to the 2014 Expanded Materials Degradation Assessment ("EMDA") and to the 2014 Commission briefing discussing these issues,[15] which he argues are examples of "knowledge gaps" that must be filled by OE. Lochbaum Report at 16. Mr. Lochbaum fails to place the EMDA in context[16] and to explain why the EMDA's prioritization of research in 2014 to prepare for second license renewal indicates that there are still knowledge gaps relevant to the effectiveness of the subsequently

[15] Lochbaum Report at 3, 16-20, quoting NUREG/CR-7153, Expanded Materials Degradation Assessment (EMDA), and SECY-14-0016, Ongoing Staff Activities to Assess Regulatory Considerations for Power Reactor Subsequent License Renewal.

[16] The EMDA was developed jointly by NRC and DOE, in preparation for second license renewals, to identify issues for which enhanced aging management activities might be warranted while allowing prioritization of research needs. NUREG/CR-7153, Expanded Materials Degradation Assessment (EMDA) (Oct. 2014), Vol. 1 at v, available at ADAMS Accession No. ML14279A321.

developed and enhanced AMPs in the GALL-SLR Report. He also fails to establish that significant knowledge deficiencies will exist during the second period of extended operation, or that research and the NRC's regulatory processes are insufficient to address regulatory uncertainties. Mr. Lochbaum acknowledges that "measures needed to ensure safety during reactor operation are not frozen in time when the initial operating license or renewed operating license is issued" (Lochbaum Report at 8), but his focus on the EMDA appears to treat the issues identified four years ago as everlasting.[17]

As discussed in a 2017 Commission briefing (in which Mr. Lochbaum was a participant and of which he is therefore well aware) on the status of subsequent license renewal preparations,[18] the Department of Energy conducts an ongoing Light Water Reactor

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[17] Mr. Lochbaum asserts that "knowledge of aging mechanisms is known to be imperfect." Lochbaum Report at 18; *see also* Lochbaum Report at 16 (the "cause(s) [of IASCC] have not yet been definitively and irrefutably identified."). These assertions are irrelevant. The NRC's license rule requires management of aging effects, not the identification of aging mechanisms.

> The intent of the license renewal review has been clarified to focus on the adverse *effects* of aging rather than identification of all aging *mechanisms*. The final rule is intended to ensure that important systems, structures, and components will continue to perform their intended function in the period of extended operation. Identification of individual aging mechanisms is not required as part of the license renewal review.

60 Fed. Reg. at 22,463 (emphasis in original). Aging effects are often managed by condition or performance monitoring programs that ensure a component remains capable of performing its intended function, regardless of the mechanisms causing the aging effect, and the inspection locations and frequencies are established conservatively to account for uncertainties. To the extent that Contention 1 is based on the assertion that mechanisms must be known "definitively and irrefutably," it is simply a challenge to the NRC's license renewal rules. As previously stated, Beyond Nuclear has not challenged the sufficiency of any particular aging management program in the Application.

[18] Briefing on Status of Subsequent Licensing Renewal Preparations (Apr. 26, 2017), available at ADAMS Accession No. ML17118A300 ("2017 Commission Briefing Tr."). As Mr. Lochbaum is relying on statements pertaining to the NRC's coordination of research, reflecting the NRC Staff's regulatory role and processes in maintaining guidance on effective aging management programs, it is appropriate to consider the most recent Commission briefing on this subject in assessing whether the 2014 EMDA provides a basis for the Contention. In any event, the research programs discussed in the 2017 briefing and their coordination with the NRC are also described in the Light Water Reactor Sustainability Program, Integrated Program Plan (Feb. 2017) ("LWRS Program Plan"), which Mr. Lochbaum references in his Report. *See* Lochbaum Report at 44. A licensing board should examine documents cited by petitioners to confirm that they support a proposed contention. *See Vermont Yankee Nuclear Power Corp*. (Vermont Yankee Nuclear Power Station), ALAB-919, 30 N.R.C. 29, 48 (1989*), vacated in part on other grounds and remanded*, CLI-90-04, 31 N.R.C. 333 (1990). A petitioner's documents may be examined both for statements that support and oppose its position. *See Virginia Electric and Power Co.* (North Anna Power Station, Unit 3), LBP-08-15, 68 N.R.C. 294, 334 n.207 (2008).

