

December 26, 2023

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

ENERGY HARBOR NUCLEAR CORP.

(Perry Nuclear Power Plant, Unit 1)

Docket No. 50-440-LR

**NRC STAFF'S ANSWER OPPOSING OHIO NUCLEAR-FREE NETWORK AND
BEYOND NUCLEAR HEARING REQUEST**

INTRODUCTION

In accordance with 10 C.F.R. § 2.309(i), the U.S. Nuclear Regulatory Commission Staff (the Staff) files its answer to the hearing request and petition to intervene (Petition) filed by Ohio Nuclear-Free Network (ONFN) and Beyond Nuclear (collectively, the Petitioners),¹ concerning the license renewal application (Application) submitted by Energy Harbor Nuclear Corp. (Energy Harbor, the Applicant), for Perry Nuclear Power Plant, Unit 1 (PNPP).² ONFN and Beyond Nuclear claim representational standing on behalf of their members and submit three contentions in the Petition. The Petitioners have shown standing as required by NRC

¹ Petition of Ohio Nuclear-Free Network and Beyond Nuclear for Leave to Intervene in Perry Nuclear Power Plant License Extension Proceeding, and Request for Hearing (Nov. 28, 2023) (ADAMS Accession No. ML23332A785) (Petition). The Petitioners filed an additional document containing multiple exhibits (Appendix to Petition) (ADAMS Accession No. ML23332A786). Per the Licensing Board's Order (Dec. 07, 2023, as amended) (ADAMS Accession No. ML23341A146) the Licensing Board indicated that the term "exhibits" should be reserved for material submitted as part of an evidentiary hearing. However, the Board did not require the Petitioners to refile the document identified as "exhibits". To avoid confusion in referencing and for compliance with the Board order, the NRC staff will refer to the "exhibits" filed with the Petition as "enclosures," while keeping the Petitioners' letter designations for these documents.

² Perry Nuclear Power Plant, Unit 1, Docket Number 50-440, Facility Operating License Number NPF-58, License Renewal Application (ADAMS Accession No. ML23184A081) (Application). The Application includes an Environmental Report (ER) as Appendix E.

procedural regulations but have not submitted an admissible contention, and the Petition must therefore be rejected.

BACKGROUND

PNPP is a boiling water reactor designed by General Electric and located in Perry, OH, approximately 35 miles northeast of the Cleveland, OH area.³ The current operating license for PNPP expires on November 7, 2026, and has not been renewed previously.⁴ By letter dated July 3, 2023, Energy Harbor applied to renew the PNPP operating license for an additional 20 years, which, if approved, would extend the license to November 7, 2046.⁵

On September 29, 2023, the NRC published a notice of opportunity to request a hearing and to petition for leave to intervene on the Energy Harbor Application.⁶ On November 28, 2023, the Petitioners submitted their petition to intervene.⁷ The Petitioners assert representational standing on behalf of their members and submit three contentions.⁸

DISCUSSION

Under the Commission's Rules of Practice in 10 C.F.R. Part 2, "Any person whose interests may be affected by a proceeding and who desires to participate as a party must file a written request for hearing and a specification of the contentions which the person seeks to have litigated in the hearing."⁹ The presiding officer will grant the petition if it determines that the

³ Application at 1-11.

⁴ *Id.* at 1-1.

⁵ Application, Cover Letter at 1.

⁶ Energy Harbor LLC; Perry Nuclear Power Plant, License renewal application; opportunity to request a hearing and to petition for leave to intervene, 88 Fed. Reg. 67,373 (Sept. 29, 2023).

⁷ Petition at 1.

⁸ *Id.* at 1-31.

⁹ 10 C.F.R. § 2.309(a). "Person" is defined in 10 C.F.R. § 2.4, as "(1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, government agency other than the Commission . . . , any State or any political subdivision of, or any political entity within a State,

petitioner has standing under 10 C.F.R. § 2.309(d) and has proposed at least one admissible contention that meets the requirements of 10 C.F.R. § 2.309(f).¹⁰ In this case, ONFN and Beyond Nuclear have demonstrated standing to intervene, but have not submitted an admissible contention, and the Petition must therefore be rejected.

I. Standing

A. Requirements for Standing

Under the general standing requirements set forth in 10 C.F.R. § 2.309(d)(1), a petitioner must state:

- (i) The name, address, and telephone number of the petitioner;
- (ii) The nature of the petitioner's right under the Act to be made a party to the proceeding;
- (iii) The nature and extent of the petitioner's property, financial, or other interest in the proceeding; and
- (iv) The possible effect of any decision or order that may be issued in the proceeding on the petitioner's interest.¹¹

NRC regulations state that in ruling on a petition, the presiding officer "must determine, among other things, whether the petitioner has an interest affected by the proceeding considering the factors enumerated in" § 2.309(d)(1).¹²

As the Commission has observed, the NRC has "long applied contemporaneous 'judicial concepts of standing,'" which require "an actual or threatened injury that is fairly traceable to the challenged action, is likely to be redressed by a favorable decision, and arguably falls within the

any foreign government or nation . . . , or other entity; and (2) any legal successor, representative, agent, or agency of the foregoing."

¹⁰ 10 C.F.R. § 2.309(d) and (f).

¹¹ 10 C.F.R. § 2.309(d)(1).

¹² 10 C.F.R. § 2.309(d)(2).

'zone of interests' protected by the Atomic Energy Act of 1954, as amended (AEA)."¹³ While the Commission generally requires the elements of standing to be pled with specificity, standing to intervene has been found to exist in construction permit and operating license proceedings based upon a "proximity" presumption.¹⁴ In such proceedings, standing is presumed for persons who reside in, or have frequent contact with, the zone of possible harm around the nuclear reactor.¹⁵ In practice, the Commission has found standing based on the proximity presumption for persons who reside within approximately 50 miles (80 km) of the facility.¹⁶

An organization seeking to intervene "must satisfy the same standing requirements as an individual seeking to intervene."¹⁷ The organization may establish standing based on organizational standing (showing that its own organizational interests could be adversely affected by the proceeding) or representational standing (based on the standing of its members).¹⁸ Where an organization seeks to establish "representational standing," the organization must demonstrate that "at least one of its members may be affected" by the proceeding and that these members, who must be identified by name, have authorized the organization to represent them and to request a hearing on their behalf.¹⁹ Further, the "member

¹³ *El Paso Electric Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-20-7, 91 NRC 225, 230 (Sept. 15, 2020) (quoting *Calvert Cliffs 3 Nuclear Project, LLC and UniStar Nuclear Operating Servs., LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 915 (2009)).

¹⁴ See, e.g., *Calvert Cliffs*, CLI-09-20, 70 NRC at 915-17 (quoting *Cleveland Electric Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 92 (1993)). Licensing boards have routinely applied the proximity presumption in reactor licensing renewal proceedings. See, e.g., *Nextera Energy Point Beach, L.L.C.* (Point Beach Nuclear Plant, Units 1 & 2), LBP-21-05, 94 NRC 1, 19 (2021) (citing *Calvert Cliffs*, CLI-09-20, 70 NRC at 915-918).

¹⁵ *Calvert Cliffs*, CLI-09-20, 70 NRC at 915.

¹⁶ *Id.* at 915-16.

¹⁷ *Palo Verde*, CLI-20-7, 91 NRC at 231.

¹⁸ *Id.*

¹⁹ *FirstEnergy Nuclear Operating Co. and FirstEnergy Nuclear Generation, LLC* (Beaver Valley Power Station, Units 1 and 2; Davis-Besse Nuclear Power Station, Unit 1; Perry Nuclear Power Plant, Unit 1),

seeking representation must qualify for standing in [their] own right; the interests that the representative organization seeks to protect must be germane to its purpose; and neither the asserted claim nor the requested relief must require an individual member to participate in the organization's legal action."²⁰

B. Ohio Nuclear-Free Network and Beyond Nuclear have satisfied their burden of demonstrating representational standing.

ONFN is an unincorporated organization that has existed for five years and is made up of about 60 members who are concerned about nuclear weapons, radioactive waste and the radioactive contamination of air, water, and soil, and that works to transition away from nuclear power and fossil fuels to renewables and energy efficiency.²¹ ONFN seeks to establish representational standing to intervene in this proceeding based on the individual standing of two of its members.²² The Petition includes signed and dated declarations from two ONFN members, Connie Kline and David Hughes.²³ Both declarations include the home addresses of the ONFN members and statements that they live within a 50-mile radius of PNPP.²⁴ Both ONFN members also state that they authorize ONFN to represent them in this proceeding.²⁵

These declarations demonstrate that at least one member of ONFN would have standing to intervene in their own right based on the proximity presumption. In keeping with Commission

CLI-20-5, 91 NRC 214, 220 (2020); *Consumers Energy Co.* (Palisades Nuclear Power Plant), CLI-07-18, 65 NRC 399, 409-10 (2007).

²⁰ *Beaver Valley*, CLI-20-5, 91 NRC at 220 (citing *Entergy Nuclear Operations, Inc. and Entergy Nuclear Palisades, LLC* (Palisades Nuclear Plant), CLI-08-19, 68 NRC 251, 258-59 (2008); *Private Fuel Storage, L.L.C.* (Indep. Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 323 (1999)).

²¹ Petition at 1-2.

²² *Id.* at 2-4; see also Petition, Appendix to Petition, Enclosure A (Nov. 21, 2023) (ADAMS Accession No. ML23332A786).

²³ Appendix to Petition, Enclosures B & C (Nov. 22, 2023).

²⁴ *Id.*

²⁵ *Id.*

case law, the interests that ONFN seeks to protect in this proceeding are germane to its purpose, and neither the asserted claim nor the requested relief require an individual member to participate in this proceeding.²⁶ For these reasons, ONFN has satisfied its burden of demonstrating representational standing.

Beyond Nuclear is not-for-profit public policy, research, education organization based in Takoma Park, Maryland that has over 12,000 members and advocates for the expansion of renewable energy to replace commercial nuclear power generation.²⁷ Beyond Nuclear seeks to establish representational standing to intervene in this proceeding based on the individual standing of one of its members.²⁸ The Petition includes a signed and dated declaration from one Beyond Nuclear member, Ronald O'Connell.²⁹ Mr. O'Connell's declaration includes his home address and a statement that he lives and farms within a 50-mile radius of PNPP.³⁰ Mr. O'Connell also states that he authorizes Beyond Nuclear to represent him in this proceeding.³¹

This declaration demonstrates that at least one member of Beyond Nuclear would have standing to intervene in his own right based on the proximity presumption. In keeping with Commission case law, the interests that Beyond Nuclear seeks to protect in this proceeding are germane to its purpose, and neither the asserted claim nor the requested relief require an individual member to participate in this proceeding.³² For these reasons, Beyond Nuclear has satisfied its burden of demonstrating representational standing.

²⁶ See *supra* n.20.

²⁷ Petition at 4.

²⁸ *Id.* at 4-6; see *also* Appendix to Petition, Enclosure D (Nov. 26, 2023).

²⁹ Appendix to Petition, Enclosure E (Nov. 21, 2023).

³⁰ *Id.*

³¹ *Id.*

³² See *supra* n.20.

II. Requirements for Contention Admissibility

The legal requirements governing the admissibility of contentions are set forth in 10 C.F.R. § 2.309(f)(1)-(2). Specifically, a petitioner must “set forth with particularity” the contentions that the petitioner seeks to raise and, for each contention, the petitioner must:

- (i) Provide a specific statement of the issue of law or fact to be raised or controverted;
- (ii) Provide a brief explanation of the basis for the contention;
- (iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;
- (iii) Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action involved in the proceeding;³³
- (iv) Provide a concise statement of the alleged facts or expert opinions that support the petitioner’s position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the petitioner intends to rely;³⁴ and
- (v) . . . [P]rovide sufficient information to show that a genuine dispute exists with the applicant or licensee on a material issue of law or fact. This information 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 supporting³⁵ reasons for the petitioner’s belief.³⁶

³³ “A dispute at issue is material if its resolution would make a difference in the outcome of the licensing proceeding.” *Holtec International* (Hi-STORE Consolidated Interim Storage Facility), CLI-20-4, 91 NRC 167, 190 (2020) (internal quotations omitted).

