UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of NEXTERA ENERGY POINT BEACH, LLC (Point Beach Nuclear Plant, Units 1 and 2)	Docket Nos. 50-266 & 50-301-SLR

NRC STAFF'S ANSWER OPPOSING PHYSICIANS FOR SOCIAL RESPONSIBILITY WISCONSIN'S PETITION TO INTERVENE

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INTRODUCTION

In accordance with 10 C.F.R. § 2.309(i), the U.S. Nuclear Regulatory Commission Staff files this answer opposing Physicians for Social Responsibility Wisconsin's (PSR WI, Petitioner) petition to intervene[1] challenging a NextEra Energy Point Beach, LLC (NextEra) application for subsequent renewal of the renewed facility operating licenses for Point Beach Nuclear Plant, Units 1 and 2 (Point Beach).[2] Although the Staff does not challenge Petitioner's standing, the Petition is insufficient because it does not propose at least one admissible contention that meets

[1] Petition of Physicians for Social Responsibility Wisconsin for Leave to Intervene in Point Beach Nuclear Plant, Units 1 and 2 Subsequent License Renewal Proceeding, and Requesting an Adjudicatory Hearing (Mar. 23, 2021) (ML21082A530) (Petition).

Attached to Petition are: Declarations in Support of Petition of Physicians for Social Responsibility Wisconsin for Leave to Intervene (Mar. 23, 2021) (ML21082A531) (Member and Organizational Declarations); Declaration of Arnold Gundersen (Mar. 23, 2021) (ML21082A532) (Gundersen Declaration); Declaration of Alvin Compaan, PH. D. (Mar. 23, 2021) (ML21082A533) (Compaan Declaration); Declaration of Mark Cooper, PH. D. (Mar. 23, 2021) (ML21082A534) (Cooper Declaration).

[2] Letter from Michael Strope, Site Vice President, NextEra, to NRC, Application for Subsequent Renewed Facility Operating Licenses (Nov. 16, 2020) (ML20329A292).

The enclosures to this letter include: Encl. 3, Att. 1, Point Beach Nuclear Plant Units 1 and 2 Subsequent License Renewal Application (Public Version) (Nov. 2020) (ML20329A247) (Subsequent License Renewal Application (SLRA)); Encl. 3, Att. 2, Appendix E Applicant's Environmental Report Subsequent Operating License Renewal Point Beach Nuclear Plant Units 1 and 2 (Nov. 2020) (ML20329A248) (Environmental Report).

the requirements of 10 C.F.R. § 2.309(f). Specifically, proposed Contention 1 is not admissible in that it does not show a genuine dispute exists with NextEra on a material issue of law or fact as required by 10 C.F.R. § 2.309(f)(1)(vi). Proposed Contention 2 is not admissible because it does not show that a genuine dispute exists with NextEra on a material issue of law or fact as required by 10 C.F.R. § 2.309(f)(1)(vi), because it challenges the NRC's regulations without a waiver of those regulations, and because its arguments regarding Point Beach's current compliance with the NRC's regulations do not satisfy the scope requirement of 10 C.F.R. § 2.309(f)(1)(iii). Proposed Contention 3 is not admissible because its challenges to the need for power from Pont Beach during the subsequent renewed license term do not satisfy the scope requirement of 10 C.F.R. § 2.309(f)(1)(iii) and because it does not show that a genuine dispute exists with NextEra on a material issue of law or fact as required by 10 C.F.R. § 2.309(f)(1)(vi). Finally, proposed Contention 4 is not admissible because its arguments related to the physical alignment of Point Beach's buildings do not satisfy the scope requirement of 10 CFR § 2.309(f)(1)(iii). Because none of its proposed contentions are admissible, consistent with 10 C.F.R. § 2.309(a), the Petition should be denied.

BACKGROUND

The Point Beach units are pressurized-water reactors designed by Westinghouse Electric Corporation and are located on the western shore of Lake Michigan in Manitowoc County, Wisconsin, approximately 15 miles (24 km) north-northeast of Manitowoc.[3] By letter dated November 16, 2020, NextEra applied to renew the Point Beach operating licenses for an additional 20 years, which would extend the Unit 1 license to October 5, 2050 and the Unit 2 license to March 8, 2053.[4]

[3] *See* Environmental Report at 1-1, 2-1–2-2.

[4] *See* SLRA at 1-3.

Under 10 C.F.R. § 54.29, the NRC may grant a license renewal application if, among other things, it finds that specific safety and environmental requirements are satisfied; the NRC review of a license renewal application consists of two concurrent reviews—a safety review and an environmental review. To support these safety and environmental reviews, NextEra submitted as part of its application a subsequent license renewal application (SLRA) and an Environmental Report.

On January 22, 2021, the NRC published a notice of opportunity to request a hearing and to petition for leave to intervene on the Point Beach application.[5] In response, PSR WI submitted the instant petition, which asserts that a hearing should be granted on four proposed contentions, with proposed Contentions 1 and 3 raising challenges to the Environmental Report and proposed Contentions 2 and 4 raising challenges to the SLRA.

DISCUSSION

Under the Commission's Rules of Practice in 10 C.F.R. Part 2, any person (petitioner) whose interest may be affected by a proceeding and who desires to participate as a party must file a written request for hearing or petition for leave to intervene (petition).[6] The petition must include the contentions that the petitioner seeks to have litigated in the hearing.[7] The presiding officer will grant the petition if it determines that the 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).[8]

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[5] NextEra Energy Point Beach, LLC; Point Beach Nuclear Plant, Units 1 and 2, 86 Fed. Reg. 6684 (Jan. 22, 2021).

[6] 10 C.F.R. § 2.309(a). As defined in 10 C.F.R. § 2.4, "*Person* means (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, any foreign government or nation…, or other entity; and (2) any legal successor, representative, agent, or agency of the foregoing."

[7] 10 C.F.R. § 2.309(a).

[8] *Id*.

I. Standing

A. The Requirements for Standing

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

> (i) The name, address, and telephone number of the petitioner;
>
> (ii) The nature of the petitioner's right under the Atomic Energy Act of 1954, as amended (AEA), 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.[9]

The 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" 10 C.F.R. § 2.309(d)(1).[10]

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 'zone of interest' protected by the AEA."[11] The "injury 'must be both concrete and particularized, not conjectural, or hypothetical.'"[12] Further, at "the heart of the standing inquiry is whether the

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[9] 10 C.F.R. § 2.309(d)(1).

[10] 10 C.F.R. § 2.309(d)(2). The presiding officer may also consider a request for discretionary intervention when a petitioner is determined to lack standing to intervene as a matter of right, where a sufficient showing is made with respect to the factors enumerated in 10 C.F.R. § 2.309(e).

[11] *El Paso Elec. Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-20-07, 91 NRC __, __ (Sep. 15, 2020) (slip op. at 4) (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)).