Sustainability ("LWRS") program, coordinating research needs with the NRC and industry, which includes research on materials, aging and degradation, including materials harvested from plants and materials that undergo accelerated aging. 2017 Commission Briefing Tr. at 5-6.[19] The research on material degradation is proactive, includes materials harvested from plants and materials that undergo accelerated aging,[20] and is used by industry and the regulator to inform updates to aging management programs. *Id.* at 7. In the Commission briefing, DOE reported that it has made significant progress in the understanding of degradation in the areas identified by the EMDA. "No technical showstoppers to long-term operation have been identified through our research." *Id.*[21] "We are developing improved materials monitoring techniques that will help detect degradation earlier, should it occur. We work with industry so that our research results can be used to update and enhance their Aging Management Programs." *Id.* at 10.

In that same Commission briefing, the Electric Power Research Institute ("EPRI") similarly described its Long-Term Operations program, one purpose of which is to support and inform the technical basis for aging management programs.[22] *Id.* at 10.

> [EPRI's] research continues working with our research partners, such as the DOE and NRC research to further enhance our ability for aging management and assessment. This includes but is not limited to improved modeling, improved inspection technologies, advances in assessment, and evaluation methodologies and online condition monitoring. In addition, we also look for opportunity to harvest materials where that can add to the database and knowledge as well.

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[19] *See also* LWRS Program Plan at 7-11.

[20] The harvesting of components from reactors is identified in the LWRS Program Plan at 16, 17, 25, 27-28, A-3, A-4, A-14, and B-4.

[21] *See also* Presentation of Richard Reister, Program Manager, Office of Nuclear Energy, "DOE Light Water Reactor Sustainability (LWRS) Program (Apr. 26, 2017) at 5, available at https://www.nrc.gov/reading-rm/doc-collections/commission/slides/2017/20170426/reister-20170426.pdf ("Much progress has been made to fill knowledge gaps … No generic technical show stoppers to long-term operation have been identified … Research continues to improve understanding and reduce uncertainties.")

[22] The EPRI Long Term Operations Program is also described in the LWRS Program Plan at 9, and DOE's coordination with EPRI is discussed throughout the plan.

> Our research for SLR is built on EPRI's living issue management programs. This approach encompasses decades of research on reactor pressure vessels, metals, concrete, and electrical cables[, a] former process to review and prioritize our research needs, the collaboration with the Department of Energy, NRC Research and international research partners, coordination under NEI Initiative 03-08 – 03-08 is the industry standard for inspection assessment and sharing of information from the Aging Management Programs; and technology transfer, which includes supporting the lead plants.
>
> The technical basis for the reports are and will continue to be updated based on the research findings, operating experience and inspection results.

Id. at 11.

Also at the briefing, the NRC Staff explained,

> [S]ince that [2014] SRM, the staff has made progress in conducting research to resolve the key technical issues.
>
> This progress has been accomplished through a staff research coordination with DOE and EPRI through deep-dive meetings and other meetings on electrical cable aging, concrete degradation, and vessel internals.
>
> *The progress resulted in enhanced aging management programs which are addressed in the subsequent license renewal guidance documents*.

Id. at 73 (emphasis added).

> [W]e have confidence that the framework used for license renewal remains sound and is sufficient to facilitate successful subsequent license renewal application reviews.

Id. at 78. Further, the NRC Staff stated that "Data and knowledge from near-term and longer term confirmatory research will be obtained to augment SLR guidance as needed." *Id.* at 73. Indeed, the NRC Staff has stated that it will continue to update license renewal guidance on a periodic basis, and the Commission has directed the Staff to do so as needed.[23]

[23] SECY-14-0016 – Ongoing Staff Activities to Assess Regulatory Considerations for Power Reactor Subsequent License Renewal (Jan. 31, 2014), Encl. 1 at 2, available at ADAMS Accession No. ML14050A306 ("SECY-14-0016"); Staff Requirements – SECY-14-0016 – Ongoing Staff Activities to Assess Regulatory Considerations for Power Reactor Subsequent License Renewal (Aug. 29, 2014) at 1, available at ADAMS Accession No. ML14241A578.

In short, research supporting aging management is a continuous process coordinated by NRC, DOE and EPRI; research on the EMDA issues has been used to develop the enhanced aging management programs in the GALL-SLR Report; and the NRC Staff will continue to update the GALL-SLR Report based both on near-term and long-term research. Beyond Nuclear does not provide any information or explanation indicating why continued evaluation of NRC-coordinated research cannot be relied upon to address any regulatory uncertainty. Nor does Beyond Nuclear identify, discuss or challenge the adequacy of enhanced AMPs in the GALL-SLR Report and the SLRA addressing the EMDA issues.