³⁴ See *USEC Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 457 (2006) (it is the petitioner’s responsibility to satisfy the basic contention admissibility requirements; boards should not have to search through a petition to “uncover” arguments and support for a contention, and “may not simply ‘infer’ unarticulated bases of contentions”); see also *Arizona Public Service Co., et. al.* (Palo Verde Nuclear Generating Station, Units 1, 2 and 3), CLI-91-12, 34 NRC 149, 155 (1991).

³⁵ Contentions cannot be based on speculation and must have “some reasonably specific factual or legal basis.” *Entergy Nuclear Vt. Yankee, LLC and Entergy Nuclear Operations, Inc.*, (Vermont Yankee Nuclear Power Station), CLI-15-20, 82 NRC 211, 221 (2015).

³⁶ To show that a genuine dispute exists, the contention “must include references to specific portions of the application that the petitioner disputes and the supporting reasons for each dispute,” and if the

Contentions “must be based on documents or other information available at the time the petition is to be filed, such as the application, supporting safety analysis report, environmental report or other supporting document filed by an applicant or licensee, or otherwise available to a petitioner.”³⁷ For environmental issues arising under the National Environmental Policy Act of 1969, as amended (NEPA), a petitioner must file contentions based on the environmental report (ER) included in the application.³⁸

A contention is inadmissible if it fails to satisfy any of the six pleading requirements in 10 C.F.R. § 2.309(f)(1).³⁹ The NRC’s regulations governing contention admissibility are “strict by design”⁴⁰ and intended to “focus litigation on concrete issues and result in a clearer and more focused record for decision.”⁴¹ Although a petitioner does not have to prove its contention at the admissibility stage,⁴² the contention admissibility standards are meant to afford hearings only to those who “proffer at least some minimal factual and legal foundation in support of their

petitioner believes that the application fails to contain information on a relevant matter, then “the contention must identify each failure and the supporting reasons for the petitioner’s belief.” *Exelon Generation Co., LLC*. (Peach Bottom Atomic Power Station, Units 2 and 3), CLI-20-11, 92 NRC 335, 342 (Nov. 12, 2020).

³⁷ 10 C.F.R. § 2.309(f)(2).

³⁸ 10 C.F.R. § 2.309(f)(2).

³⁹ *Entergy Nuclear Operations, Inc.* (Indian Point, Unit 2) CLI-16-5, 83 NRC 131, 136 (2016); *see also Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334-35 (1999) (the heightened contention admissibility rules are designed to preclude contentions “based on little more than speculation”).

⁴⁰ *Indian Point*, CLI-16-5, 83 NRC at 136 (citing *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001) and *South Carolina Electric & Gas Co. and South Carolina Public Service Authority* (Virgil C. Summer Nuclear Station, Units 2 and 3), CLI-10-1, 71 NRC 1, 7 (2010)). The Commission has stated 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.” *Changes to Adjudicatory Process*, 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004).

⁴¹ *See, e.g., Southern Nuclear Operating Co. Inc.* (Vogtle Electric Generating Plant, Unit 3) LBP-20-8, 92 NRC 23, 46 (Aug. 10, 2020) (quoting “*Changes to Adjudicatory Process*,” 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004)).

⁴² *Private Fuel Storage L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 139 (2004).

contentions.”⁴³ Furthermore, the Commission has also held that, absent a waiver, a contention must be rejected if it challenges applicable statutory requirements, regulations, or the basic structure of the Commission’s regulatory process.⁴⁴

Showing that a contention is within the scope of the proceeding, as required by 10 C.F.R. § 2.309(f)(1)(iii), is of particular importance for license renewals because NRC regulations set the scope of such proceedings. In general, the scope of a proceeding is defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board,⁴⁵ and any contention that falls outside the specified scope must be rejected.⁴⁶ As discussed in Sections III and IV below, NRC regulations in 10 C.F.R. Part 54 set the scope for license renewals, and Appendix B of 10 C.F.R. Part 51 contains additional provisions applicable to environmental reviews. These regulations must be considered when evaluating whether a contention falls within the scope of a proceeding as required by Section § 2.309(f)(1)(iii).

III. Scope of License Renewal Proceedings Under 10 C.F.R. Part 54

The Commission’s regulations in 10 C.F.R. Part 54 limit the scope of license renewal proceedings to those matters that must be considered for the license renewal application to be granted and that have not been addressed by rulemaking or on a generic basis.⁴⁷ Under 10

⁴³ *Pacific Gas & Electric Co.* (Diablo Canyon Power Plant Indep. Spent Fuel Storage Installation), CLI-08-1, 67 NRC 1, 8 (2008) (quoting *Oconee*, CLI-99-11, 49 NRC at 334).

⁴⁴ As set forth in 10 C.F.R. § 2.335(a), “no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding,” in the absence of a waiver petition granted by the Commission. Further, any contention that amounts to an attack on applicable statutory requirements or represents a challenge to the basic structure of the Commission’s regulatory process must be rejected. *Dominion Nuclear Conn.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 218 (2003).

⁴⁵ See *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-00-23, 52 NRC 327, 329 (2000).

⁴⁶ See *Pacific Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 435-36 (2011).

⁴⁷ *Amergen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 117-18 (2006); see also 10 C.F.R. § 54.29; *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 8-10 (2001).

C.F.R. § 54.29(a), when determining whether to grant a license renewal application, the Commission requires actions be identified that have been or will be taken with regard to:

- (1) managing the effects of aging during the period of extended operation on the functionality of structures and components that have been identified to require review under 10 C.F.R. § 54.21(a)(1); and
- (2) time-limited aging analyses that have been identified to require review under 10 C.F.R. § 54.21(c).⁴⁸

These actions must provide reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis,⁴⁹ and that any changes made to the plant's current licensing basis are "in accord with the Act [AEA] and the Commission's regulations."⁵⁰ Additionally, a renewed license may be issued if the Commission finds that "[a]ny applicable requirements of [Subpart A of 10 C.F.R. Part 51] have been satisfied" and "[a]ny matters raised under [10 C.F.R.] § 2.335 have been addressed."⁵¹

Adjudications on license renewal applications are bounded by the same rules and scope as the NRC's license renewal review.⁵² Under 10 C.F.R. Part 54, "the NRC conducts a technical review of the license renewal application to ensure that public health and safety requirements are satisfied."⁵³ However, the focus of NRC's license renewal safety review is on "plant systems, structures, and components for which current [regulatory] activities and requirements

⁴⁸ 10 C.F.R. § 54.29(a).

⁴⁹ The current licensing basis, as defined in 10 C.F.R. § 54.3, is "the set of NRC requirements applicable to a specific plant and a licensee's written commitments for ensuring compliance with and operation within applicable NRC requirements and the plant-specific design basis (including all modifications and additions to such commitments over the life of the license) that are docketed and in effect"

⁵⁰ 10 C.F.R. § 54.29(a).

⁵¹ 10 C.F.R. § 54.29(b)-(c).

⁵² *Turkey Point*, CLI-01-17, 54 NRC at 8 ("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.").

⁵³ *Id.* at 6.

may not be sufficient to manage the effects of aging in the period of extended operation.”⁵⁴ The Commission has found it generally unnecessary, in the license renewal stage, to review issues already monitored and reviewed in ongoing regulatory oversight processes.⁵⁵ Contentions falling outside the scope of the staff’s review are inadmissible and must be rejected.⁵⁶

IV. Environmental Reviews in License Renewal

Per 10 C.F.R. § 54.23, each license renewal application must include a supplement to the ER that complies with the requirements of Subpart A of 10 C.F.R. Part 51. The NRC has adopted the regulations in 10 C.F.R. Part 51 to implement the agency’s NEPA responsibilities, and 10 C.F.R. § 51.53(c) governs the contents of an applicant’s ER at the operating license renewal stage. Under 10 C.F.R. § 51.53(c)(2), an applicant is required to

discuss in [the environmental report] the environmental impacts of alternatives and any other matters described in § 51.45. The report is not required to include discussion of need for power or the economic costs and economic benefits of the proposed action or of alternatives to the proposed action except insofar as such costs and benefits are either essential for a determination regarding the inclusion of an alternative in the range of alternatives considered or relevant to mitigation. The environmental report need not discuss other issues not related to the environmental effects of the proposed action and the alternatives.⁵⁷

For all applicants seeking license renewal after June 30, 1995, 10 C.F.R. § 51.53(c)(3) requires further conditions and considerations.⁵⁸ Among these are that applicants are not required to include analyses of the environmental impacts of the license renewal issues identified in 10 C.F.R. Part 51, Appendix B, as “Category 1” issues, whereas they are required to

⁵⁴ *Id.* at 10 (quoting Nuclear Power Plant License Renewal; Revisions, 60 Fed. Reg. 22,461, 22,469 (May 8, 1995)).

⁵⁵ See, e.g., *Turkey Point*, CLI-01-17, 54 NRC at 8-10 (holding that “[i]ssues like emergency planning—which already are the focus of ongoing regulatory processes—do not come within the NRC’s safety review at the license renewal stage”).

⁵⁶ 10 C.F.R. § 2.309(f)(1)(iii); see, e.g., *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 567 (2005).

⁵⁷ 10 C.F.R. § 51.53(c)(2).

⁵⁸ 10 C.F.R. § 51.53(c)(3).

so include them for “Category 2” issues.⁵⁹ The regulations in 10 C.F.R. Part 51, Appendix B, are supported by a generic environmental impact statement (2013 GEIS), which can be found in NUREG-1437.⁶⁰ The 2013 GEIS identifies 78 environmental impact issues for license renewal, of which 59 are generic for all sites, 2 are uncategorized, and 17 are site-specific Category 2 issues.⁶¹ The 2013 GEIS addresses the generic environmental impacts of operating a plant for an additional 20 years that are common to all plants or to a specific subgroup of plants, and its findings are listed in Table B-1 of Appendix B to Part 51.⁶²

Guidance for license renewal applicants preparing an ER is found in Regulatory Guide (RG) 4.2, Supplement 1.⁶³ While a license renewal applicant is not required to reevaluate Category 1 issues in its ER, but instead may reference and adopt the Commission’s generic findings set forth in Appendix B to Part 51, under 10 C.F.R. § 51.53(c)(3)(iv) an applicant’s environmental report “must contain any new and significant information regarding the

⁵⁹ 10 C.F.R. § 51.53(c)(3)(i)-(ii).

⁶⁰ Generic Environmental Impact Statement for License Renewal of Nuclear Plants, NUREG-1437, Rev. 1, Vol 1 (2013) (ADAMS Accession No. ML13106A241) (2013 GEIS). A 2023 version of the GEIS is currently under development. While it is not yet available for use, the Staff has compared the impact levels discussed in this pleading with public drafts of the 2023 GEIS and confirmed that if the publicly available draft of the 2023 license renewal GEIS is approved as currently written, no changes to the relevant issue categories or impact levels are currently anticipated. On March 3, 2023, the NRC announced an opportunity for interested parties to submit comments on a proposed rule, a draft revised GEIS, and associated draft guidance. See *Renewing Nuclear Power Plant Operating Licenses—Environmental Review*, 88 Fed. Reg. 13,329 (proposed Mar. 3, 2023) (to be codified at 10 C.F.R. pt. 51).