[12] *Palo Verde,* CLI-20-07, 91 NRC at __ (slip op. at 4–5) (quoting *Sequoyah Fuels Corp. and General Atomics* (Gore, Oklahoma Site), CLI-94-12, 40 NRC 64, 72 (1994)).

petitioner has 'alleged such a personal stake in the outcome of the controversy' as to demonstrate that a concrete adverseness exists [that] will sharpen the presentation of issues."[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] As noted by the Commission, licensing boards have also employed the proximity presumption to establish standing to intervene in reactor operating license renewal proceedings.[17]

An organization seeking to intervene "must satisfy the same standing requirements as an individual seeking to intervene."[18] 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). 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

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[13] *Sequoyah Fuels*, CLI-94-12, 40 NRC at 71 (citing *Duke Power Co. v. Carolina Environmental Study Group, Inc.*, 438 U.S. 59, 72 (1978) and quoting *Baker v. Carr*, 369 U.S. 186, 204 (1962)).

[14] *See, e.g., Calvert Cliffs, Unit 3*, CLI-09-20, 70 NRC at 915–17 (quoting *Cleveland Elec. Illuminating Co.* (Perry Nuclear Power Plant, Unit 1), CLI-93-21, 38 NRC 87, 92 (1993)).

[15] *Id.* at 915.

[16] *Id.* at 915–16.

[17] *Id.* at 915 n.15 (noting that the Board in *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-06, 53 NRC 138, 150, *aff'd on other grounds,* CLI-01-17, 54 NRC 3 (2001) was "applying [the] proximity presumption in [a] reactor operating license renewal proceeding").

[18] *Palo Verde,* CLI-20-07, 91 NRC at __ (slip op. at 5).

organization to represent them and to request a hearing on their behalf.[19] Further, the "member 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. PSR WI Has Satisfied its Burden of Demonstrating Standing

PSR WI is a nonprofit organization of health professionals and other concerned individuals that works to end commercial nuclear power generation and engages in public education and legal and administrative advocacy to that end.[21] The Petition includes the organization's address and telephone number.[22] PSR WI seeks to establish representational standing to intervene in the Point Beach subsequent license renewal proceeding based on the standing of several of its members.[23] The Petition includes signed and dated declarations from these members. The members provided their names and home addresses, stated that they live and have significant contact within a 50-mile radius of Point Beach, and stated that they are concerned that, as a result of the Point Beach subsequent license renewal, they and their families may be killed, injured, or sickened by airborne or waterborne radioactive releases, and that there may be irreparable damage to real and personal property and the environment.[24] The

[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), CLI-20-05, 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-20-05, 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 2.

[22] *Id*.

[23] *Id.*

[24] *See id.* at 2–10; *see also* Member and Organizational Declarations.

members also stated that they authorize PSR WI to represent their interests in the Point Beach subsequent license renewal proceeding.[25]

The Petition and declarations demonstrate that at least one of the members of PSR WI has authorized it to represent them in this proceeding and that they would have standing to intervene in their own right based on the proximity presumption; that the interests that PSR WI seeks to protect are germane to its purpose; and that neither the asserted claim nor the requested relief require an individual member to participate in this proceeding. Therefore, the Staff does not oppose the standing of PSR WI in this proceeding.

II. Contention Admissibility

A. The 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 petition must "set forth with particularity" the contentions that a petitioner seeks to raise and, for each contention, the petition 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;[26]
>
> (iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;[27]

[25] *See* Member and Organizational Declarations.

[26] 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).

[27] All proffered contentions must be within the scope of the proceeding as defined by the Commission in its initial hearing notice and order referring the proceeding to the licensing board panel. *See, e.g., Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-00-23, 52 NRC 327, 328–29 (2000). As a consequence, any contention that falls outside the specified scope of the proceeding must be rejected. *See, e.g., Pacific Gas and Elec. Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-11-11, 74 NRC 427, 435–36 (2011).

(iv) Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;[28]

(v) 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 to support its position on the issue;[29] and

(vi) Provide 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 supporting reasons for the petitioner's belief.[30]

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."[31] On issues arising under the National Environmental Policy Act of 1969, as

[28] "A dispute at issue is material if its resolution would make a difference in the outcome of the licensing proceeding." *Holtec Int'l* (HI-STORE Consolidated Interim Storage Facility), CLI-20-4, 91 NRC 167, 190 (2020) (internal quotations omitted).

[29] The petitioner is obligated to present the facts and expert opinions necessary to support its contention. *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; "it is not up to the boards to search through pleadings or other materials to uncover arguments and support never advanced by the petitioners themselves [and] boards may not simply 'infer' unarticulated bases of contentions"). *See also Ariz. Pub. Serv. Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991).

[30] 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 petitioner believes that the application fails to contain information on a relevant matter, "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 __, __ (Nov. 12, 2020) (slip op. at 10).

[31] 10 C.F.R. § 2.309(f)(2).

amended (NEPA),[32] the petitioner "shall file contentions based on the applicant's environmental report."[33]

The Commission's regulations governing contention admissibility are intended to "focus litigation on concrete issues and result in a clearer and more focused record for decision."[34] The Commission has explained that the contention admissibility rules are "strict by design."[35] Failure to satisfy any one of the six pleading requirements "renders a contention inadmissible."[36] The rules require "a clear statement as to the basis for the contentions and the submission of … supporting information and references to specific documents and sources that establish the validity of the contention."[37] Although a petitioner does not have to prove its contention at the admissibility stage,[38] the contention admissibility standards are meant to only afford hearings to those who "proffer at least some minimal factual and legal foundation in support of their contentions."[39] The petitioner must provide some support for the contention, either in the form

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[32] 42 U.S.C. § 4321 *et seq*.

[33] *Id.*

[34] *See e.g.*, *S. Nuclear Operating Co., Inc.* (Vogtle Elec. Generating Plant, Unit 3), LBP-20-8, 92 NRC 23, 46 (2020) (quoting Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2202 (Jan. 14, 2004)).

[35] *Entergy Nuclear Operations, Inc.* (Indian Point, Unit 2) CLI-16-5, 83 NRC 131, 136 (2016) (citing *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001) and *S. Carolina Elec. & Gas Co.* (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." 69 Fed. Reg. at 2202.

[36] *Indian Point*, CLI-16-5, 83 NRC at 136; *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 that appear to be "based on little more than speculation"). The requirements are intended, among other things, to ensure that a petitioner reviews the application and supporting documents prior to filing contentions; that contentions are supported by at least some facts or expert opinion known to the petitioner at the time of filing; and that there exists a genuine dispute before a contention is admitted for litigation, to avoid the practice of filing contentions that lack any factual support and seeking to flesh them out later through discovery. *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), LBP-91-35, 34 NRC 163, 167–68 (1991).