In sum, Beyond Nuclear does not provide any basis to challenge the continuous robust evaluation of OE and AMP effectiveness that includes information from multiple sources, or the NRC regulatory process that coordinates research with DOE and EPRI and adjusts NRC guidance as needed. By focusing (speculatively) only on just one source of OE (U.S. industry OE), Beyond Nuclear fails to demonstrate any genuine concern regarding the sufficiency of the entire program.

c. Contention 1 Is Inadmissible Because It Is Based On Vague Speculation

Last but not least, Contention 1 is inadmissible because it is founded on vague speculation that perhaps some problem might exist at some time in the future. Beyond Nuclear provides no showing of any immediate or concrete concern. Even if other sources of OE were discounted, Beyond Nuclear has not shown that projected plant closures will reduce industry OE to a point where it is no longer capable of providing meaningful data. In fact, the only specific example in Mr. Lochbaum's report shows exactly the opposite. Figure 3 of Mr. Lochbaum's report shows the fluence of the U.S. BWR fleet projected at 80 years. Lochbaum Report at 36.

As that figure shows, there are numerous U.S. BWRs with greater projected fluence than Peach Bottom.

Moreover, there is no good reason for ignoring foreign units, and it is unclear why the relevant OE would be limited to BWRs. PWRs have higher fluence than BWRs,[24] and therefore would be the leading indicators regarding embrittlement of reactor vessels. Nor does Mr. Lochbaum provide any explanation why reactor vessel material properties are not adequately assured through periodic removal and testing of surveillance specimens.[25]

In short, Beyond Nuclear and Mr. Lochbaum provide nothing beyond conjecture that a licensee might not have sufficient OE at some point in the future. In essence, Beyond Nuclear's contention amounts to a claim that at some indefinite time in the future, perhaps there will no longer be sufficient operating reactors to provide industry OE; and perhaps gaps in knowledge will still exist that need to be filled; and perhaps (for some unexplained reason) plant-specific OE will not be sufficient to gauge the adequacy of AMPs; and perhaps confirmatory research will no longer be performed; and perhaps licensees would not adjust their programs at that time if it were necessary, and perhaps the NRC would not take any action (such as imposing additional requirements or conducting additional research). Such vague speculation is not sufficient to establish a material challenge to an application. *Palisades,* CLI-15-23, 82 N.R.C. at 330.

As the Commission has held, "[W]e cannot admit an issue for adjudication based on mere conjecture." *Consolidated Edison Co. of New York* (Indian Point, Units 1 and 2), CLI-01-19, 54 N.R.C. 109, 140 (2001). "Unsupported hypothetical theories or projections, even in the form of

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[24] 2017 Commission Briefing Tr. at 12. As discussed by DOE during this briefing, "The embrittlement of reactor pressure vessels has been generally understood and managed for many years. Our research is being conducted on test specimens that have undergone accelerated irradiation at test reactors and will soon include samples collected from a shutdown Zion plant." *Id.* at 8.

[25] *See id. See also* SLRA at B-118 to B-123 (Reactor Vessel Material Surveillance).

an affidavit, will not support invocation of the hearing process." *Power Authority of the State of New York* (James A. FitzPatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-00-22, 52 N.R.C. 266, 315 (2000).[26] Moreover, "[t]he Commission is particularly reluctant to engage in prognostication of the impact of changes . . . that . . . may occur years in the future." *Fitzpatrick,* CLI-00-22, 52 N.R.C. at 315.

For all of these reasons, Contention 1 is inadmissible.

2. Contention 2 Is Inadmissible

Contention 2 is inadmissible because it impermissibly challenges the NRC rules and is therefore neither within the scope of the proceeding, as required by 10 C.F.R. § 2.309(f)(1)(iii), nor material to the findings that the NRC must make, as required by 10 C.F.R. § 2.309(f)(1)(iv). The gravamen of Contention 2 is that Exelon's ER violates the National Environmental Policy Act ("NEPA") and 10 C.F.R. § 51.53(c)(2) by failing to address the risk of design-basis accidents posed by operating aging reactor equipment. This contention impermissibly challenges 10 C.F.R. Part 51, Appendix B, Table B-1, which codifies the NRC's finding in the GEIS that "the environmental impacts of design-basis accidents are of small significance for all plants." To extent Contention 2 might be construed as applying to severe-accident risk,[27] it would also impermissibly challenge the finding in Table B-1 that "[t]he probability-weighted consequences of atmospheric releases, fallout onto open bodies of water, releases to groundwater, and societal and economic impacts from severe accidents are small for all plants." Exelon's ER incorporates

[26] The Commission "expect[s] [a] petitioner to present 'well-defined' issues, not issues based on 'little more than guesswork.'" *Palisades,* CLI-15-23, 82 N.R.C. at 326. Neither mere speculation nor bare or conclusory assertions, even by an expert, suffices to allow the admission of a proposed contention. *See USEC*, CLI-06-10, 63 N.R.C. at 472; *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 N.R.C. 195, 203 (2003).