With respect to the 2023 GEIS, the Commission has previously stated that “it has long been agency policy that Licensing Boards ‘should not accept in individual license proceedings contentions which are (or are about to become) the subject of general rulemaking by the Commission.’” *Oconee*, CLI-99-11, 49 NRC at 345. While the Staff’s views concerning the admissibility of the proffered contentions are based on the 2013 GEIS, to the extent the proposed contentions challenge findings that are the subject of the 2023 license renewal GEIS rulemaking, the Board should reject these contentions based on this Commission policy as well.

⁶¹ 2013 GEIS at Vol 1, 1-36.

⁶² *See id.*

⁶³ RG 4.2, Suppl. 1, Rev. 1, Preparation of Environmental Reports for Nuclear Power Plant License Renewal Applications (June 2013) (ADAMS Accession No. ML13067A354).

environmental impacts of license renewal of which the applicant is aware.” Thus, an applicant must provide a site-specific review of the Category 2 issues in its ER and must address any *new and significant* information that might render the Commission’s Category 1 determinations inapplicable in that proceeding.⁶⁴

The Staff’s license renewal environmental review is guided by the 2013 GEIS and the “Standard Review Plan for Environmental Review of Nuclear Power Plants—Operating License Renewal” (ESRP).⁶⁵ Like the Applicant, the NRC Staff is not required to address generic, Category 1 impacts in its site-specific environmental impact statement (EIS), which the Staff publishes as a supplement to the GEIS (SEIS). The Staff must, however, address any new and significant information of which it becomes aware that might affect either the generic or the site-specific findings in its draft or final SEIS.⁶⁶

Contentions raising environmental issues in a license renewal proceeding are limited to those issues that are affected by license renewal and have not been addressed by rulemaking or otherwise on a generic basis.⁶⁷ As the Commission has stated, Category 1 determinations “are not subject to site-specific review and thus fall beyond the scope of individual license

⁶⁴ See, e.g., *Exelon Generation Co., LLC* (Limerick Generating Station, Units 1 and 2), CLI-13-7, 78 NRC 199, 212-13 (2013); *Turkey Point*, CLI-01-17, 54 NRC 3 at 11-12; *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), *Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI-09-10, 69 NRC 521, 527 (2009).

⁶⁵ “Standard Review Plan for Environmental Review of Nuclear Power Plants—Operating License Renewal,” NUREG-1555, Supp. 1, Rev. 1 (2013) (ADAMS Accession No. ML13106A246) (ESRP).

⁶⁶ See, e.g., *Limerick*, CLI-13-7, 78 NRC at 216-17; *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-16-8, 83 NRC 417, 439 (2016). Following publication of a site-specific supplement to the GEIS, further supplementation is required only “if there are ‘significant new circumstances or information’ ... [that] paint[s] a dramatically different picture of impacts compared to the description of impacts in the EIS.” *Massachusetts v. NRC*, 708 F.3d at 68-69 (quoting *Town of Winthrop v. FAA*, 535 F.3d 1, 7, 12 (1st Cir. 2008)); accord, *Limerick*, CLI-13-7, 78 NRC at 211, 216-17.

⁶⁷ *Turkey Point*, CLI-01-17, 54 NRC at 11-12; see 10 C.F.R. § 51.53(c)(3)(i)-(ii).

renewal proceedings.”⁶⁸ Because these Category 1 determinations have been incorporated into a regulation, “the conclusions of that analysis may not be challenged in litigation unless the rule is waived.”⁶⁹ Accordingly, a contention challenging a Category 1 determination, even if based on new and significant information, can be admitted only if the Commission grants a waiver of its regulations according to the provisions of 10 C.F.R. § 2.335.⁷⁰

V. ONFN and Beyond Nuclear have not met their burden of proposing at least one admissible contention.

A. Proposed Contention 1, asserting that the Application's severe accident mitigation analysis is inadequate because it did not reflect geological understandings since PNPP was designed and constructed, is outside the scope of license renewal and therefore inadmissible.

In proposed Contention 1, the Petitioners challenge the Applicant's ER by asserting that “the severe accident mitigation analysis is inadequate[,]” specifically concerning seismic hazards and geologic conditions as they relate to the Applicant's severe accident mitigation alternatives (SAMA) analysis in the ER.⁷¹ As the basis for proposed Contention 1, the Petitioners assert that the application's representation of geological conditions at the PNPP site does not incorporate the latest available information.⁷² As stated in the Petition,

The Environmental Report (ER) is inadequate because it does not properly reflect contemporary geological investigative techniques as well as geological

⁶⁸ *Turkey Point*, CLI-01-17, 54 NRC at 12 (emphasis added); see 10 C.F.R. § 51.53(c)(3)(i)-(ii). In *Turkey Point*, the Commission recognized that the rules “provide a number of opportunities for individuals to alert the Commission to new and significant information that might render a generic finding invalid, either with respect to all nuclear power plants or for one plant in particular. In the hearing process, for example, petitioners with new information showing that a generic rule would not serve its purpose at a particular plant may seek a waiver of the rule.” *Id.*

⁶⁹ *Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-07-3, 65 NRC 13, 17 (footnotes omitted), *reconsid. denied*, CLI-07-13, 65 NRC 211, 214 (2007). This approach has been found to comply with NEPA. See, e.g., *Massachusetts v. NRC*, 708 F.3d at 68-69.

⁷⁰ 10 C.F.R. § 2.335(b).

⁷¹ Petition at 12.

⁷² *Id.* at 13.

understanding of the Perry Nuclear Power Plant site since the design and construction of the plant some 40 years ago. Petitioners' expert geologist has detailed possibilities of severe accidents to structures and stability of the PNPP site, all based upon latter-day science. There is a severe earthquake potential at PNPP because of the tectonic nature of recent quake activity; shoreline erosion is ongoing; there is an increasing possibility of landslide collapse of the bluff on which PNPP is located.⁷³

In further support of proposed Contention 1, the Petitioners submit a 30-page report on geologic conditions at the PNPP site by Dr. Julie Weatherington-Rice,⁷⁴ from which the Petitioners cite extensively in their pleading and incorporate by reference in its entirety.⁷⁵ In her report, Dr. Weatherington-Rice concludes that continued operation of the plant should not be permitted, and that the plant should be shut down and decommissioned.⁷⁶ Much of the discussion of proposed Contention 1 is focused on Dr. Weatherington-Rice's report, including multiple pages of quotations from the report.⁷⁷

However, the Petitioners also attempt to connect Dr. Weatherington-Rice's report to an argument related to the SAMA analysis in the Applicant's ER.⁷⁸ The Petitioners argue that:

The applicant's study of postulated severe accidents rejects the need for mitigation measures. Petitioners state that Energy Harbor has ignored severe geological defects and deficiencies revealed by scientific developments since PNPP was built and that consequently, the applicant is in violation of 10 C.F.R. § 51.53(c)(3)(ii)(L). Further [severe accident mitigation alternatives] analysis by the applicant, Energy Harbor, is obligatory.⁷⁹

⁷³ *Id.* at 12-13.

⁷⁴ Appendix to Petition, Enclosure F, Report of Dr. Julie Weatherington-Rice, Geologic Conditions at the Perry Nuclear Power Plant in Lake County, Ohio (Nov. 22, 2023) (Weatherington-Rice Report).

⁷⁵ Petition at 16-21.

⁷⁶ *Id.* at 13; Weatherington-Rice Report at 30.

⁷⁷ See Petition at 16-21.

⁷⁸ *Id.* at 15.

⁷⁹ *Id.* at 13.

According to the Petitioners, Dr. Weatherington-Rice's analysis of the site geology calls into question the Applicant's SAMA analysis, and the Petitioners call for "in-depth review of the previous SAMA assumptions and determinations."⁸⁰

Contention 1 contains a specific statement of the issue the Petitioners are concerned about (seismic hazards, geologic site characteristics, and the adequacy of the Applicant's SAMA analysis) and contains a detailed explanation of the basis for the contention, and the Petitioners have submitted an expert opinion in support of their arguments, but Contention 1 is inadmissible because it raises issues outside the scope of this license renewal proceeding and does not identify a genuine dispute with the application that is material to the license renewal decision. To be admissible in this proceeding, a contention must meet the general admissibility requirements in 10 C.F.R. § 2.309(f) and must demonstrate that they are within the scope of a license renewal proceeding as described in Sections III and IV above.⁸¹ As the Petitioners note, 10 C.F.R. § 51.53(c)(3)(ii)(L) requires license renewal applicants to consider severe accident mitigation alternatives if they have not previously done so for their plant.⁸² The Applicant has not submitted a SAMA analysis for PNPP previously, and therefore submitted one as Attachment G to the ER and described it in the main body of the ER.⁸³

With respect to the analysis of seismic hazards at the PNPP site, the focus of Dr. Weatherington-Rice's report and the main basis for the Petitioners' contention, proposed Contention 1 meets the contention admissibility requirements in 10 C.F.R. § 2.309(f)(1)(i), (ii), and (v). However, the contention is not within the scope of this proceeding, as required by 10 C.F.R. § 2.309(f)(1)(iii), because the issue raised—a challenge to the Applicant's estimate of

⁸⁰ *Id.* at 21.

⁸¹ See *supra* Sections III and IV.

⁸² Petition at 13, citing 10 C.F.R. § 51.53(c)(3)(ii)(L).

⁸³ See ER at 4-44 to 4-50 & Attachment G, G-1 to G-103.

earthquake frequency that is used as an input for the SAMA analysis⁸⁴—is a safety issue that is within the current licensing basis of the plant and addressed by ongoing regulatory processes.⁸⁵ Furthermore, because the Petitioners do not show any connection between the geological information discussed by Dr. Weatherington-Rice and the SAMA analysis described by the Applicant in its ER and submitted as Attachment G to that document,⁸⁶ proposed Contention 1 does not identify a genuine dispute with the application that is material to the license renewal decision, as required by 10 C.F.R. § 2.309(f)(1)(iv), and (vi).

Instead, the Petitioners make the conclusory statement that “[b]y underestimating the cost of a severe earthquake-caused accident in its SAMA analysis, Energy Harbor incorrectly discounts possible mitigation alternatives.”⁸⁷ But that argument is premised on the current licensing basis being wrong, and such argument is inadmissible in a license renewal proceeding.⁸⁸ Further, nowhere do the Petitioners challenge the accident cost estimates that the Applicant uses in its SAMA analysis or any of the evaluations of specific SAMAs discussed in Attachment G to the ER. To provide an admissible contention, Petitioners are obliged to read the application and challenge the information therein, yet Petitioners did not take this step.⁸⁹ Finally, none of the other geological issues mentioned in the Petition or in Dr. Weatherington-Rice’s report present an admissible contention, either in connection with the Applicant’s SAMA analysis or considered on their own, and proposed Contention 1 should therefore be rejected in its entirety.

⁸⁴ Petition at 18-21.

⁸⁵ See *supra* at 10-11.

⁸⁶ See ER at 4-44 to 4-50 & Attachment G, G-1 to G-103.

⁸⁷ Petition at 15.

⁸⁸ 10 C.F.R. § 54.30.

⁸⁹ 10 C.F.R. § 2.309(f)(1)(vi).

- i. *Seismic hazard evaluations are safety matters addressed as part of the current licensing basis of the plant, and are therefore outside the scope of license renewal.*

The Petitioners' expert states that "[s]eismic activity is probably the most important hazard that the Perry plant faces."⁹⁰ The portions of Contention 1 that relate to seismic hazards at the PNPP site meet the requirements of 10 C.F.R. § 2.309(f)(1)(i)-(ii) because they provide a specific statement of the issue of law or fact to be raised or controverted and a brief explanation of the basis for the contention.⁹¹ These portions of the contention also meet the requirements of 10 C.F.R. § 2.309(f)(1)(v) because they provide a concise statement of the alleged facts or expert opinions that support the petitioner's position on the issue and on which the petitioner intends to rely at hearing.⁹² However, the seismic portions of the contention are related to the current licensing basis for the plant and are subject to ongoing regulatory oversight processes, and they are therefore not within the scope of a license renewal proceeding.⁹³ At its heart, proposed Contention 1 is based on the theory that the current licensing basis⁹⁴ is incorrect because the geologic information reflected in PNPP's current licensing basis is wrong. As a threshold matter, the Commission's regulations in 10 C.F.R. § 54.30 "Matters not subject to a renewal review," provides that if license renewal reviews show that there is not reasonable assurance during the *current* license term that licensed activities will be conducted in accordance with the current licensing basis, then the licensee shall take measures under its *current* license and such measures, which are taken the *current* license are not within the scope

⁹⁰ Weatherington-Rice Report at 24. See also Petition at 15.