[37] *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 118–19 (2006) (quoting *Palo Verde*, CLI-91-12, 34 NRC at 155–56).

[38] *Private Fuel Storage, LLC* (Indep. Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 139 (2004).

[39] *Oconee*, CLI-99-11, 49 NRC at 334.

of facts or expert testimony, and failure to do so requires that the contention be rejected.[40] "[N]either mere speculation nor bare or conclusory assertions, even by an expert, alleging that a matter should be considered will suffice to allow the admission of a proffered contention."[41] Any supporting material provided by the petitioner is subject to scrutiny by the presiding officer and the presiding officer must confirm that the proffered material provides adequate support for the contention.[42] The Commission has long held that the "basis" requirements are intended to: (1) ensure that the contention raises a matter appropriate for adjudication in a particular proceeding; (2) establish a sufficient foundation for the contention to warrant further inquiry into the assertion; and (3) put other parties sufficiently on notice of the issues to be litigated.[43]

If a petitioner neglects to provide the requisite support for its contentions, then the presiding officer should not make assumptions of fact that favor the petitioner or search for or supply information that is lacking.[44] Moreover, providing any material or document as a basis for a contention, without setting forth an explanation of its significance, is grounds for the presiding officer to reject the contention.[45] In sum, the information, facts, and expert opinions

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[40] *Palo Verde*, CLI-91-12, 34 NRC at 155; *accord, Indian Point*, CLI-16-5, 83 NRC at 136. *See* Rules of Practice for Domestic Licensing Proceedings—Procedural Changes in the Hearing Process," 54 Fed. Reg. 33,168, 33,170 (Aug. 11, 1989) ("This requirement does not call upon the intervener to make its case at this stage of the proceeding, but rather to indicate what facts or expert opinions, be it one fact or opinion or many, of which it is aware at that point in time which provide the basis for its contention.").

[41] *S. Nuclear Operating Co.* (Early Site Permit for Vogtle ESP Site), LBP-07-3, 65 NRC 237, 253 (2007) (citing *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003)).

[42] *See Vt. Yankee Nuclear Power Co.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989), *vacated in part on other grounds and remanded*, CLI-90-4, 31 NRC 333 (1990); *see also Tenn. Valley Authority* (Bellefonte Nuclear Plant, Units 1 and 2), LBP-10-7, 71 NRC 391, 421 (2010).

[43] *Oconee*, CLI-99-11, 49 NRC at 328; *See also Phila. Elec. Co.* (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-216, 8 AEC 13, 20–21 (1974).

[44] *See Am. Centrifuge Plant*, CLI-06-10, 63 NRC at 457.

[45] *See Fansteel*, CLI-03-13, 58 NRC at 205.

provided by the petitioner are to be examined by the presiding officer to determine whether they provide adequate support for the proffered contentions.[46]

Under the Commission's caselaw, and 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.[47] Contentions that are nothing more than a generalization regarding the petitioner's view of what applicable policies ought to be must also be rejected.[48] Further, attempts to advocate for requirements stricter than those imposed by regulation constitute collateral attacks on the Commission's rules and are therefore inadmissible.[49]

1. The Scope of Initial and Subsequent License Renewal Proceedings

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.[50] Under 10

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[46] *Am. Centrifuge Plant,* CLI-06-10, 63 NRC at 457; *see Bellefonte Nuclear Plant*, LBP-10-7, 71 NRC at 421.

[47] 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. *See also Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 218 (2003). Accordingly, 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 without a waiver must be rejected. *Id.*

[48] *Millstone*, CLI-03-14, 58 NRC at 218.

[49] *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 315 (2012) (citations omitted); *See Peach Bottom*, ALAB-216, 8 AEC at 20–21 (explaining that a contention that seeks to raise an issue that is not proper for adjudication in the proceeding or that does not apply to the facility in question, or seeks to raise an issue that is not concrete or litigable must also be rejected).

[50] *Oyster Creek*, CLI-06-24, 64 NRC at 117–18; *see also* 10 C.F.R. § 54.29; *Turkey Point*, CLI-01-17, 54 NRC at 8–10.

The standards in 10 C.F.R. Part 54 and the environmental regulations related to license renewal set forth in 10 C.F.R. Part 51 and Appendix B thereto establish the scope of issues that may be considered in a license renewal proceeding. *See generally* Nuclear Power Plant License Renewal, 56 Fed. Reg. 64,943 (Dec. 13, 1991); Nuclear Power Plant License Renewal; Revisions, 60 Fed. Reg. 22,461 (May 8, 1995). As the Commission made clear in 2014, the existing regulatory framework and regulatory process for license renewal also apply to subsequent license renewal. *See* Staff Requirements – SECY-14-0016 – Ongoing Staff Activities to Assess Regulatory Considerations for Power Reactor Subsequent License Renewal (Aug. 29, 2014) (ML14241A578) (SRM-SECY-14-0016) (declining rulemaking; directing the Staff to update license renewal guidance as needed to provide clarity and to "address emerging technical issues and operating experience through alternative vehicles").

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).

The effects of aging are typically managed through aging management programs; time-limited aging analyses are plant-specific safety analyses that were based on an explicitly assumed period of time[51] and must "remain valid for the period of extended operation," or "have been projected to the end of the period of extended operation," or be "adequately managed for the period of extended operation."[52] The actions with regard to aging management and time-limited aging analyses must provide reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the current licensing basis,[53] and that any changes made to the plant's current licensing basis are in accordance with the AEA and the Commission's regulations.[54] Additionally, a renewed license may be issued if the Commission finds that the applicable requirements of Subpart A of 10 C.F.R. Part 51 have been satisfied and any matters raised under 10 C.F.R. § 2.335 have been addressed.[55] The adequacy and manner of the Staff's review may not be challenged in a license renewal proceeding.[56]

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[51] 60 Fed. Reg. at 22,479.

[52] 10 C.F.R. § 54.21(c).

[53] As defined in 10 C.F.R. § 54.3, the current licensing basis 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…."

[54] 10 C.F.R. § 54.29(a).

[55] 10 C.F.R. § 54.29(b)-(c).