[27] Contention 2 appears limited to design basis accidents. *See* Pet. at 7, 11.

these findings by reference. *See* ER at 4-69, 4-70. Any challenge to these generic findings codified in the NRC rules is barred by 10 C.F.R. § 2.335.

Beyond Nuclear incorrectly argues that Exelon may not rely on the Commission's Category 1 findings, because 10 C.F.R. § 51.53(c)(3) applies only to applicants seeking an initial renewed license. Pet. at 7, 11. This argument ignores Appendix B to 10 C.F.R. Part 51, which codifies the Commission's generic findings on environmental issues associated with granting a renewed operating license. Appendix B to 10 C.F.R. Part 51 is not limited to an initial renewal application. To the contrary, it explicitly states that Table B-1 (containing the codified findings) "represents the analysis of the environmental impacts associated with renewal of ***any*** operating license." 10 C.F.R. Part 51, App. B, introductory paragraph (emphasis added). Beyond Nuclear's argument also ignores the NRC rules at 10 C.F.R. § 51.71(d) and 10 C.F.R. § 51.95(c), which provide that the NRC's environmental impact statement shall rely on and integrate the conclusions in the GEIS for issues designated as Category 1 in Appendix B to 10 C.F.R. Part 51. These provisions in the NRC's rules are also not limited to the environmental impact statements for initial license renewals. Obviously, an environmental report should have the same scope as the NRC's environmental impact statement, as the purpose of the environmental report is to assist the NRC in preparing the environmental impact statement. Because 10 C.F.R. § 51.71(d) and 10 C.F.R. § 51.95(c) direct the NRC Staff to rely on Category 1 findings, any contention asserting that Category 1 findings must be reanalyzed is not only an impermissible challenge to these rules but also inadmissible as not material to the findings that the NRC must make. *See* 10 C.F.R. § 2.309(f)(1)(iv).

Further, while 10 C.F.R. § 51.53(c)(3) may be silent on the contents of an environmental report for a subsequent license renewal application, it does not preclude such an environmental

report from incorporating the NRC's codified findings on Category 1 issues. Indeed, 10 C.F.R. § 51.53(a) explicitly states that any environmental report may incorporate by reference information contained in NRC Staff-prepared generic environmental impact statements. Nor should 10 C.F.R. § 51.53(c)(3) be interpreted as implying that an applicant for subsequent license renewal may not rely on codified findings on Category 1 issues.

> It is a "fundamental canon of statutory construction that the words of a statute must be read in their context and with a view to their place in the overall statutory scheme." *Davis v. Michigan Dept. of Treasury*, 489 U.S. 803, 809 (1989). A court must therefore interpret the statute "as a symmetrical and coherent regulatory scheme," *Gustafson v. Alloyd Co.*, 513 U.S. 561, 569 (1995), and "fit, if possible, all parts into an harmonious whole," *FTC v. Mandel Brothers, Inc.*, 359 U.S. 385, 389 (1959).

FDA v. Brown & Williamson, 529 U.S. 120, 133 (2000). Thus, under this fundamental canon of statutory construction (equally applicable to regulatory construction), 10 C.F.R. § 51.53(c)(3) must be interpreted in a manner consistent with 10 C.F.R. Part 51, Appendix B (which applies the NRC's generic findings to renewal of *any* operating license) and 10 C.F.R. § 51.71(d) and 10 C.F.R. § 51.95(c) (which require the NRC's environmental impact statement to rely on the Category 1 findings). Consequently, 10 C.F.R. § 51.53(c)(3) cannot be interpreted as precluding a subsequent license renewal applicant from incorporating and relying on the Category 1 determinations, or opening those codified findings to challenge.