⁹¹ 10 C.F.R. § 2.309(f)(1)(i)-(ii).

⁹² 10 C.F.R. § 2.309(f)(1)(v).

⁹³ See Section III above.

⁹⁴ As defined in 10 C.F.R. § 54.3(a), the current licensing basis includes, among other things, the plant-specific design-basis information defined in 10 C.F.R. § 50.2 as documented in the most recent final safety analysis report (FSAR).

of the license renewal review.⁹⁵ The Petitioners' proposition that the current licensing basis is defective and not reflective of current geologic knowledge, and must be therefore be changed, is not within the scope of a license renewal proceeding.⁹⁶ The Petitioners' claim that the licensee must shut down is similarly outside the scope of a license renewal proceeding, which is premised on continued operations under the current licensing basis, subject to certain changes when needed.⁹⁷ While such concerns are not within the scope of a license renewal proceeding, the Petitioners could exercise their rights under 10 C.F.R. § 2.206(a) by filing a request to institute a proceeding to modify, suspend, or revoke the PNPP license, or for any other action that may be proper.⁹⁸

NRC regulations in 10 C.F.R. Parts 50 and 100 establish requirements related to the geologic conditions at a reactor site, including seismic hazards, as well as to the design of a nuclear reactor to protect against external hazards. Applicants and licensees must comply with these safety regulations, regardless of whether any licensing action is pending, in order to "provide reasonable assurance that a nuclear power plant can be constructed and operated at a proposed site without undue risk to the health and safety of the public."⁹⁹ For seismic hazards, the NRC's regulatory requirements can be found in 10 C.F.R. Part 100 and in General Design Criterion (GDC) 2 in Appendix A to 10 C.F.R. Part 50, which states:

Criterion 2—Design bases for protection against natural phenomena. Structures, systems, and components important to safety shall be designed to withstand the

⁹⁵ 10 C.F.R. § 54.30(a)-(b).

⁹⁶ See 10 C.F.R. § 54.30(b).

⁹⁷ As stated in 10 C.F.R. § 54.29(a), a renewed license may be issued by the Commission if the Commission finds, among other things, that actions have been identified and have been or will be taken with respect to certain license renewal matters such that there is reasonable assurance that the activities authorized by the renewed license *will continue* to be conducted in accordance with the CLB, and that any changes made to the plant's CLB in order to comply with this paragraph are in accord with the Act and the Commission's regulations.

⁹⁸ 10 C.F.R. § 2.206(a).

⁹⁹ 10 C.F.R. § 10.10(c)(1); see also Appendix A to 10 C.F.R. Part 50.

effects of natural phenomena such as earthquakes, tornadoes, hurricanes, floods, tsunami, and seiches without loss of capability to perform their safety functions. The design bases for these structures, systems, and components shall reflect: (1) Appropriate consideration of the most severe of the natural phenomena that have been historically reported for the site and surrounding area, with sufficient margin for the limited accuracy, quantity, and period of time in which the historical data have been accumulated, (2) appropriate combinations of the effects of normal and accident conditions with the effects of the natural phenomena and (3) the importance of the safety functions to be performed.

NRC has additional regulations in 10 C.F.R. Part 100 that cover both seismic analyses of reactor sites and earthquake engineering criteria that reactor licensees must meet.¹⁰⁰ Reactor applicants and licensees must comply with the GDC and NRC regulations in order to “provide reasonable assurance that a nuclear power plant can be constructed and operated at a proposed site without undue risk to the health and safety of the public.”¹⁰¹ Additionally, the AEA requires that the Commission must find that a facility “will provide adequate protection to the health and safety of the public” prior to granting a license, and may modify or revoke existing licenses if the statutory standard is not met.¹⁰²

After a plant is licensed, seismic issues are addressed through ongoing regulatory oversight processes, including under current operating licenses and any renewed licenses. Such evaluations are not within the scope of a license renewal proceeding because, as discussed in Section III above, the focus of NRC’s license renewal safety review is on “plant systems, structures, and components for which current [regulatory] activities and requirements may not be sufficient to manage the effects of aging in the period of extended operation.”¹⁰³

¹⁰⁰ See 10 C.F.R. § 100.10, Factors to be considered when evaluating sites; 10 C.F.R. Part 100, Appendix A, Seismic and Geologic Siting Criteria for Nuclear Power Plants. For plants licenses after January 10, 1997, parallel regulatory provisions are found in 10 C.F.R. §§ 100.20 and 100.23, and in Appendix S to 10 C.F.R. Part 50.

¹⁰¹ 10 C.F.R. § 100.10(c)(1); see also Appendix A to 10 C.F.R. Part 50.

¹⁰² See AEA, § 182, License Applications.

¹⁰³ *Turkey Point*, CLI-01-17, 54 NRC at 10 (quoting 60 Fed. Reg. at 22,469).

Issues already monitored and reviewed in ongoing regulatory oversight processes therefore fall outside the scope of the license renewal safety review.¹⁰⁴

This ongoing oversight has been carried out under PNPP's current license in response to an NRC request sent to all power reactor licensees and construction permit holders following the 2011 earthquake and tsunami that resulted in an accident at the Fukushima Dai-ichi nuclear power plant in Japan.¹⁰⁵ Enclosure 1 of that request included specific direction to licensees to "reevaluate the seismic hazards at their sites against present-day NRC requirements and guidance," and said that "[b]ased upon this information, the NRC staff will determine whether additional regulatory actions are necessary (e.g., update the design basis and SSCs important to safety) to protect against the updated hazards."¹⁰⁶ The seismic hazard reevaluation for the PNPP site was submitted to the NRC on March 31, 2014.¹⁰⁷ The reevaluations for PNPP and other plants were summarized in a 2021 NRC report that detailed "best knowledge and practices for characterizing the site-specific seismic hazards" for nuclear power plants in the United States.¹⁰⁸

¹⁰⁴ See, e.g., *Turkey Point*, CLI-01-17, 54 NRC at 8-10 (holding that "[i]ssues like emergency planning—which already are the focus of ongoing regulatory processes—do not come within the NRC's safety review at the license renewal stage").

¹⁰⁵ See Letter from Eric J. Leeds, Director, Office of Nuclear Reactor Regulation and Michael R. Johnson, Director, Office of New Reactors, to All Power Reactor Licensees and Holders of Construction Permits in Active or Deferred Status (Mar. 12, 2012) (ADAMS Accession No. ML12053A340) (2012 Seismic Request Letter). This request describes the history of Commission and Congressional direction on this matter. See *id.* at 2.

¹⁰⁶ *Id.* at Enclosure 1, p.1.

¹⁰⁷ Letter from Peter P. Sena III, President and Chief Operating Officer, FirstEnergy Nuclear Operating Company, to U.S. Nuclear Regulatory Commission, FirstEnergy Nuclear Operating Company (FENOC) Seismic Hazard and Screening Report (CEUS Sites), Response to NRC Request for Information Pursuant to 10 C.F.R. § 50.54(f) Regarding Recommendation 2.1 of the Near-Term Task Force (NTTF) Review of Insights from the Fukushima Dai-ichi Accident (March 31, 2014) (ADAMS Accession No. ML14092A203); Enclosure D, NTTF 2.1 Seismic Hazard and Screening Report for Perry Nuclear Power Plant, Lake County, Ohio (ADAMS Accession No. ML14090A145).

¹⁰⁸ NUREG/KM-0017, Seismic Hazard Evaluations for U.S. Nuclear Power Plants: Near-Term Task Force Recommendation 2.1 Results (December 2021) (ADAMS Accession No. ML21344A126).

The Petitioners' expert does not refer to this material, but instead focuses on analyses done during initial licensing of the plant in the 1980s and in updated plant documents from 2003.¹⁰⁹ Her characterization of past seismic hazard evaluation at the PNPP site leaves out the latest information that has been prepared by the Applicant and submitted to the NRC.

However, even if the Petitioners did challenge the latest seismic information for the PNPP site, the topic would still fall outside the scope of a license renewal proceeding because seismic hazards are addressed through ongoing regulatory oversight processes, including under the current license. Because the issue is out of scope for license renewal, it is also immaterial to the findings that must be made on the license renewal application and fails to show that a genuine dispute on a material issue of law or fact exists. For these reasons, seismic safety issues in Contention 1 are inadmissible and should be rejected.

- ii. *Treating proposed Contention 1 as an environmental contention does not make it admissible, either in general or with respect to SAMAs.*

The Petitioners' attempts to link evaluation of seismic hazards to an environmental issue discussed in the ER does not render the contention admissible. The regulations in 10 C.F.R. Part 51 do not require license renewal applicants to conduct new seismic hazard evaluations as part of their ERs. With respect to guidance, the guidance for license renewal applicants in Regulatory Guide (RG) 4.2, Supplement 1, discusses including the seismic history of the site in a license renewal ER.¹¹⁰ Similarly, the ESRP in NUREG-1555 contains guidance related to NRC staff reviews of the seismic history of a site as part of the overall discussion of the geology of the site.¹¹¹ Both of these guidance documents focus on identifying the largest earthquakes that

¹⁰⁹ Weatherington-Rice Report at 24-27.

¹¹⁰ RG 4.2, Suppl. 1, Rev. 1 at 12.

¹¹¹ See ESRP at 3.3-1 to 3.3-3.

have occurred near the site, but they do not suggest that the full seismic hazard evaluation for the site be revisited or reproduced in the ER.¹¹²

The Petitioners' references to the Applicant's SAMA analysis do not create a requirement for a reevaluation of seismic hazards in the ER. A SAMA analysis is required in a license renewal ER when, as here, the applicant has not performed one previously.¹¹³ However, in contrast to the analyses needed to determine whether a nuclear power plant meets the safety requirements in NRC regulations, a SAMA analysis in an Applicant's ER focuses on potential alternative mitigation measures that are supplemental to NRC safety requirements needed for adequate protection of public health and safety:

Of note, none of the mitigation alternatives evaluated in the SAMA analysis are measures the agency has deemed necessary for safety. They are supplemental to mitigation capabilities our safety regulations already require. As an ongoing matter, the NRC oversees the safety of reactor operations pursuant to the Atomic Energy Act of 1954, as amended, and may require licensees to implement new mitigation measures whenever warranted to assure adequate protection of public health and safety. *The NEPA mitigation analysis conducted for license renewal helps to identify additional measures that may further reduce plant risk beyond that necessary for adequate protection of public health and safety. . . .* To identify those mitigation measures that may be cost-beneficial to implement, the SAMA cost-benefit analysis compares the cost of implementing a new mitigation measure with its assessed potential to reduce severe accident risk.¹¹⁴

A SAMA analysis is an alternatives analysis, carried out under NEPA in order to determine if there are any procedures, training activities, or plant-design alternatives that could significantly reduce environmental risks at a reactor site in the event of a severe accident.¹¹⁵ The

¹¹² See RG 4.2, Suppl. 1, Rev. 1 at 12; ESRP at 3.3-1 to 3.3-3.

¹¹³ 10 C.F.R. § 51.53(c)(3)(ii)(L).