[56] *See, e.g., Northern States Power Co.* (Prairie Island Nuclear Generating Plant, Units 1 and 2), CLI-10-27, 72 NRC 481, 493 n.56 (2010) (citations omitted) (noting that adjudicatory challenges that focus on the

These standards, along with other regulations in 10 C.F.R. Part 54 and the environmental regulations related to license renewal set forth in 10 C.F.R. Part 51 and Appendix B thereto, establish the scope of issues that may be considered in a license renewal proceeding. Any contention that falls outside this scope is inadmissible and must be rejected.[57] The NRC's license renewal regulations "derive from years of extensive technical study, review, interagency input, and public comment."[58]

In license renewal proceedings, the Commission has found it generally unnecessary to review issues that are already monitored and reviewed in ongoing regulatory oversight processes; the NRC conducts a technical review under 10 C.F.R. Part 54 to ensure that pertinent public health and safety requirements have been satisfied.[59] Regardless of whether a license renewal application has been filed for a facility, the Commission has a continuing responsibility to oversee the safety of ongoing plant operations, and it routinely oversees a broad range of operating issues under its statutory responsibility to ensure the protection of the public health and safety. In contrast, the NRC's license renewal safety review focuses on "plant systems, structures, and components for which current [regulatory] activities and requirements

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Staff's review of the application rather than on errors or omissions in the application itself are not permitted in NRC adjudications); *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-23, 68 NRC 461, 476–77 (2008) (citations omitted) (stating that "[t]he NRC has not, and will not, litigate claims about the adequacy of the Staff's safety review in licensing adjudications" and that it is the applicant, not the Staff, that has the burden of proof in litigation). Further, licensing boards are not generally empowered to correct or supervise the Staff's performance of its research activities. *See* 10 C.F.R. § 2.319. Licensing boards "simply have no jurisdiction over nonadjudicatory activities of the Staff that the Commission has clearly assigned to other offices unless the Commission itself grants that jurisdiction to the Board." *Duke Energy Corp.* (Catawba Nuclear Station, Units 1 and 2), CLI-04-6, 59 NRC 62, 74 (2004) (citations omitted). Staff non-adjudicatory functions include safety reviews and the approaches to conducting environmental reviews. *See id.* ("[L]icensing boards do not sit to correct NRC Staff misdeeds or to supervise or direct NRC Staff regulatory reviews.").

[57] 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).

[58] *Turkey Point*, CLI-01-17, 54 NRC at 7.

[59] *See, e.g., id.* at 6, 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").

may not be sufficient to manage the effects of aging in the period of extended operation."[60] Adjudicatory proceedings on license renewal applications are bounded by the same rules and scope as the NRC's license renewal review.[61]

2. The Environmental Review Requirements of Initial and Subsequent License Renewal Applications

NEPA requires Federal agencies to include in any recommendation or report on proposals for major Federal actions significantly affecting the quality of the human environment, a detailed statement on:

(i) the environmental impact of the proposed action,

(ii) any adverse environmental effects that cannot be avoided should the proposal be implemented,

(iii) alternatives to the proposed action,

(iv) the relationship between local short-term uses of the environment and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources that would be involved in the proposed action should it be implemented.[62]

In accordance with its NEPA responsibilities, the NRC is required to take a "hard look" at the environmental impacts of a proposed major Federal action that could significantly affect the environment, as well as reasonable alternatives to that action.[63] This hard look is tempered by "a 'rule of reason' in that consideration of environmental impacts need not address 'all theoretical possibilities,' but rather only those that have some 'reasonable possibility' of

[60] *Id.* at 10 (quoting 60 Fed. Reg. at 22,469).

[61] *Id*. ("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.").

[62] *See* NEPA § 102(2)(C), 42 U.S.C. § 4332(2)(C).

[63] *See Crow Butte Resources, Inc.* (Marsland Expansion Area), LBP-19-2, 89 NRC 18, 40 (2019) (citing *Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87–88 (1998)).

occurring."[64] An agency thus need only address impacts that are reasonably foreseeable; the "agency need not perform analyses concerning events that would be considered 'worst case scenarios … or those considered remote and highly speculative.'"[65] Further, "NEPA 'does not call for certainty or precision, but an *estimate* of anticipated (not unduly speculative) impacts.'"[66] Neither does NEPA call for Federal agencies to do the impossible.[67] Moreover, NEPA gives agencies "broad discretion 'to keep their inquiries within appropriate and manageable boundaries.'"[68] As the Commission has observed, "NEPA requires consideration of 'reasonable' alternatives, not all conceivable ones."[69] Further, the Staff's environmental impact statements "need only discuss those alternatives that … will bring about the ends of the proposed action—a principle equally applicable to Environmental Reports."[70]

The NRC has adopted regulations in 10 C.F.R. Part 51 to implement the agency's NEPA responsibilities. These regulations divide the license renewal environmental review into "Category 1" generic issues and "Category 2" site-specific issues[71] based on NUREG-1437,

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[64] *Id*. (quoting *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-156, 6 AEC 831, 836 (1973)).

[65] *Holtec Int'l* (HI-STORE Consolidated Interim Storage Facility), LBP-19-4, 89 NRC 353, 357 (2019) (quoting *Limerick Ecology Action, Inc. v. NRC,* 869 F.2d 719, 754–55 (3d Cir. 1989)).

[66] *Marsland,* LBP-19-2, 89 NRC at 40 (quoting *Louisiana Energy Services, L.P.* (National Enrichment Facility), CLI-05-20, 62 NRC 523, 536 (2005)).

[67] *Kleppe v. Sierra Club*, 427 U.S. 390, 401–02 (1976) (observing that where it is not possible for an agency to analyze the environmental consequences of a proposed action or alternatives to it, requiring such analysis would have "no factual predicate" and under those circumstances an environmental impact statement is not required).

[68] *Marsland*, LBP-19-02, 89 NRC at 40 (quoting *Claiborne*, CLI-98-3, 47 NRC at 103).

[69] *Seabrook*, CLI-12-5, 75 at 338 (quoting *Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827, 834, 837, 838 (D.C. Cir. 1972)).

[70] *Id.* at 339 (footnotes and quotation marks omitted).

[71] *See* Appendix B to Subpart A of 10 C.F.R. Part 51 ("The Commission has assessed the environmental impacts associated with granting a renewed operating license for a nuclear power plant" and "Table B–1 summarizes the Commission's findings … subject to an evaluation of those issues identified in Category 2 as requiring further analysis and possible significant new information….").

"Generic Environmental Impact Statement for License Renewal of Nuclear Plants" (GEIS).[72] The findings of the environmental impact analyses conducted for the GEIS are listed in Table B–1 of Appendix B to Subpart A of 10 C.F.R. Part 51, which lists each issue and its categorization. The NRC can satisfy its NEPA obligations for license renewal by combining the site-specific analysis of the Category 2 issues with the generic analysis of the Category 1 issues, including consideration of any new and significant information.[73]

In its Environmental Report, a license renewal applicant is required to include "analyses of the environmental impacts of the proposed action … for those issues identified as Category 2 issues…."[74] The Environmental Report is "not required to contain analyses of the environmental impacts of the license renewal issues identified as Category 1"[75] except to the extent that there is "any new and significant information regarding the environmental impacts…."[76] The Environmental Report is also 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" or "other issues not related to the environmental effects of the proposed action and the alternatives."[77] Accordingly, an applicant must provide a plant-specific review of the Category 2 issues in its Environmental Report and must address any new and significant

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[72] NUREG-1437, Rev. 1, Vols. 1–3, Generic Environmental Impact Statement for License Renewal of Nuclear Plants (2013) (ML13106A241, ML13106A242, and ML13106A244) (identifying 78 environmental impact issues for license renewal, of which 59 were determined to be generic Category 1 issues, 17 are site-specific Category 2 issues, and 2 are uncategorized).