Nor is Beyond Nuclear's interpretation supported by its discussion of the rulemaking history. Beyond Nuclear relies solely on a statement in the supplemental information published with the 1991 proposed rule that "the part 51 amendments apply to one renewal of the initial license for up to 20-years beyond the expiration of the initial license." Pet. at 11, *citing* Proposed Rule, Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 56 Fed. Reg. 47,016, 47,017 (Sept. 17, 1991). The statement of considerations for the final rule did not

include this statement. *See* Final Rule, Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. 28,467 (June 5, 1996). Nor were the provisions of the final rule the same as those initially proposed. Instead, the Commission made several changes in the final rule that for all intents and purposes eliminated the need to limit the applicability of the rule to an initial application. These changes included (1) committing to review the material in Appendix B of Part 51 (i.e., the codified generic findings) on a 10-year cycle and update it if necessary (*id.* at 28,468, 28,490); (2) preparing a supplemental environmental impact statement (rather than an environmental assessment as originally proposed) for each license renewal application, as a supplement to the GEIS and addressing public comments (*id.* at 28,468, 28,470-71); and (3) providing a framework in each license renewal proceeding for consideration of new and significant information that might alter the conclusions on Category 1 issues (*id.*).[28]

Moreover, the NRC amended the license renewal provisions in Part 51 (including the generic findings codified in Appendix B) in 2013, and the Statement of Considerations for the 2013 amendments contains no statement indicating that the generic findings in Appendix B or the scope of environmental review in 10 C.F.R. §§ 51.71(d) and 51.95(c) are in any way limited to initial license renewal proceedings. *See* Revisions to Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 78 Fed. Reg. 37,282 (June 20, 2013). To the contrary, the 2013 amendments codified findings from the 2013 GEIS applicable to subsequent license renewal, as discussed further below.[29] In addition, the regulatory analysis referenced in the statement of considerations (78 Fed. Reg. at 37,314, 37,316) and evaluating the benefit of the

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[28] The provisions in 10 C.F.R. §§ 51.71(d) and 51.95(c) governing the scope of the NRC's draft and final supplemental environmental impact statements, and requiring reliance on Category 1 findings, were also added as part of the final rule, and therefore were not among the "Part 51 amendments" in Beyond Nuclear's quotation from the earlier proposed rule.

[29] *See infra* text accompanying notes 32-33.

2013 final rule indicates that the 2013 amendments are intended to apply to second license renewal applications. *See* Regulatory Analysis, Final Rule Revisions to 10 CFR Part 51, Environmental Review for Renewal of Nuclear Power Plant Operating Licenses (June 20, 2013) at 25 (ADAMS Accession No. ML13029A471) ("The NRC estimates that a total of 27 license renewal applications (including applications for a second license renewal) will be received in the 9 years following the compliance date of the rule.").[30] The NRC's scoping report for the update to the GEIS also stated: "The NRC's current plan is to apply the revised GEIS to *all* license renewal applications submitted after the date the Record of Decision for the revised GEIS is printed in the Federal Register."[31]

There is also no merit to Beyond Nuclear's suggestion that the GEIS does not apply to a second license renewal term. *See* Pet. at 11-12. At the outset, any such argument is an attack on the findings codified in Appendix B to 10 C.F.R. Part 51 and the provisions on treatment of Category 1 findings in 10 C.F.R. § 51.71(d) and 10 C.F.R. § 51.95(c). Such a challenge to the NRC rules is barred by 10 C.F.R. § 2.335(a), except through a petition for waiver of the rules supported by an affidavit (demonstrating with respect to the particular proceeding that the application of the rules would not serve the purposes for which they were adopted), or through a

[30] Shortly after the completion of 2013 rulemaking, and reinforcing the understanding of its intent, the NRC Staff informed the Commission that in preparation of second license renewal applications, "[t]he Staff does not recommend updating the environmental regulatory framework under 10 CFR Part 51 . . . , because environmental issues can be adequately addressed by the existing GEIS and through future GEIS revisions." SECY-14-0016, at 5.

[31] Environmental Impact Statement Scoping Process, Summary Report, Update of the Generic Environmental Impact Statement for License Renewal of Nuclear Plants (May 2009) at 67, available at ADAMS Accession No. ML082960910 (emphasis added). This scoping summary report was referenced in the proposed rule to update the Part 51 provisions on license renewal. *See Revisions to Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, Proposed Rule*, 74 Fed. Reg. 38,117, 38,119 (July 31, 2009). In addition, the Statement of Considerations for the final rule states that the proposed amendments to Part 51 were based on consideration of the comments received during the public scoping process. 78 Fed. Reg. at 37,284.

petition for rulemaking (if challenges to the rules are generic). Beyond Nuclear has submitted no such petition.