¹¹⁴ *Entergy Nuclear Operations, Inc.* (Indian Point Nuclear Generating Units 2 and 3), CLI-16-07, 83 NRC 293, 296 (2016) (emphasis added).

¹¹⁵ RG 4.2, Suppl. 1, Rev. 1 at 118.

Commission has stated that the alternatives evaluated go beyond what is needed for adequate protection under NRC safety regulations.¹¹⁶

As described in the NRC guidance in RG 4.2, Supplement 1, SAMA analyses rely on the use of probabilistic risk assessment (PRA) to evaluate the risk of severe accidents.¹¹⁷ In this case, the Applicant's use of PRA in the SAMA analysis is described at length in Attachment G to the ER.¹¹⁸ This description includes the history of model updates, including updates to seismic hazard evaluations used in the Applicant's PRA, which is in turn used in the SAMA analysis.¹¹⁹ The Petitioners do not challenge this material in the ER, but rather appear to cite to the existence of the applicant's SAMA analysis in its ER in an attempt to cure the inadmissibility of their challenge to the seismic hazard analysis for the site.¹²⁰ As noted above, that challenge is incomplete in that it focuses on analyses done in the 1980s through 2003 rather than on the latest analyses,¹²¹ and it remains inadmissible under the regulations in 10 C.F.R. § 2.309(f)(1)(iii), (iv), and (vi).

- iii. *No other geological issue mentioned in proposed Contention 1 or the accompanying report gives rise to an admissible contention.*

The Petitioners' expert describes a number of other geological topics in her report, and the Petitioners quote some of this discussion in their Petition.¹²² These topics include soil

¹¹⁶ *Indian Point*, CLI-16-07, 83 NRC at 296.

¹¹⁷ RG 4.2, Suppl. 1, Rev. 1 at 120-122.

¹¹⁸ ER, Attachment G at G-1 to G-69.

¹¹⁹ *See, e.g., id.* at G-7.

¹²⁰ Petition at 21 ("Petitioners believe that their geological review should prompt extensive re-examination of SAMA candidate scenarios.").

¹²¹ Weatherington-Rice Report at 24-27. *See also supra* nn. 107 & 108.

¹²² Petition at 16-21.

structure at the PNPP site,¹²³ landslide potential,¹²⁴ erosion of the shoreline of Lake Erie,¹²⁵ and the potential for release of methane and radon into confined spaces accessed by plant workers.¹²⁶ The Petition is unclear about how these topics relate to the main argument in the contention, that the plant's safety analysis needs to be revisited in order to complete an acceptable SAMA analysis, and indeed they are not mentioned except for quotations from Dr. Weatherington-Rice's report.¹²⁷ Because only the expert discusses these issues, and because they are not incorporated into any argument regarding the admissibility of proposed Contention 1, it is not clear that these topics are intended as additional bases for the contention's SAMA claims. Accordingly, portions of the contention that deal with geological issues other than seismic hazards fail to meet the basis requirement in 10 C.F.R. § 2.309(f)(1)(ii), as well other contention admissibility requirements in 10 C.F.R. § 2.309(f)(1)(iii), (iv), and (vi).

As with the seismic hazards, the other geological topics mentioned in Dr. Weatherington-Rice's report are plant safety issues addressed as part of the current licensing basis of the plant and maintained through ongoing regulatory oversight. GDC 2 in Appendix A to 10 C.F.R. Part 50 addresses natural phenomena other than seismic hazards, and Appendix A to 10 C.F.R. Part 100 includes requirements for soil structure, slope stability, and erosion for plants licensed prior to 1997.¹²⁸ Protecting plant workers from radiation is covered by 10 C.F.R. § 20.1201, and protection from fires is required by GDC 3 in Appendix A of 10 C.F.R. Part 50 and by 10 C.F.R.

¹²³ *Id.* at 16-17.

¹²⁴ *Id.* at 17.

¹²⁵ *Id.* at 17-18.

¹²⁶ *Id.* at 20.

¹²⁷ *See* Petition at 13-16 & 21.

¹²⁸ 10 C.F.R. Part 100, Appendix A, Section V, Seismic and Geologic Design Bases.

§ 50.48. As with the seismic hazard analysis, these are safety issues that are subject to ongoing regulatory oversight processes and are outside the scope of NRC's license renewal reviews, which focus on managing the effects of plant aging in the period of extended operation.¹²⁹ Contentions related to these issues are therefore outside the scope of license renewal, do not represent a genuine dispute with the application, and are not material to a license renewal decision, and therefore do not meet the contention requirements in 10 C.F.R. § 2.309(f)(1)(iii), (iv), and (vi).

As with the seismic hazard analysis, mentioning SAMAs does not cure this problem. The Petitioners do not argue for a direct connection between Dr. Weatherington-Rice's report and the Applicant's SAMA in the case of geologic topics other than the seismic analysis, and again they do not challenge any portion of the SAMA analysis in the ER itself or in Attachment G to that document.¹³⁰ For these reasons, portions of the contention that mention issues other than the seismic analysis fail to meet the contention pleading requirements in 10 C.F.R. § 2.309(f)(1)(ii)-(iv), and (vi) and should be rejected.

iv. *Conclusion*

With respect to seismic issues, proposed Contention 1 fails to meet the contention admissibility requirements in 10 C.F.R. § 2.309(f)(1)(iii), (iv), and (vi). With respect to other geologic issues, proposed Contention 1 also fails to meet the basis requirement in 10 C.F.R. § 2.309(f)(1)(ii) and is therefore inadmissible under 10 C.F.R. § 2.309(f)(1)(ii)-(iv) and (vi). Accordingly, proposed Contention 1 should be rejected in its entirety.

¹²⁹ See Section III above.

¹³⁰ See Attachment G at G-1 to G-69.

- B. Proposed Contention 2, asserting that the Applicant has an inadequate purpose and need statement, that the Applicant presents an exaggeration of its importance as a power producer, and that the Applicant's no-action alternative is fact averse, is not admissible.

In proposed Contention 2, the Petitioners assert that the ER's "consideration of the no-action alternative . . . provides conclusions unsupported by data."¹³¹ The Petition include three bases supporting this contention. First, the Petitioners argue that the Application has an inadequate purpose and need statement.¹³² Second, the Petitioners argue that the Applicant exaggerated the importance of Energy Harbor and Perry in producing power for Ohio and the regional grid.¹³³ Finally, the Petitioners argue that the Application's no-action alternative is fact averse.¹³⁴ In support of Contention 2, the Petitioners cite the testimony from Ned Ford, a utilities economist.¹³⁵

To be admissible in this proceeding, a contention must meet the general admissibility requirements in 10 C.F.R. § 2.309(f) and must demonstrate that the claims being made are within the scope of a license renewal proceeding as described in Sections III and IV above.¹³⁶ As discussed below, the specific claims in these bases are related, and all three fall outside the scope of this proceeding and impermissibly challenge an NRC regulation. With respect to the first set of claims, relating to the purpose and need statement, proposed Contention 2 meets the contention admissibility requirements in 10 C.F.R. § 2.309(f)(1)(i)-(ii). However, the contention is not within the scope of this proceeding, as required by 10 C.F.R. § 2.309(f)(1)(iii), because, as explained below, the Petitioners' argument that including baseload power in the purpose and

¹³¹ Petition at 22.

¹³² *Id.*

¹³³ *Id.* at 23.

¹³⁴ *Id.* at 22.

¹³⁵ *Id.* at 26-27.

¹³⁶ *See supra* Sections III and IV.

need statement for purposes of calculating need for power for economic arguments¹³⁷ is not applicable to the ER in the license renewal process.¹³⁸ As further detailed below, since this set of claims relating to the purpose and need statement are out of scope, they do not identify a genuine dispute with the application that is material to the license renewal decision, as required by 10 C.F.R. § 2.309(f)(1)(iv), and (vi). They must therefore be rejected under the provisions of 10 C.F.R. §§ 2.309(f)(1) and 2.335.

With respect to the second set of claims relating to the exaggeration of the applicant as a power producer, proposed Contention 2 meets the contention admissibility requirements in 10 C.F.R. § 2.309(f)(1)(i)-(ii). However, this claim is also outside the scope of this proceeding and does not meet 10 C.F.R. § 2.309(f)(1)(iii), because, like the first claim, need for power is not applicable to the ER in the license renewal process.¹³⁹ As further detailed below, since this set of claims relating to exaggeration of importance as a power producer is out of scope, the claims do not identify a genuine dispute with the application that is material to the license renewal decision, as required by 10 C.F.R. § 2.309(f)(1)(iv), and (vi). They must therefore be rejected under the provisions of 10 C.F.R. §§ 2.309(f)(1) and 2.335.

With respect to Petitioners' third set of claims, that the Application's no-action alternative is fact averse, proposed Contention 2 meets the contention admissibility requirements in 10 C.F.R. § 2.309(f)(1)(i)-(ii). However, this claim is also outside the scope of this proceeding and does not meet 10 C.F.R. § 2.309(f)(1)(iii), because the facts that the Petitioners allege are missing relate to the need for power analysis, which again, is not applicable to the ER in the license renewal process.¹⁴⁰ Additionally, Petitioners also argue that the no-action alternative

¹³⁷ Petition at 29.

¹³⁸ 10 C.F.R. § 51.53(c)(2).

¹³⁹ *Id.*

¹⁴⁰ *Id.*

has been rejected by the agency.¹⁴¹ This argument is inaccurate. Consequently, this set of claims also falls out of scope for that reason, as further detailed below. Moreover, and in the alternative, and further discussed below, this set of claims related to the inadequacy of the no-action alternative does not allege any facts or expert opinions, and lacks the required specificity, and therefore fails to satisfy 10 C.F.R. §§ 2.309(f)(1)(v), since Petitioners do not allege facts or opinions regarding environmental impacts. As claims relating to the no-action alternative being fact averse and being rejected are out of scope, they do not identify a genuine dispute with the application that is material to the license renewal decision, as required by 10 C.F.R.

§ 2.309(f)(1)(iv), and (vi). They must therefore be rejected under the provisions of 10 C.F.R. §§ 2.309(f)(1) and 2.335. Therefore, because none of the bases in Contention 2 result in an admissible contention, Contention 2 must be rejected in its entirety.

There may, of course, be mistakes in an environmental document, but in an NRC adjudication, it is the burden of petitioners to show their significance and materiality because “boards do not sit to ‘flyspeck’ environmental documents or to add details or nuances” and “[i]f the [document] on its face ‘comes to grips with all important considerations’ nothing more need be done.”¹⁴² Moreover, an applicant’s analysis of alternatives “need not discuss every conceivable alternative to the proposed action.”¹⁴³ Indeed, NEPA only mandates “consideration of ‘feasible, nonspeculative, and reasonable alternatives’ that are capable of meeting the

¹⁴¹ Petition at 29.

¹⁴² *Exelon Generation Co., LLC* (Early Site Permit for Clinton ESP Site), CLI-05-29, 62 NRC 801, 811 (2005) (quoting *Systems Energy Resources, Inc.* (Early Site Permit for Grand Gulf ESP Site), CLI-05-4, 61 NRC 10, 13 (2005)).

¹⁴³ *FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), LBP-11-13, 73 NRC 534, 552 (2011), *rev’d in part on other grounds*, CLI-12-08, 75 NRC 393 (2012) (the Commission ruled that even the combined contention was inadmissible) (quoting *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), LBP-08-13, 68 NRC 43, 95 (2008)) (citing *Nuclear Management Co., LLC* (Monticello Nuclear Generating Plant), LBP-05-31, 62 NRC 735, 753 (2005)); *accord City of Carmel-by-the-Sea v. Department of Transportation*, 123 F.3d 1142, 1155 (9th Cir. 1997); *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), CLI-91-02, 33 NRC 61, 71 (1991).

purpose and need of the action.”¹⁴⁴ Taken together with the below analysis, the Petitioner’s claims are “flyspecking” and should be rejected as inadmissible.