[73] *See Massachusetts v. NRC*, 522 F.3d 115, 120–21 (1st Cir. 2008).

[74] 10 C.F.R. § 51.53(c)(3)(ii).

[75] 10 C.F.R. § 51.53(c)(3)(i).

[76] 10 C.F.R. § 51.53(c)(3)(iv).

[77] 10 C.F.R. § 51.53(c)(2).

information that might render the Commission's Category 1 determinations inapplicable in that proceeding.[78]

Based on the Environmental Report, the Staff is required to prepare an environmental impact statement that is a supplement to the GEIS and that is referred to as an SEIS.[79] Like the Environmental Report, the SEIS "integrate[s] the conclusions in the [GEIS] for issues designated as Category 1 with information developed for those Category 2 issues applicable to the plant … and any new and significant information."[80] The Staff's license renewal environmental review is guided by NUREG-1555, "Standard Review Plans for Environmental Reviews for Nuclear Power Plants—Operating License Renewal."[81]

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 on a generic basis.[82] Therefore, as the Commission has stated, Category 1 issues "fall beyond the scope of individual license renewal proceedings."[83] Because these generic environmental analyses were incorporated into an NRC rule, their conclusions "may not be challenged in litigation unless the rule is waived by the Commission for a particular proceeding

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[78] *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 at 11–12; *Entergy Nuclear Generation Company 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, 527–28 (2009).

[79] 10 C.F.R. § 51.95(c).

[80] 10 C.F.R. § 51.95(c)(4). Following publication of an SEIS, 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 [SEIS]." *Massachusetts v. NRC,* 708 F.3d at 68–69 (quoting *Town of Winthrop v. FAA*, 535 F.3d 1, 7, 12 (1st Cir. 2008)).

[81] NUREG-1555, Supp. 1, Rev. 1, Standard Review Plans for Environmental Reviews for Nuclear Power Plants—Operating License Renewal (2013) (ML13106A246).

[82] *Turkey Point*, CLI-01-17, 54 NRC at 11–12.

[83] *Id.* at 12. In *Turkey Point*, the Commission recognized that the NRC's 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*.

or the rule itself is suspended or altered in a rulemaking proceeding."[84] Accordingly, a contention challenging a Category 1 generic determination, even if based on new and significant information, can only be admitted if the Commission grants a waiver of its regulations.[85]

B. PSR WI Has Not Satisfied its Burden of Proposing at Least One Admissible Contention

Although the Petition demonstrates standing under the provisions of 10 C.F.R.§ 2.309(d), it does not demonstrate that at least one of its four proposed contentions meets the requirements of 10 C.F.R. § 2.309(f). Therefore, pursuant to 10 C.F.R. § 2.309(a), the Petition should be denied.

1. Proposed Contention 1 Is Not Admissible

Proposed Contention 1 states that

> The Environmental Report fails to consider a reasonable range of alternatives to the proposed action because of a failure to analyze thermal pollution mitigation as a means of reducing aquatic biota and migratory bird impingement, entrainment, and damage from thermal pollution, as required by NEPA and the NRC.

This proposed contention, read together with the basis and arguments presented, alleges that Environmental Report § 7.3, "Alternatives for Reducing Adverse Impacts," fails to comply with the 10 C.F.R. §§ 51.45(c) and 51.53(c)(3)(iii) requirements to consider "alternatives available for reducing or avoiding adverse environmental effects" because it "unlawfully" fails consider the "reasonable" mitigation alternative of replacing Point Beach's once-through cooling system with a closed-cycle cooling tower system.[86] Petitioner claims the alternative would reduce the adverse environmental effects of Category 2 issues (impingement and entrainment

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[84] *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.

[85] *Florida Power & Light Co.* (Turkey Point Nuclear Generating Units 3 and 4), CLI-20-03, 91 NRC 133, 152–53 (2020).

[86] *Id.* at 17-18.

of aquatic organisms; thermal impacts on aquatic organisms), and would also reduce occasional bird mortality from impingement.[87] Petitioner also claims that the Environmental Report's analysis is inaccurate or incomplete because (1) it presents an insufficient analysis of thermal discharges between 1975 and 2020 because of limited data and "scientific weaknesses"[88] and (2) NextEra wrongly concludes that "[b]ecause there are no planned operational changes during the proposed [subsequent license renewal] operating term that would increase the temperature of [Point Beach's] existing thermal discharge, impacts are anticipated to be SMALL and mitigation measures are not warranted."[89]

Proposed Contention 1 claims the Environmental Report is deficient for failing to include—as a reasonable alternative to the proposed action or as a mitigation alternative —the use of a cooling tower system to reduce or avoid adverse effects from thermal impacts, and entrainment and impingement, on aquatic organisms.[90] Thus, this contention appears to be a contention of omission.[91]

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[87] *Id*. at 18-20. *See* 10 C.F.R. Part 51, Subpart A, Appendix B, Table B-1 (Table B-1) (listing Category 2 issues: "Impingement and entrainment of aquatic organisms (plants with once-through cooling systems or cooling ponds)"; and "Thermal impacts on aquatic organisms (plants with once-through cooling systems or cooling ponds)"). Petitioner also claims that Point Beach is a "super predator[]." Petition at 20 (citing Gundersen Declaration at 23). But Gundersen describes the function of cooling systems and states generalized concerns, without reference to specific Point Beach data, to conclude that cooling towers are required "to save Lake Michigan biome." Gundersen Declaration at 23–24. Conclusory assertions, even by an expert, do not provide adequate support for a contention. *See Fansteel,* CLI-03-13, 58 NRC at 203.

[88] Petition at 21-25; Petition at 24 (citing *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 and 2), National Pollutant Discharge Elimination System Permit, 1 E.A.D. 332, __ (1977) (1977 WL22370, at 5) (where the U.S. Environmental Protection Agency (EPA) Administrator stated,"[A] determination of the effect of the thermal discharge cannot be made without considering all other effects on the environment, including the effects of the intake (i.e., entrainment and entrapment)…."). This statement addressed the interdependence of CWA § 316(a) and (b) determinations, acknowledging a determination of best available technology for cooling is made on a case-by-case basis that considers the discharge environment.

[89] Petition at 25 (quoting Environmental Report at 4-26). Petitioner omits the immediately preceding discussion in the Environmental Report explaining that the impacts to aquatic organisms during the proposed subsequent license renewal period would be SMALL because Point Beach complies with its Clean Water Act § 316(a) discharge permit. *See* Environmental Report at 4-25–4-26.

[90] *See, e.g.,* Petition at 21-23, 29-30.