In addition, Beyond Nuclear's assertion mischaracterizes both the GEIS as originally issued in 1996 (NUREG-1437, Rev. 0, available at ADAMS Accession No. ML040690705, and hereinafter referred to as the "1996 GEIS") and the GEIS as revised in 2013 (NUREG-1437, Rev. 1). Beyond Nuclear states that the 1996 GEIS describes the "proposed action" addressed by the GEIS as allowing nuclear power plants to operate "for a maximum of 20 years past the terms of their original 40-year operating licenses." Pet. at 11-12 (citing 1996 GEIS at 2-28 to 2-29). The cited statement in the 1996 GEIS is describing the license renewal rule in 10 C.F.R. Part 54, and states "Under the license renewal rule (10 CFR Part 54), nuclear power plant licensees would be allowed to operate their plants for a maximum of 20 years past the terms of their original 40-year operating licenses provided that certain requirements are met. . . ." Section 1.2 of the 1996 GEIS, "Renewal of a Plant Operating License – the Proposed Federal Action" states "Operating licenses may be renewed for up to 20 years beyond the 40-year term of the initial license. *No limit on the number of renewals is specified.*" 1996 GEIS at 1-1. Section 1.3 of the 1996 GEIS states that "[t]he purpose and need for the proposed action (***renewal of an operating license***) is to provide an option that allows for power generation capability beyond the term of a ***current*** nuclear power plant operating license. . . ." *Id.* at 1-2. More importantly, Beyond Nuclear does not explain why the assessment of the incremental environmental impacts for an additional 20-year period of extended operation would be any different in a first or second renewal period.

Moreover, Beyond Nuclear ignores the description of the proposed action in the 2013 GEIS. The 2013 GEIS states that "[t]he proposed action is the renewal of commercial nuclear

plant operating licenses." NUREG-1437, Rev. 1, at S-3. *See also id.* at 1-3 ("The Proposed Action [-] To renew commercial nuclear power plant operating licenses"). The purpose and need of the proposed action is to provide an option to continue plant operations "*beyond the current licensing term*." *Id.* at S-3, 1-3 (emphasis added). "The decisions to be supported by the GEIS are whether or not to renew the operating licenses of individual commercial nuclear power plants for an additional 20 years." *Id.* at 1-7. The 2013 GEIS observes that "[t]here are no specific limitations in the Atomic Energy Act or the NRC's regulations restricting the number of times a license may be renewed." *Id.* at S-1. And the 2013 GEIS clearly indicates that it assesses impacts for a 20-year period beyond the "*current license term*." *See id.* at S-4 ("The GEIS documents the results of the systematic approach NRC used to evaluate the environmental consequences of renewing the licenses of commercial nuclear power plants and operating the plants for an additional 20 years *beyond the current license term*.") (emphasis added). *See also id.* at 1-2 ("The GEIS for license renewal of nuclear power plants assesses the environmental impacts that could be associated with license renewal and an additional 20 years of power plant operation.")

In addition, the 2013 GEIS states that the proposed action includes the activities associated with the "license renewal term" (*id.* at 4-2), and this term is used throughout the GEIS in assessing the impacts of these activities,[32] as well as in various impact findings codified in Table B-1. The 2013 GEIS explicitly defines the "license renewal term" as "[t]hat period of time

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[32] As an example relevant to Beyond Nuclear's contention, the finding in the 2013 GEIS on the impacts of design basis accidents states:

> The environmental impacts of design-basis accidents are SMALL for all nuclear plants. Due to the requirements for nuclear plants to maintain their licensing basis and implement aging management programs during the license renewal term, the environmental impacts *during a license renewal term* should not differ significantly from those calculated for the design-basis accident assessments conducted as part of the initial plant licensing process. This is a Category 1 issue.

NUREG-1437, Rev. 1, at S-17 (emphasis added).

past the original *or current license term* for which the renewed license is in force." NUREG-1437, Rev. 1, at 7-27 (emphasis added).[33] Thus, the 2013 GEIS explicitly evaluates the environmental impacts associated with a 20-year period of extended operation, regardless of whether this period follows the original license or a current renewed license; and the 2013 revisions to the Part 51 rules codify in Table B-1 the findings from the 2013 GEIS on the impacts associated with the "license renewal term."

Consequently, Beyond Nuclear's assertions that the 2013 GEIS does not expand the temporal scope of the environmental analysis and simply reviews and reevaluates the findings in the 1996 GEIS (Pet. at 12) is specious. The 2013 GEIS clearly and explicitly assesses the impacts of operating a nuclear plant for an additional 20 years beyond its current license term. Further, the 2013 GEIS took a hard look at these impacts.