- i. *Petitioners’ first basis is out of scope, impermissibly challenges an NRC regulation, is not supported by alleged facts or expert opinions, and is therefore inadmissible.*

The first basis for proposed Contention 2 relates to the Application’s purpose and need statement. The Petitioners allege that the purpose and need statement is inadequate, that “the agency may not accept out of hand the applicant’s statement of purpose and need . . . and then use that purpose and need to summarily reject the no-action alternative.”¹⁴⁵ The Petitioners’ reasoning for this claim is that the Applicant impermissibly includes baseload power in the purpose and need statement.¹⁴⁶ The Petitioners state that doing so causes the purpose and need statement to be legally inadequate because it “is devoted to preservation of anachronistic baseload power,” “is tautological,” and “relies on the baseload nature of the plant... [to] avoid[] head-to-head economic arguments.”¹⁴⁷

Contention 2 provides a statement of the issue the Petitioners raise and an explanation for the basis for the contention, and therefore satisfies the requirements in 10 C.F.R. § 2.309(f)(1)(i)-(ii), but Contention 2 is inadmissible because the Petitioners fail to satisfy the other requirements of 10 C.F.R. § 2.309(f)(1), raising challenges to NRC regulations without seeking a waiver to do so as required by 10 C.F.R. § 2.335. Moreover, challenges to the purpose and need for the Perry Nuclear Power Plant are out of scope for a license renewal proceeding and therefore do not meet § 2.309(f)(1)(iii).

¹⁴⁴ *Id.* at 552-53.

¹⁴⁵ Petition at 29.

¹⁴⁶ *Id.*

¹⁴⁷ *Id.* at 22, 29.

The Petitioners' reasoning for their claim regarding the alleged inadequacy of the purpose and need statement is their belief that it is insufficient because it includes baseload power to avoid including economic arguments.¹⁴⁸ This claim is therefore out of scope, as 10 C.F.R. § 51.53(c)(2) states, that for a license renewal, the ER is "not required to include discussion of need for power or the economic costs and economic benefits of the proposed action or of alternatives" except insofar as is necessary for determining which alternatives to include in the range of alternatives.¹⁴⁹ The Board has previously determined, and the Commission upheld, "argument[s] about the need for power from [nuclear power plant] during the renewal period [are] outside of the scope of [the] proceeding and inadmissible" because they challenge 10 C.F.R. § 51.53(c)(2)."¹⁵⁰ Because applicants do not have to include a discussion of economic costs and benefits for the proposed action or alternatives under these circumstance, the Petitioners' claim that the purpose and need statement is legally inadequate is out of scope and inadmissible under 10 C.F.R. § 2.309(f)(1)(iii) because it challenges 10 C.F.R. § 51.53(c)(2).¹⁵¹ As this is a claim outside the scope of individual license renewal proceedings, it is definitionally immaterial to the licensing decision that must be made and does not represent a genuine dispute with the Application, and therefore also fails to satisfy 10 C.F.R. § 2.309(f)(1)(iv) and (vi). The claim also challenges an NRC regulation, which under 10 C.F.R. § 2.335 is impermissible in NRC adjudications absent a waiver. Petitioners have neither sought nor received a waiver under 10 C.F.R. § 2.335 to challenge the applicability of section 51.53(c)(2) to

¹⁴⁸ *Id.* at 29.

¹⁴⁹ 10 C.F.R. § 51.53(c)(2).

¹⁵⁰ *Davis-Besse Nuclear Power Station*, LBP-11-13, 73 NRC at 556-57 (2011), *rev'd in part on other grounds*, CLI-12-08, 75 NRC 393 (2012) (the Commission ruled that even the combined contention was inadmissible).

¹⁵¹ 10 C.F.R. § 51.53(c)(2).

the Application. The portions of Contention 2 related to including baseload power in the purpose and need statement and avoiding economic arguments must therefore be rejected.

Additionally, this claim fails to meet 10 C.F.R. § 2.309(f)(1)(v), as the Petitioners fail to state any alleged facts or expert opinions to support their position on the issue. While the Petitioners claim that “the agency may not accept out of hand the applicant’s statement of purpose and need,” the Petitioners do not state any alleged facts or opinions that support their position that the agency did not give any consideration to the purpose and need statement.¹⁵² Furthermore, the Commission has held that the agency can accept an applicant’s purpose and need statement as it is proposed and that, in fact, the NRC generally defers to the purpose and need of the applicant.¹⁵³ Federal courts have similarly held that purpose and need statements that include baseload power are acceptable and are “broad enough ‘to permit consideration of a host of energy generating alternatives.’”¹⁵⁴ Additionally, the Application’s purpose and need statement is standard language that is taken directly from the 2013 GEIS, signaling that this language is not an issue during license renewals and that inclusion of baseload power is standard practice.¹⁵⁵

¹⁵² Petition at 29.

¹⁵³ *Davis-Besse Nuclear Power Station*, LBP-11-13, 73 NRC at 552-53 (2011), *rev'd in part on other grounds*, CLI-12-08, 75 NRC 393 (2012) (the Commission ruled that even the combined contention was inadmissible) (citing *South Carolina Electric & Gas Co.* (Virgil C. Summer Nuclear Station, Units 2 and 3), LBP-09-02, 69 NRC 87, 110 (2009)).

¹⁵⁴ *Id.* at 552 (the Commission ruled that even the combined contention was inadmissible) (citing *Environmental Law & Policy Center v. NRC*, 470 F.3d 676, 684 (7th Cir. 2006)).

¹⁵⁵ ER at 1-1; 2013 GEIS at Vol 1, X; The purpose and need statement in the 2013 GEIS comes from the Commission’s June 5, 1996, final license renewal rule, 61 Fed. Reg. 28,468 (June 5, 1996), and states “[t]he NRC acknowledges the primacy of State regulators and utility officials in defining energy requirements and determining the energy mix within their jurisdictions. Therefore, the issue of *need for power* and generating capacity *will no longer be considered in NRC’s license renewal decisions*. The final GEIS has been revised to include an explicit statement of purpose and need for license renewal consistent with this acknowledgment.” (Emphasis added in italics.)

Finally, Petitioners' claim fails to meet 10 C.F.R. § 2.309(f)(1)(iii)-(vi) because the Application has not rejected the no-action alternative, as the Petitioners claim, leaving no actual dispute.¹⁵⁶ Petitioners claim that the agency has "summarily reject[ed] the no-action alternative," however the no-action alternative has not been rejected.¹⁵⁷ The ER, only states that the Applicant did not select Petitioners' preferred alternative, purchased power, for further consideration, and does not reject the no-action alternative.¹⁵⁸ As the Petitioners themselves quote from the purpose and need statement of the ER, "the NRC does not have a role in the energy planning decisions of whether a particular nuclear power plant should continue to operate,"¹⁵⁹ therefore, the no-action alternative has not been rejected. In fact, the ER specifically details fourteen potential alternatives that were analyzed briefly, but were ultimately determined not to be reasonably suited to the Applicant's purpose and need, and two alternatives analyzed in depth within the no-action alternative that meet the purpose and need of the Applicant, "Natural Gas-Fired Generation" and "Renewable and Natural Gas Combination Alternative."¹⁶⁰ Furthermore, over the course of nineteen pages, the ER details the environmental impacts for each of the two alternatives selected for further consideration, including examining the impact on: land use visual resources, air quality, noise, geology and soils, hydrology, ecological resources, historic and cultural resources, socioeconomics, human health environmental justice, and waste management.¹⁶¹ Since the Petitioners have failed to show that they have any facts to support their allegation that the no-action alternative has been

¹⁵⁶ ER at 2-30 to 2-31.

¹⁵⁷ Petition at 29.

¹⁵⁸ ER at 2-31.

¹⁵⁹ Petition at 22.

¹⁶⁰ ER at 7-1 to 7-30.

¹⁶¹ *Id.* at 7-10 to 7-28.

rejected or that there is a material issue or genuine dispute, this claim fails to meet the requirements of 10 C.F.R. § 2.309(f)(1)(iv)-(vi). The portions of Contention 2 related to the alleged rejection of the no-action alternative must therefore be rejected.

Because this set of claims relating to the inclusion of the baseload power in the purpose and need statement and allegedly using the purpose and need statement to reject the no-action alternative are outside the scope of a license renewal proceeding, they are necessarily immaterial to the licensing decision that must be made and do not represent genuine disputes with the Application, and they therefore fail to satisfy 10 C.F.R. § 2.309(f)(1)(iii)-(vi). The portions of Contention 2 related to the purpose and need statement must therefore be rejected.

- ii. *Petitioners' second basis is out of scope and impermissibly challenges an NRC regulation and is therefore inadmissible.*

The second basis for Contention 2 alleges that the Applicant “falsely exaggerated” Perry’s importance as a power producer in the regional grid.¹⁶² The Petitioners claim that there is “no statistical or factual analysis of the availability of electricity overcapacity within Ohio, nor of the available export electricity in multiple states surrounding Ohio.”¹⁶³ For Contention 2, as explained by this claim, Petitioners satisfy the contention pleading requirements in 10 C.F.R. § 2.309(f)(1)(i)-(ii). By including the testimony of Ned Ford, Petitioners also satisfy the requirement of 10 C.F.R. § 2.309(f)(1)(v) to provide the sources or documents on which the Petitioners intend to rely. However, Petitioners fail to satisfy the other requirements of 10 C.F.R. § 2.309(f)(1) and of 10 C.F.R. § 2.335 because claims regarding a need for power analysis are outside of the scope of a license renewal proceeding. Again, as mentioned above, 10 C.F.R. § 51.53(c)(2) states that for a license renewal, the ER is “not required to include discussion of need for power or the economic costs and economic benefits of the proposed action or of

¹⁶² Petition at 23.

¹⁶³ *Id.*

alternatives” except insofar as is necessary for determining which alternatives to include in the range of alternatives.¹⁶⁴ The Board has also previously determined, and the Commission upheld, that “argument[s] about the need for power from [nuclear power plant] during the renewal period [are] outside of the scope of [the] proceeding and inadmissible” because they challenge 10 C.F.R. § 51.53(c)(2).¹⁶⁵ Because these claims are outside the scope of a license renewal proceeding, they are necessarily immaterial to the licensing decision that must be made and do not represent genuine disputes with the Application, and therefore fail to satisfy 10 C.F.R. § 2.309(f)(1)(iv) and (vi). The Petitioners also challenge NRC regulations, which under 10 C.F.R. § 2.335 is impermissible in NRC adjudications absent a waiver. Petitioners have neither sought nor received a waiver of section 51.53(c)(2). The portions of Contention 2 related to a need for power analysis must therefore be rejected.

- iii. *Petitioners’ third basis is out of scope, impermissibly challenges an NRC regulation, is not supported by alleged facts or expert opinions, and therefore is inadmissible.*

The third basis for Contention 2 alleges that the no-action alternative is fact averse and makes conclusions unsupported by data.¹⁶⁶ Petitioners allege this is due to the lack of inclusion of analysis relating to the “availability of electricity overcapacity within Ohio, [or] of the available export electricity in multiple states surrounding Ohio,” the “self-serving conclusion about a rather outsized power generation role ostensibly dominated by Perry,” and because the ER’s analysis “avoid[s] head-to-head economic arguments.”¹⁶⁷

¹⁶⁴ 10 C.F.R. § 51.53(c)(2).

¹⁶⁵ *Davis-Besse Nuclear Power Station*, LBP-11-13, 73 NRC at 556-57 (2011), *rev'd in part on other grounds*, CLI-12-08, 75 NRC 393 (2012) (the Commission ruled that even the combined contention was inadmissible).

¹⁶⁶ Petition at 22.

¹⁶⁷ *Id.* at 23, 28.