[91] A contention of omission "alleges an application suffers from an improper omission, whereas a contention of adequacy raises a specific substantive challenge to how particular information or issues

But the information Petitioner provides is not sufficient to show a genuine dispute as to a material issue of law or fact concerning whether a cooling tower system must be considered as a reasonable mitigation alternative to reduce adverse impacts at Point Beach. Neither NEPA nor NRC regulations applicable to license renewal require consideration of Petitioner's proposed alternative because NEPA's hard look requirement is subject to a rule of reason. Moreover, unlike the circumstances Petitioner describes surrounding the Oyster Creek and Indian Point license renewals, where state authorities required the use of cooling towers,[92] Petitioner does not show that the State of Wisconsin water quality permitting authority has "changed [its] regulatory view" and imposed a cooling tower requirement at Point Beach.

Petitioner does not identify sufficient information to show a genuine dispute with the Environmental Report as to whether the consideration of their proposed mitigation alternative is required or reasonable in the circumstances presented here. Therefore, the contention is inadmissible under 10 C.F.R. § 2.309(f)(1)(vi).

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have been discussed in the application." *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 6 & 7), LBP-11-6, 73 NRC 149, 200 n.53 (2011); *accord Pac. Gas & Elec. Co.* (Diablo Canyon Nuclear Power Plant, Units 1 & 2), CLI-16-11, 83 NRC 524, 534 (2016). If missing information "is later supplied by the applicant or considered by the Staff in a draft EIS, the contention is moot" and should be dismissed. *See Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station Units 1 and 2,), CLI-02-28, 56 NRC 373, 383 (2002); *accord USEC, Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 444 (2006).

See, e.g., *Fla. Power & Light Co*. (Turkey Point Nuclear Generating Units 3 and 4), LBP-19-3, 89 NRC 245 (2019) (admitting a contention claiming an Environmental Report omitted consideration of mechanical draft cooling alternative due to impacts on species and water); *Fla. Power & Light Co*. (Turkey Point Nuclear Generating Units 3 and 4), LBP-19-6, 90 NRC 17, 21-22 (2019) (dismissing the contention as moot based because information in the NRC Draft SEIS cured the omission identified in the contention).

[92] *See* Petition at 25-26.

(a) Proposed Contention 1 Does Not Show a Genuine Dispute Exists

Petitioner does not provide sufficient information to show a genuine dispute with the application.

i. Consideration of Cooling Towers Is Not Required or a Reasonable Alternative

Petitioner's claims lack an adequate factual or legal basis to show consideration of cooling towers as a reasonable alternative to the proposed action or as a reasonable mitigation alternative that is "required" for the Point Beach subsequent license renewal.[93] Neither NEPA nor the NRC's regulations implementing NEPA require the evaluation of the continued operation of Point Beach with cooling towers as a reasonable alternative.

As noted in section II.B.2, supra, NEPA's hard look requirement for consideration of the environmental impacts of a proposed action that could significantly affect the environment, and reasonable alternatives to that action,[94] dictates a process, not a particular action or result, and is tempered by a rule of reason.[95] NRC regulations implementing NEPA instruct a license renewal applicant, as well as the Staff, to consider "the environmental impacts of alternatives to the proposed action, and alternatives available for reducing or avoiding adverse environmental effects."[96] NRC regulations applicable to subsequent license renewal, however, do not specify the alternative actions or mitigation measures that must be considered. Instead, a reasonable range of alternatives needs to be considered.[97] Additionally, agencies have "broad discretion 'to

[93] Petition at 17.

[94] *See Marsland*, LBP-19-2, 89 NRC at 40*; Claiborne*, CLI-98-3, 47 NRC at 87-88.

[95] *See Marsland*, LBP-19-2, 89 NRC at 40 (quoting *Shoreham*, ALAB-156, 6 AEC at 836); *see also Dep't of Transp. v. Pub. Citizen*, 541 U.S. 752, 767-68 (2004) (explaining that inherent in NEPA is a "rule of reason" which ensures that agencies determine whether and to what extent to prepare an EIS).

[96] 10 C.F.R. §§ 51.45(c) and 51.71(d).

[97] *See id*. (no discussion required at the license renewal stage regarding economic or technical benefits and costs unless they "are either essential for a determination regarding the inclusion of an alternative in the range of alternatives considered or relevant to mitigation").

keep their inquiries within appropriate and manageable boundaries.'"[98] As the Commission has noted, this means that "NEPA requires consideration of 'reasonable' alternatives, not all conceivable ones."[99] "Under basic NEPA principles, it is reasonable to tailor the degree of mitigation analyses to the significance of the impact to be mitigated."[100]

Petitioner does not show a genuine dispute as to whether there is a legal requirement to consider a mitigation measure as a project alternative. Petitioner aptly identifies case law indicating that an agency should explore a reasonable range of alternatives to permit a reasoned choice, to aid the decisionmaker by illuminating whether the purpose of the action can be achieved with less impact.[101] Petitioner, however, incorrectly argues that an "obviously superior" standard applies to consideration of alternatives in license renewal proceedings.[102] That standard, codified at 10 C.F.R. § 51.50(b), applies to comparison of alternate sites being considered at the site selection stage and it is not appropriate here.

In license renewal, the NRC also considers the environmental impacts of the proposed action, alternatives to a proposed action, and any mitigation measures for a facility that is

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[98] *Marsland,* LBP-19-2, 89 NRC at 40 (quoting *Claiborne,* CLI-98-3, 47 NRC at 103); *see generally South Louisiana Environmental Council, Inc. v. Sand*, 629 F.2d 1005, 1011 (5th Cir. 1980).

[99] *Seabrook*, CLI-12-5, 75 NRC at 338 (citing *NRDC v. Morton*, 458 F.2d 827, 834, 837, 838 (D.C. Cir. 1972)).

[100] *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 & 3), CLI-16-7, 83 NRC 293, 323 n.156 (2016) (citing 40 C.F.R. § 1502.2(b) ("Environmental impact statements shall discuss impacts in proportion to their significance.")).

[101] *See*, *e.g.,* Petition at 30-31 (citing *Methow Valley Citizens Council v. Regional Forester, 833 F.2d 810, 815 (9th Cir. 1987)* (discussion of alternative must permit a reasoned choice); *Union Neighbors United, Inc. v. Jewell*, 831 F.3d 564, 569 (D.C. Cir. 2016) (rigorous exploration and objectively evaluation of all reasonable alternatives as required 40 C.F.R. § 1502.14); *Idaho Conservation League v. Mumma*, 956 F. 2d 1508, 1519-20 (9th Cir. 1992) (existence of a viable but unexamined alternative renders an impact statement inadequate); *North Buckhead Civic Ass'n v. Skinner*, 903 F.2d 1533, 1542 (11th Cir. 1990) (consideration of a highway project alternative that partially satisfies the purpose of a proposed project may allow the decision-maker to conclude that it should meet part of the goal with less impact, but its consideration "may or may not needed depending on whether it can be considered a "'reasonable alternative'".).