> This GEIS reviews and reevaluates the issues and findings of the 1996 GEIS in compliance with the requirement to review the material in Appendix B to Subpart A of 10 CFR Part 51 and update it on a 10-year cycle, if necessary. Lessons learned and knowledge gained during previous license renewal reviews provided a significant source of new information for this review. Public comments received during previous license renewal environmental reviews were re-examined to validate existing environmental issues and identify new ones. Since 1996, over 40 commercial nuclear power plants have undergone a license renewal environmental review. The purpose of the review for this GEIS was to determine if the findings presented in the 1996 GEIS remain valid. In doing so, the NRC considered the need to modify, add, group, or delete any of the 92 environmental impact issues evaluated in the 1996 GEIS. In addition, new research, findings, and other information were considered when the significance of impacts associated with license renewal was being evaluated.

NUREG-1437, Rev. 1, at 1-7. Thus, Beyond Nuclear's attempt to dismiss the 2013 GEIS is baseless.

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[33] This same definition was included in the draft revision to the GEIS. *See* NUREG-1437, Rev. 1, Draft Report for Comment (July 2009), Vol. 1 at 7-26, available at ADAMS Accession No. ML091770049.

Beyond Nuclear makes a number of additional assertions relating to Contention 2, but they all appear focused on assessing accident risk and therefore impermissibly challenge the NRC rules. Beyond Nuclear alleges that Exelon violates NEPA by failing to review and evaluate the existing body of literature regarding reactor aging phenomena and their effects beyond 60 years, but explains "there can be no question that accident risk posed by operating Peach Bottom for an additional twenty years is a relevant environmental consideration." Pet. at 7. Beyond Nuclear does not identify any other environmental risk requiring evaluation. In addition, *Pacific Gas & Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 N.R.C. 427, 443 (2001),[34] which Beyond Nuclear cites in support of this allegation, addressed whether additional information on seismic risk was necessary to support the severe accident mitigation alternatives ("SAMA") analysis. A SAMA analysis is only required in license renewal proceedings if one has not been previously performed. *See* 10 C.F.R. Part 51, App. B, Table B-1 ("The probability-weighted consequences of atmospheric releases, fallout onto open bodies of water, releases to groundwater, and societal and economic impacts from severe accidents are small for all plants. However, alternatives to mitigate severe accidents must be considered for all plants that have not considered such alternatives."); *see also* 10 C.F.R. § 51.53(c)(3)(ii)(L). As the Commission has explained, for plants for which SAMAs were already considered in an environmental impact statement (as they were in the Peach Bottom initial license renewal proceeding[35]), "the SAMA issue has been resolved by rule." *Exelon Generation Co., LLC* (Limerick Generating Station, Units 1 and 2), CLI-12-19, 76 N.R.C. 377, 386 (2012).

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[34] Beyond Nuclear incorrectly cites this case as involving the Diablo Canyon Nuclear Power Plant Independent Spent Fuel Storage Installation. *See* Pet. at 7.

[35] *See* NUREG-1437, Supp. 10, Generic Environmental Impact Statement for License Renewal of Nuclear Plants: Regarding Peach Bottom Atomic Power Station, Units 2 and 3 - Final Report (Jan. 2003), Section 5.2.

Similarly, Beyond Nuclear does not identify any environmental risk beyond accident risk pertaining to its claim that Exelon's ER must address the environmental implications of reactor aging issues identified in SECY-14-0016 or the significance of allegedly declining operating experience discussed in Mr. Lochbaum's report. *See* Pet. at 7-8. Beyond Nuclear provides no information even suggesting that its allegations pertain to or are material to any Category 2 issue, and thus fail to provide any basis to dispute, or information demonstrating a genuine material dispute with, the assessment of Category 2 issues.

Moreover, even if accident risk were not resolved generically (which it is), Contention 2 would still be inadmissible, because Beyond Nuclear has provided no information indicating that the NRC Staff's previous identification of research topics or the vague and speculative concern regarding the sufficiency of future operating experience would result in any significant increase in the consequences of design basis accidents (or the probability-weighted consequences of severe accidents). Beyond Nuclear provides no basis to dispute the assessment in the 2013 GEIS that additional experience has contributed to improved plant performance (e.g., as measured by trends in plant-specific performance indicators), a reduction in operating events, and lessons learned that improve the safety of all of the operating nuclear power plants. NUREG-1437, Rev. 1, Vol. 3, App. E at E-3. As the GEIS states, "the performance and safety record of nuclear power plants operating in the United States continues to improve. *This is also confirmed by analysis which indicates that, in many cases, improved plant performance and design features have resulted in reductions in initiating event frequency, core damage frequency, and containment failure frequency*." *Id*.[36] Beyond Nuclear also provides no information disputing

[36] The NRC's more recent Accident Sequence Precursor Program 2017 Annual Report also shows over the last decade statistically significant decreasing trends for all precursors, including precursors due to degraded conditions. Memorandum from M. Check, Director, Division of Risk Analysis, to M. Weber, Director, NRR,

the observation in the ER that estimated core damage frequencies from internal events have followed a decreasing trend at both Peach Bottom units. ER at 4-70.