Contention 2 as explained by this claim, is inadmissible because even though the Petitioners identify the issue and provide a detailed explanation of the basis for the contention, which meets the requirements in 10 C.F.R. § 2.309(f)(1)(i)-(ii), the Petitioners fail to satisfy the other requirements of 10 C.F.R. § 2.309(f)(1) and impermissibly challenge NRC regulations regarding the scope of license renewal without seeking or obtaining a waiver, as required by 10 C.F.R. § 2.335. As discussed above, claims regarding a need for power analysis and economic arguments are outside of the scope of a license renewal proceeding. 10 C.F.R. § 51.53(c)(2) states, for a license renewal, that the ER is “not required to include discussion of need for power or the economic costs and economic benefits of the proposed action or of alternatives” except insofar as is necessary for determining which alternatives to include in the range of alternatives.¹⁶⁸ The Board has previously determined, and the Commission has upheld, “argument[s] about the need for power from [nuclear power plant] during the renewal period [are] outside of the scope of [the] proceeding and inadmissible” because they challenge 10 C.F.R. § 51.53(c)(2).¹⁶⁹ As the facts and analysis that the Petitioners allege are lacking are not the type of facts required to be analyzed under 10 C.F.R. § 51.53(c)(2), this claim is therefore out of scope. Because this claim is outside the scope of a license renewal proceeding, it is necessarily immaterial to the licensing decision that must be made and does not represent a genuine dispute with the Application, and therefore fails to satisfy 10 C.F.R. § 2.309(f)(1)(iv) and (vi). The claim also challenges NRC regulations, which under 10 C.F.R. § 2.335 is impermissible in NRC adjudications absent a waiver. Petitioners have neither sought nor received a waiver under 10 C.F.R. § 2.335 to permit them to challenge the applicability of section

¹⁶⁸ 10 C.F.R. § 51.53(c)(2).

¹⁶⁹ *Davis-Besse Nuclear Power Station*, LBP-11-13, 73 NRC at 556-57 (2011), *rev'd in part on other grounds*, CLI-12-08, 75 NRC 393 (2012) (the Commission ruled that even the combined contention was inadmissible).

51.53(c)(2) to the Application. The portions of Contention 2 related to this claim must therefore be rejected.

Additionally, this claim also fails to meet the requirements of 10 C.F.R. § 2.309(f)(1)(v) because the Petitioners do not provide any alleged facts or expert opinions to support any claims related to the environmental impact of the proposed action or alternatives. The Petitioners' stated facts and expert opinion relate to the need for power and ability to import power, all of which are out of scope, and do not provide any facts or testimony on the environmental impacts of the proposed project or the alternatives in question.¹⁷⁰ Moreover, even if the testimony were in scope, the opinion is pure speculation, and does not actually demonstrate where purchased power would come from, what the generating sources would be, and what environmental impacts those sources would have.¹⁷¹ This type of speculation, hypotheticals, and guesswork are insufficient to provide the needed support for Petitioners' claim.¹⁷² Petitioners must allege facts and show support for a challenge to the sufficiency of an alternatives analysis, as mere "information and belief" is insufficient, and assertions without support violate the Commission's rules on focusing the hearing process and giving notice to other parties.¹⁷³ The Commission has held that claims that do not have any alleged facts or provide sufficient detail fail to meet the requirements of 10 C.F.R. § 2.309(f)(1)(v).¹⁷⁴ As Petitioners do not allege any facts, provide any expert opinion, or provide any details for any

¹⁷⁰ Petition, Appendix to Petition, Enclosure G (Nov. 27, 2023).

¹⁷¹ *Id.*

¹⁷² *FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-08, 75 NRC 393, 400-06 (2012).

¹⁷³ *South Texas Project Nuclear Operating Co.* (South Texas Project, Units 1 and 2), LBP-11-21, 74 NRC 115, 133 (2011); *PPL Susquehanna, LLC* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-04, 65 NRC 281, 303-04 (2007).

¹⁷⁴ *Id.* (citing *Fansteel*, CLI-03-13, 58 NRC 195, 203 (2003) (citing *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-06, 51 NRC 193, 208 (2000))).

concerns relating to impacts on the environment in the alternatives analysis, this claim fails to meet the requirements of 10 C.F.R. § 2.309(f)(1)(v). The portions of Contention 2 related to the no-action alternative being fact averse must therefore be rejected.

Petitioners also claim that the ER “reject[s] the no-action alternative,”¹⁷⁵ however, as analyzed above, this allegation is unproven. As the Petitioners have failed to show that they have any facts to support their allegation that the no-action alternative has been rejected, this claim again fails to meet the requirements of 10 C.F.R. § 2.309(f)(1)(iv)-(vi). The portions of Contention 2 related to the rejection of the no-action alternative must therefore be rejected.

iv. *Conclusion*

As described above, proposed Contention 2 as supported by its first basis is inadmissible under 10 C.F.R. § 2.309(f)(1)(iii)-(vi) and under 10 C.F.R. § 2.335. Proposed Contention 2 as supported by its second basis is inadmissible under 10 C.F.R. § 2.309(f)(1)(iii)-(iv), and (vi) and under 10 C.F.R. § 2.335. And proposed Contention 2 as supported by its third basis is inadmissible under 10 C.F.R. § 2.309(f)(1)(iii)-(vi) and under 10 C.F.R. § 2.335.

Accordingly, the contention must be rejected in its entirety.

C. Proposed Contention 3, asserting that the Application is “inadequate because it fails to include considerable information on the release of tritium and other radionuclides from” Perry is inadmissible.

In proposed Contention 3, the Petitioners assert that “the License Renewal Application is inadequate because it fails to include considerable information on the release of tritium and other radionuclides from PNPP.”¹⁷⁶ The contention includes three bases. The first basis is an environmental claim, under NEPA and 10 C.F.R. Part 51, asserting that the Applicant’s ER is incomplete because:

[t]he LRA and its Environmental Report omit to analyze cumulative radiological impacts and resulting potential health risks of operating Perry Nuclear Power

¹⁷⁵ Petition at 29.

¹⁷⁶ *Id.* at 31.

Plant while leaking and otherwise emitting unpredictable amounts of tritium, for an additional 20 years. The LRA and ER underestimate the hazards of tritium released into the physical environment and omit to provide analysis of the hazards from 20 more years of discharge of water that contains radioactive particulates and tritium into groundwater in the vicinity of PNPP and also, into Lake Erie.¹⁷⁷

The second basis of proposed Contention 3 is related to the aging of the PNPP, which is normally treated a safety issue arising under the AEA and 10 C.F.R. Part 54:

the LRA gives a partial history of tritium releases into water and air, but that history is incomplete. There is mention of pipe leaks or other breakage that has led to some radiation releases, but there is no analysis of similar pipe leaks or breakage that may occur in the future and the related radiation release increase that could result in aging nuclear reactors.¹⁷⁸

The Petitioners place it in that context, noting that “[l]eakage of tritium and other radionuclides is intimately associated with managing the aging and deterioration of structures and components at nuclear power plants, and the issues raised by this contention go to the ultimate ‘reasonable assurance’ question that must be answered by the applicant.”¹⁷⁹ Finally, the third basis for proposed Contention 3 is also is an environmental claim under NEPA and 10 C.F.R. Part 51, and it states that the ER is incomplete because it fails to discuss additive and synergistic effects between tritium and chemical hazards in the waters of Lake Erie.¹⁸⁰ Discussions related to this third basis also mention potential human health impacts to both plant workers and the general public, effects on aquatic organisms, cooling tower drift, and cumulative impacts.¹⁸¹ In support of Contention 3, the Petitioners cite a book called *Exploring Tritium Dangers* by Dr. Arjun Makhijani.¹⁸²

¹⁷⁷ *Id.*

¹⁷⁸ *Id.*

¹⁷⁹ *Id.* at 34-35.

¹⁸⁰ *Id.* at 31.

¹⁸¹ *Id.* at 31, 34, 36-37, and 44-45.

¹⁸² *Id.* at 35.

To be admissible in this proceeding, a contention must meet the general admissibility requirements in 10 C.F.R. § 2.309(f) and must demonstrate that the bases for the contention are within the scope of a license renewal proceeding as described in Sections III and IV above.¹⁸³ As supported by the three bases provided, proposed Contention 3 meets the contention admissibility requirements of 10 C.F.R. § 2.309(f)(1)(i) and (ii). As supported by the first two bases, the contention is also within the scope of a license renewal proceeding and potentially material to the licensing decision, and these parts of the contention also meet the admissibility requirements of 10 C.F.R. § 2.309(f)(1)(iii) and (iv). However, no part of proposed Contention 3 includes “sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact,” or a “a concise statement of the alleged facts or expert opinions” that would support the Petitioners’ position in such a dispute.¹⁸⁴ Accordingly, proposed Contention 3 should be rejected in its entirety for failing to meet the requirements of 10 C.F.R. § 2.309(f)(1)(v) and (vi).

- i. *The Petitioners’ challenge to the ER’s discussion of tritium leaks to groundwater is not a genuine dispute on a material issue of fact or law and is inadmissible.*

Much of the Petitioners’ discussion of the first basis for proposed Contention 3 is taken directly from the Applicant’s ER, but they have not challenged any portion of that document, provided information in support of such a challenge, or explained why any such challenge demonstrates a genuine dispute on a material issue of fact or law with the Application. Although portions of Contention 3 as supported by its first basis meet the requirements of 10 C.F.R. §2.309(f)(1)(i)-(iv), the Petitioners fail to meet the requirements of 10 C.F.R. §2.309(f)(1)(v)-(vi). Contention 3 as supported by the first basis must therefore be rejected.

¹⁸³ See *supra* Sections III and IV.

¹⁸⁴ 10 C.F.R. § 2.309(f)(1)(vi) and (v).

Under the 2013 GEIS, as codified in Appendix B to 10 C.F.R. Part 51, release of radionuclides to groundwater is a Category 2 issue with potential impact levels ranging from SMALL to MODERATE.¹⁸⁵ Category 2 issues require site-specific analysis as part of a license renewal application, and contentions challenging such an analysis therefore can fall within the scope of a license renewal proceeding and be material to the license renewal decision.¹⁸⁶ The Applicants addressed these issues in their ER and, while the Petitioners have referred to the Applicant's ER in their pleading, the Petitioners fail to demonstrate a genuine dispute with the Application.

The Petitioners quote extensively from the ER in the groundwater portions of proposed Contention 3, especially regarding past tritium releases at PNPP and other plants.¹⁸⁷ They also refer to several reports submitted to the NRC by the Applicant under the current license for PNPP.¹⁸⁸ However, they do not dispute this historical information, but instead raise three issues unrelated to the ER and or to any requirements for a license renewal ER. First, they argue that groundwater monitoring at the PNPP site is not frequent enough.¹⁸⁹ However, groundwater monitoring is an operating concern that is addressed by the current licensing basis for the reactor, and any challenge to the monitoring program itself would be outside the scope of this proceeding.¹⁹⁰ Second, the Petitioners argue that plant aging requires that the ER include

¹⁸⁵ 10 C.F.R. Part 51, Appendix B.

¹⁸⁶ *See supra* at 11-12.

¹⁸⁷ Petition at 31-32.

¹⁸⁸ *See id.* at 37-40.

¹⁸⁹ *Id.* at 32.

¹⁹⁰ *See supra* at 10-11.

additional discussion of potential future plant leaks.¹⁹¹ As discussed in the following section¹⁹² and acknowledged in the Petition,¹⁹³ license renewal requires managing the effects of plant aging and maintaining the current licensing basis of the plant, which means that the frequency of leaks from items subject to aging management should not increase.¹⁹⁴ However, neither 10 C.F.R. Part 51 nor 10 C.F.R. Part 54 require this information to be addressed in the ER specifically, and the Petitioners do not make a connection between the type of aging management issues addressed through the safety portions of a license renewal application review and any alleged deficiency in the Applicant's ER. For this reason, their statements regarding potential future leaks are speculative and therefore insufficient to support an admissible contention.¹⁹⁵ Finally, the Petitioners assert that "[t]ritium is a very underrated environmental toxin that deserves much greater scrutiny" and describe a book by Dr. Arjun Makhijani in which the author discusses the potential effects of tritium on pregnancy.¹⁹⁶ Once more, the Petitioners do not connect these statements to any alleged deficiency in the ER.