[102] *See* Petition at 31 (citing *Pub. Serv. Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-471, 7 NRC 477, 499 (1978).

already constructed and has an operating license.[103] Under 10 C.F.R. § 51.95(c)(4), the NRC Staff recommends (and an NRC licensing board presiding over a contested proceeding must determine) "whether or not the adverse impacts are so great that preserving the option of renewal for energy decisionmakers would be unreasonable." NRC guidance indicates that consideration of the no action alternative and viable replacement power alternatives in lieu of the proposed action is reasonable.[104]

With respect to mitigation, NRC license renewal guidance states that license renewal environmental reports should include "a brief description of alternatives considered that would reduce or avoid adverse effects."[105] That guidance emphasizes that mitigation alternatives are to be considered "in proportion to the significance of the impact,"[106] which reflects Commission

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[103] *See* 10 C.F.R. §§ 51.53(c), 51.71, 51.95(c).

[104] *See* Regulatory Guide 4.2, Supp.1, Rev. 1, Preparation of Environmental Reports for Nuclear Power Plant License Renewal Applications, 5, 52 (June 2013) (ML13067A354) (RG 4.2). This guidance generally refers to alternatives to the proposed action as "replacement power alternatives" and mitigation as "alternatives for reducing adverse impacts." See *id.* at 52-53.

[105] RG 4.2 at 13. Guidance to the Staff similarly instructs the Staff to consider the environmental impacts of alternatives, and "alternatives to reduce or avoid adverse environmental impacts (e.g., constructing and operating a new cooling system)." NUREG-1555, Supp. 1, Rev. 1, "Standard Review Plans for Environmental Reviews for Nuclear Power Plants, Operating License Renewal, Final Report" (June 2013) (ML13106A246), at 4.0-1.

[106] RG 4.2, Section A.2, "General Guidance to Applicants" (at 8-9) states that 10 C.F.R. § 51.45(c) requires applicants to consider alternatives available for reducing or avoiding any adverse effects, indicating that applicants should "identify any ongoing mitigation and discuss the potential need for additional mitigation. Mitigation alternatives should be considered in proportion to the significance of the impact." Applicants "should identify all relevant, reasonable mitigation measures that could reduce or avoid adverse effects, even if they are outside the jurisdiction of the NRC."

Reg. Guide 4.2, Section 4, "Environmental Consequences of the Proposed Action and Mitigating Actions," *id.* at 26, similarly states that an applicant should consider mitigation measures "to reduce or avoid adverse effects where applicable" and identify and discuss possible mitigation measures in proportion to the significance of the adverse impact. "If there is no adverse impact to be mitigated, the applicant should present the basis for that determination." *Id.*

Section 7.2 (*id*. at 53-54) notes that alternatives considered to reducing adverse impacts typically "include closed-cycle cooling or intake modification options for nuclear power plants that currently use once-through cooling." Applicants "should describe the impacts of the alternatives for reducing adverse effects identified for detailed study" and "analyze each alternative on a site-specific basis and in proportion to its significance."

expectations for discussions of mitigation and is consistent with NEPA case law.[107] The lesser the impact, the lesser the detail or alternative required to address it.

ii. NRC Regulations Require Reliance on Water Quality Permits

For the Category 2 issues raised by the contention (thermal impacts on aquatic organisms, and entrainment and impingement impacts on aquatic organisms), the decisive factor is the NPDES permit issued under Section 402 of the Federal Water Pollution Control Act, as amended ("FWPCA"), and the regulations at 40 CFR Part 423.[108] The FWPCA, also known as the Clean Water Act (CWA), authorizes the EPA to approve state programs for the issuance of National Pollutant Discharge Elimination System ["NPDES"] permits.[109] Permits issued under the NPDES program impose "effluent limitations and other requirements on facilities that discharge pollutants into the waters of the United States." Section 511(c)(2) of the CWA "precludes [the NRC] from either second-guessing the conclusions in NPDES permits or imposing our own effluent limitations— thermal or otherwise."[110] The general intent of Congress evidenced in CWA § 101 is that "the CWA [is] to be implemented in a way that avoids needless duplication and unnecessary delays at all levels of government."[111] The permitting agency (the EPA or a state agency) determines what cooling system a nuclear power facility may use; the

[107] *Indian Point*, CLI-16-7, 83 NRC at 323 n.156 ("Under basic NEPA principles, it is reasonable to tailor the degree of mitigation analyses to the significance of the impact to be mitigated."). For example, RG 4.2 (at 49) states that an Environmental Report should identify mitigation measures to reduce or avoid any impacts if the cumulative analysis indicates that a moderate to large contribution would occur as a result of license renewal.

[108] 33 U.S.C. § 1251.

[109] 33 U.S.C. § 1342(b).

[110] *Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI-07-16, 65 NRC 371, 377 (2007) (citing 33 U.S.C. § 1371(c)(2).

[111] *Vermont* Yankee, CLI-07-16, 65 NRC at 389-90 (quoting *Carolina Power and Light Co.* (H.B. Robinson, Unit 2), ALAB-569, 10 NRC 557, 561 n.14 (1979) (internal quotations and citations omitted).

NRC then considers the impacts resulting from the use of that system. The Commission has held that NRC licensing boards should defer to the agency that issued the 316(a) permit.[112]

NRC regulations require that the NRC rely, in part, on water quality and thermal impact determinations and requirements established under the CWA, including by States that implement the statute. Specifically, 10 C.F.R. § 51.53(c)(3)(ii)(B) requires license renewal applicants for plants that use once-through cooling heat dissipation systems to provide a current CWA § 316(b) determination, and, if necessary, a CWA § 316(a) variance[113] in accordance with 10 C.F.R. Part 125, or equivalent State permits and supporting documentation. If not provided, the license renewal applicant must "assess the impact of the proposed action on fish and shellfish resources resulting from thermal changes and impingement and entrainment."[114]

Section 316(b) of the CWA requires that the location, design, construction and capacity of the cooling water intake structures to reflect the best technology available to minimize adverse impacts. The current Wisconsin NPDES permit (i.e., the WPDES permit), which expires in June 2021, is appended to the Environmental Report and provides an interim determination regarding the technology available to reduce impacts.[115]

Cooling towers are not required by this permit and Petitioner proffers no information to indicate that Wisconsin will impose that technology as a condition of the renewal of the § 316(a) variance. In addition, Petitioner does not show why NextEra cannot rely on its compliance with

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[112] *Vermont Yankee,* 65 NRC at 389.