To demonstrate a genuine, material dispute, Beyond Nuclear must present some plausible support or argument that such consequences are significant enough to require inclusion in the ER, as NEPA requires discussion of the impacts of a proposed action that significantly affect the environment (42 U.S.C. § 4332(2)(C)(i)), and 10 C.F.R. § 51.45(b)(1) only requires impacts to be discussed in proportion to their significance.[37] If there are alleged errors or omission in the environmental analysis, it is the petitioner's burden to show their significance and materiality. *Exelon Generating Co.* (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 N.R.C. 801, 811 (2005). "NEPA is, after all, governed by a 'rule of reason,' which frees the agency from pursuing unnecessary or fruitless inquiries." *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 N.R.C. 125, 139 (2004).

Here, Beyond Nuclear has not made any showing that accident risk has or will increase as Peach Bottom continues to operate. It has not pointed to any data suggesting any increase in accident risk or consequences. Therefore, in addition to rejecting Contention 2 as an impermissible challenge to the NRC rules generically assessing accident risk, the Board should also rule that Beyond Nuclear has failed to demonstrate any genuine material dispute with the assessment of accident risk in the GEIS, which the ER has incorporated by reference. In sum,

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Transmittal of the Accident Sequence Precursor Program 2017 Annual Report (June 19, 2018), available at ADAMS Accession No. ML18130A855. "The ASP Program results also continue to show that licensee risk management initiatives are effective in helping to maintain a flat or decreasing risk profile for the industry." *Id.*

[37] *See, e.g., Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LPB-09-10, 70 N.R.C. 51, 105 (2009) (rejecting a contention because petitioners failed to present any plausible support or argument that impacts would be significant enough to require inclusion in the ER); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 6 and 7), LBP-11-6, 73 N.R.C. 149, 198 (2011) (rejecting a contention because petitioners did not explain why impacts would be so potentially significant as to warrant analysis in the ER).

even if a challenge to this assessment were permissible (which it is not), Contention 2 would be inadmissible for lack of basis, failure to demonstrate an issue material to the findings that the NRC must make, and failure to demonstrate a genuine dispute with the application on a material issue, as required by 10 C.F.R. §§ 2.309(f)(1)(ii), (iv), and (iv).

For all of these reasons, Contention 2 should be rejected.

IV. SELECTION OF HEARING PROCEDURES

Commission rules require that the Atomic Safety and Licensing Board designated to rule on the Petition "determine and identify the specific hearing procedures to be used for the proceeding" pursuant to 10 C.F.R. §§ 2.310 (a)-(h). 10 C.F.R. § 2.310. The regulations are explicit that "proceedings for the . . . grant . . . of licenses . . . subject to [10 C.F.R. Part 54] may be conducted under the procedures of subpart L." *Id.* at § 2.310(a). The regulations permit the presiding officer to use the procedures in 10 C.F.R. Part 2, Subpart G ("Subpart G") in certain circumstances. *Id*. at § 2.310(d). It is the proponent of the contentions, however, who has the burden of demonstrating "by reference to the contention and the bases provided and the specific procedures in subpart G of this part, that resolution of the contention necessitates resolution of material issues of fact which may be best determined through the use of the identified procedures." *Id.* at § 2.309(g). Petitioners did not address the selection of hearing procedures in its Petition and therefore have not shown that Subpart G procedures should be used in this proceeding. Accordingly, any hearing arising from the Petition should be governed by the procedures of Subpart L.

V. CONCLUSION

For the reasons stated above, the Petition should be denied.

Respectfully submitted,

/signed electronically by David Lewis/

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December 14, 2018

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of	)	
	)	
Exelon Generation Company, LLC	)	Docket Nos. 50-277-SLR
	)	50-278-SLR
Peach Bottom Atomic Power Station,	)	
Units 2 and 3	)	

CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing Exelon's Answer Opposing Beyond Nuclear Inc's Hearing Request and Petition to Intervene has been served through the E-Filing system on the participants in the above-captioned proceeding this 14th day of December, 2018.

/signed electronically by David Lewis/
David R. Lewis