Because the Petitioners have provided neither "sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact," nor "a concise statement of the alleged facts or expert opinions" that would support such a dispute, proposed Contention 3 as supported by the first basis fails to meet the pleading requirements of 10 C.F.R. § 2.309(f)(1)(v)-(vi) and should be rejected.

¹⁹¹ Petition at 31, 34-35.

¹⁹² See *infra* Section V.C.ii.

¹⁹³ See Petition at 34-35.

¹⁹⁴ See 10 C.F.R. § 54.21(a)(3).

¹⁹⁵ Contentions cannot be based on speculation and must have "some reasonably specific factual or legal basis." *Vermont Yankee*, CLI-15-20, 82 NRC at 221.

¹⁹⁶ Petition at 35.

- ii. *Proposed Contention 3 is also inadmissible when considered as a safety contention.*

As the second basis for proposed Contention 3, the Petitioners argue that the Application is incomplete because, while it discusses past tritium leaks, “there is no analysis of similar pipe leaks or breakage that may occur in the future and the related radiation release increase that could result in aging nuclear reactors.”¹⁹⁷ As noted above, the Petitioners refer to the tritium discussion in the ER throughout proposed Contention 3.¹⁹⁸ However, while the Petitioners rely on the legal authorities in 10 C.F.R. Part 54, under which aging management is addressed, they fail to reference those portions of the Application where the Applicant discusses its aging management plans for piping and other plant structures, systems, and components.¹⁹⁹

In general, contentions related to the aging management actions required for license renewal under 10 C.F.R. §§ 54.21 and 54.29 can fall within the scope of a license renewal proceeding.²⁰⁰ However, in this case the Petitioners do not reference any of the aging management discussion in the Application or raise issues within the scope of this proceeding in relation to any portion of the Application other than the ER. Proposed Contention 3, as supported by the second basis, is therefore missing the specificity required by 10 C.F.R. § 2.309(f)(1). The NRC’s contention admissibility standards are meant to afford hearings only to those who “proffer at least some minimal factual and legal foundation in support of their contentions.”²⁰¹ Considering proposed Contention 3 as a safety contention, the Petitioners have neither identified a dispute with a specific portion of the Application related to aging management nor explained why “current [regulatory] activities and requirements may not

¹⁹⁷ Petition at 31.

¹⁹⁸ See *supra* Section V.C.i.

¹⁹⁹ See Petition at 34-35.

²⁰⁰ See *supra* Section III.

²⁰¹ *Ocone*, CLI-99-11, 49 NRC at 334.

be sufficient to manage the effects of aging in the period of extended operation,”²⁰² as required for license renewal. They have described a key finding that must be made for license renewal, but have not identified any material issue with the Application that is related to 10 C.F.R. Part 54, and their statements regarding potential future leaks are speculative and therefore insufficient to support an admissible contention.²⁰³ For these reasons, proposed Contention 3, as supported by this the second basis and considered as a safety contention, fails to meet the requirements of 10 C.F.R. § 2.309(f)(1)(iii)-(vi) and should be rejected.

- iii. *The Petitioners’ claims related to resources other than groundwater are inadmissible.*

The third basis for proposed Contention 3 includes a variety of claims related to the potential for releases of tritium other than to ground water, for example to the waters of Lake Erie and to surrounding land.²⁰⁴ These include potential additive and synergistic effects between tritium and chemical hazards, human health impacts to both plant workers and the general public, effects on aquatic organisms, cooling tower drift, and cumulative impacts.²⁰⁵ As clarified by the third basis, proposed Contention 3 meets the admissibility requirements in 10 C.F.R. § 2.309(f)(1)(i)-(ii). However, no issue raised in the discussion of the third basis meets the other admissibility requirements in 10 C.F.R. § 2.309(f)(1)(iii)-(vi), and some of the Petitioners’ arguments appear to challenge the NRC’s regulations, which is impermissible without first obtaining a waiver from the Commission under 10 C.F.R. § 2.335.

²⁰² *Turkey Point*, CLI-01-17, 54 NRC at 10 (quoting Nuclear Power Plant License Renewal; Revisions, 60 Fed. Reg. at 22,469).

²⁰³ Contentions cannot be based on speculation and must have “some reasonably specific factual or legal basis.” *Vermont Yankee*, CLI-15-20, 82 NRC at 221.

²⁰⁴ Petition at 31, 34, 36-37, and 44-45.

²⁰⁵ *Id.*

Many of the issues raised in this discussion do not support the admission of the contention because they are designated as Category 1 issues in the 2013 GEIS and in Appendix B to 10 C.F.R. Part 51, which the Commission has held cannot be challenged in a specific licensing proceeding without first obtaining a waiver to do so under 10 C.F.R. § 2.335.²⁰⁶ These include radiation doses to the public, radiation doses to plant workers, exposure of aquatic organisms to radionuclides, and cooling tower impacts on vegetation.²⁰⁷ All of these are classified as Category 1 issues with an impact level of SMALL.²⁰⁸ As the Commission has stated, Category 1 determinations “are not subject to site-specific review and thus fall beyond the scope of individual license renewal proceedings.”²⁰⁹ Also, because these Category 1 determinations have been incorporated into a regulation, “the conclusions of that analysis may not be challenged in litigation unless the rule is waived.”²¹⁰ For these reasons, portions of proposed Contention 3 dealing with Category 1 issues are outside the scope of a license renewal proceeding.

The Petitioners’ use of the word “cumulative” does not affect the admissibility of Category 1 issues when the emphasis is on the added effects of operating the PNPP for an additional 20 years. Cumulative impacts are a Category 2 issue under the 2013 GEIS and in

²⁰⁶ See, e.g., *Exelon Generation Co., LLC* (Limerick Generating Station, Units 1 & 2), CLI-12-19, 76 NRC 377, 383-387 (2012).

²⁰⁷ See 10 C.F.R. Part 51, Appendix B.

²⁰⁸ *Id.*

²⁰⁹ *Turkey Point*, CLI-01-17, 54 NRC at 12 (emphasis added); see 10 C.F.R. § 51.53(c)(3)(i)-(ii). In *Turkey Point*, the Commission recognized that the rules “provide a number of opportunities for individuals to alert the Commission to new and significant information that might render a generic finding invalid, either with respect to all nuclear power plants or for one plant in particular. In the hearing process, for example, petitioners with new information showing that a generic rule would not serve its purpose at a particular plant may seek a waiver of the rule.” *Id.*

²¹⁰ *Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-07-03, 65 NRC 13, 17 (footnotes omitted), *reconsid. denied*, CLI-07-13, 65 NRC 211, 214 (2007). This approach has been found to comply with NEPA. See, e.g., *Massachusetts v. NRC*, 708 F.3d at 68-69.

Appendix B to 10 C.F.R. Part 51,²¹¹ and the NRC regulation in 10 C.F.R. § 51.53(c)(3)(ii)(O) requires that an applicant provide information about “other past, present, and reasonably foreseeable future actions occurring in the vicinity of the nuclear plant that may result in a cumulative effect.”²¹² However, the 2013 license renewal GEIS generically evaluates the environmental impacts of operating a facility over the initial 20-year license renewal period, and these impacts are included in the impact levels codified in Appendix B to Part 51.²¹³ The NRC regulation in 10 C.F.R. § 51.53(c)(3)(ii)(O) requires a cumulative analysis of the environmental impacts of license renewal combined with other activities that could affect the resources in question, and the Applicant has provided such an analysis in Section 4.12 of its ER,²¹⁴ and the Petitioners have not challenged any portion of that analysis.

Regarding the Petitioners’ claim regarding potential additive and synergistic effects between tritium and chemical pollutants in Lake Erie, this issue is not specifically designated as either Category 1 or Category 2 in the 2013 GEIS or in Appendix B to 10 C.F.R. Part 51. However, the Petitioners treat potential additive and synergistic effects as cumulative impacts, a Category 2 issue.²¹⁵ For this reason, claims related to this issue are not barred by 10 C.F.R. § 2.335 as impermissible challenges to NRC regulations. The Petitioners have, however, submitted neither technical support for their claims that such effects are an issue, nor legal argument supporting their assertion that an analysis of these effects is required in the

²¹¹ 10 C.F.R. Part 51, Appendix B.

²¹² 10 C.F.R. § 51.53(c)(3)(ii)(O).

²¹³ 2013 GEIS at S-4 (The 2013 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”).

²¹⁴ ER at 4-34 to 4-42.

²¹⁵ Petition at 44; see 10 C.F.R. Part 51, Appendix B.

Applicant's ER.²¹⁶ In fact, they note that tritium levels in the lake are declining,²¹⁷ although they assert (without providing support) that this trend is likely to reverse.²¹⁸ As previously noted, the NRC's contention admissibility regulations require "at least some minimal factual and legal foundation in support of . . . contentions,"²¹⁹ and contentions cannot be based on speculation and must have "some reasonably specific factual or legal basis."²²⁰ The Petitioners have not provided such a factual or legal foundation here.

For these reasons, proposed Contention 3 as supported by the third basis fails to meet the requirements of 10 C.F.R. § 2.309(f)(1)(iii)-(vi) and should be rejected. In addition, portions of the contention that relate to Category 1 issues are inadmissible pursuant to 10 C.F.R. § 2.335, which prohibits challenges to NRC regulations absent a waiver.

iv. *Conclusion*

As described above, proposed Contention 3 as clarified by its first basis is inadmissible under 10 C.F.R. § 2.309(f)(1)(v)-(vi). Proposed Contention 3 as clarified by its second basis is inadmissible under 10 C.F.R. § 2.309(f)(1)(iii)-(vi). And proposed Contention 3 as clarified by its third basis is inadmissible under 10 C.F.R. § 2.309(f)(1)(iii)-(vi) and, with respect to Category 1 issues, under 10 C.F.R. § 2.335. Accordingly, the contention must be rejected in its entirety.

²¹⁶ The ESRP is silent on the topic. See *generally* ESRP, Section 4.12. The topic of potential synergistic effects is mentioned once in RG 4.2, but only in general terms and not in relation to tritium. See RG 4.2 at 138.

²¹⁷ Petition at 41-43.

²¹⁸ *Id.* at 47.

²¹⁹ *Oconee*, CLI-99-11, 49 NRC at 334.

²²⁰ *Vermont Yankee*, CLI-15-20, 82 NRC at 221.

CONCLUSION

For the reasons discussed above, while the Staff agrees that the Petitioners have demonstrated standing, they have not submitted an admissible contention and the Petition must therefore be rejected.

/Signed (electronically) by/

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Executed in Accord with 10 C.F.R. 2.304(d)

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Dated in Washington, DC
this 26th day of December 2023

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of

ENERGY HARBOR NUCLEAR CORP.

(Perry Nuclear Power Plant, Unit 1)

Docket No. 50-440-LR

Certificate of Service

Pursuant to 10 C.F.R. § 2.305, I hereby certify that copies of the foregoing “NRC STAFF’S ANSWER OPPOSING OHIO NUCLEAR-FREE NETWORK AND BEYOND NUCLEAR HEARING REQUEST,” dated December 26, 2023, have been served upon the Electronic Information Exchange (the NRC’s E-Filing System), in the captioned proceeding, this 26th day of December 2023.

/Signed (electronically) by/

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Dated in Washington, DC
this 26th day of December 2023