[113] A CWA § 316(a) variance allows a thermal effluent discharger to demonstrate that thermal discharge limits are more stringent than necessary and obtain alternate, facility-specific limits. 33 U.S.C. §1326. National Pollutant Discharge Elimination System—Final Regulations To Establish Requirements for Cooling Water Intake Structures at Existing Facilities and Amend Requirements at Phase I Facilities, 79 Fed. Reg. 48,300 (Aug. 15, 2014) (effective October 14, 2014).

[114] 10 C.F.R. § 51.53(c)(3)(ii)(B).

[115] *See* Environmental Report at 2-19 and Attachment B at 1 (effective July 1, 2016) (containing water quality-based effluent limitations that are necessary to ensure water quality standards for Lake Michigan are met) It states that the current cooling water intake system includes a crib with an acoustic deterrent system located offshore and makes an interim determination that the cooling water intake system is the best technology available).

its WPDES requirement to conduct its analysis. In fact, 10 C.F.R. § 51.45(d) requires the applicant to include in its Environmental Report a discussion of applicable environmental standards and requirements, "including …water pollution limitations or requirements which have been imposed by Federal, State, regional, and local agencies having responsibility for environmental protection."[116] Thus, Petitioner has not shown a genuine dispute with the Environmental Report regarding the impacts resulting from impingement and entrainment of aquatic organisms or why NextEra cannot rely on adherence to the CWA 316(b) regulation.[117]

The Environmental Report relies on compliance with the WPDES permit to ensure that Point Beach complies with CWA requirements for thermal discharge.[118] A "SMALL" impact significance level means that the "environmental effects are not detectable or are so minor that they will neither destabilize nor noticeably alter any important attribute of the resource."[119]

Petitioner does not show that consideration of cooling towers would reduce an impact finding significance level from LARGE to MODERATE, or MODERATE to SMALL. [120] Such a showing is consistent with NEPA's rule of reason and the efficiencies the Commission sought to

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[116] Under 10 C.F.R. § 51.71(d), the NRC will consider the same information, "including water pollution limitations and requirements issued or imposed under the [FWPCA]." However, note 3 to § 51.71(d) emphasizes that compliance with standards imposed by EPA or designated permitting states is not a substitute for the requirement that the NRC weigh all environmental effects weigh effects and consider alternatives that are available to reduce adverse effects.

[117] *See* National Pollutant Discharge Elimination System—Final Regulations To Establish Requirements for Cooling Water Intake Structures at Existing Facilities and Amend Requirements at Phase I Facilities, 79 Fed. Reg. 48,300 (Aug. 15, 2014). *See* also Environmental Report at § 4.6.1 (noting that NextEra also relies on Wisconsin legislation, and the Point Beach Wisconsin Pollutant Discharge Elimination System (WPDES) permit, as well as NextEra's identification of potential concerns via ongoing studies to minimize or maintain existing SMALL impacts. To the extent that Petitioner seeks to challenge the NRC reliance on water quality permits, it would appear to challenge NRC regulations without the requisite petition for waiver or exception required by 10 C.F.R. § 2.335.

[118] Environmental Report at § 4.6.2.

[119] Note 3 in Table B-1 to 10 C.F.R. Part 51, Subpart A, Appendix B. For the only two Category 2 issues implicated by the concerns in proposed Contention 1, Table B-1, indicates impacts from impingement and entrainment are small at many plants, but could be moderate or large depending on cooling system withdrawal rates and volumes, and the aquatic resources at the site.

[120] Table B-1 states that "MODERATE" means "environmental effects are sufficient to alter noticeably, but not to destabilize, important attributes of the resource" and that "LARGE" means "environmental effects are clearly noticeable and are sufficient to destabilize important attributes of the resource."

gain in the conduct of license renewal reviews. If the environmental effects from thermal impacts, entrainment and impingement are SMALL—not detectable or so minor they will neither destabilize nor noticeably alter any important attribute of the resource—then it would not be reasonable to consider a further reduction. The absence of meaningful differences in impact about impacts would likely not assist the NRC determination, required by 10 C.F.R. § 51.95(c)(4), on whether the impacts of license renewal are so great that preserving the option of license renewal for energy-planning decisionmakers would be unreasonable. Moreover, consideration of a closed cycle cooling system not imposed on the continued operation of the facility would appear to second guess the permitting agency's determination.[121]

But such circumstances are not identified by the Petitioner here. Petitioner's argument that use of cooling towers is a reasonable alternative and would reduce impacts at the facility,[122] implies that the NRC staff (and, if the contention is admitted, the licensing board) should second guess Wisconsin's water quality oversight or ignore the presumption that the permitting authority will appropriately fulfill its duties.[123]

Petitioner's reliance on events surrounding the renewal of the Oyster Creek and Indian Point power plants as showing a genuine dispute that consideration of cooling towers is a reasonable mitigation alternative applicable to Point Beach is also misplaced.[124] As indicated by Petitioner's summary, the consideration of cooling towers was prompted by the actions of the respective Clean Water Act (CWA) § 316(b) permitting authority that required cooling towers as

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[121] *Vermont Yankee,* CLI-07-16, 65 NRC at 377.

[122] See Petition at 26-27. At this juncture, however, the Staff takes no position on the propriety of impact significance levels in the ER.

[123] The NRC recognizes a presumption that other regulatory authorities will continue to regulate an applicant's activities and will take enforcement action, as necessary, to ensure compliance with requirements imposed by those authorities. *See Fla Power & Light Co.* (Turkey Point Units 6 & 7), LBP-17-5, 86 NRC 1, 29 (2017).

[124] *See* Petition at 26-27.

the best technology available for minimizing adverse environmental impacts from the operation of those facilities.[125]

Petitioner's reliance on an EPA Inspector General Report, which estimates annual aquatic species mortality due to impingement and entrainment at named power facilities, does not provide support for the contention as required by 10 C.F.R. § 2.309(f)(1)(v); Point Beach is not mentioned in the EPA report.[126] Thus, it provides no site-specific information and does not show a genuine dispute.

In addition, Petitioner's recitation of information in the Environmental Report, including WPDES permit limits for waste heat discharges into Lake Michigan, impact information in the previous license renewal (2005 SEIS), water withdrawal rates, and temperatures associated with previous power uprates in 2002 and 2011, does not support its claim that cooling towers must be considered a reasonable alternative to mitigate adverse thermal impacts of subsequent license renewal.[127] The uprates occurred before the current WPDES permit.

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[125] Although not discussion in the petition, the examination of cooling towers alternative at the Seabrook cite was done under unique circumstances, "necessary only because the [U.S. Environmental Protection Agency (EPA)] might require" the utilization of towers and at the behest of the applicant as a "backup plan" to accommodate EPA's determination. *Seabrook*, ALAB-471, 7 NRC at 499. "If the applicants were sure ultimately to obtain EPA's approval of an open-cycle cooling system, we would not have to ascertain whether other alternatives for providing power are 'obviously superior' to Seabrook with cooling towers". *Id.* Irrespective of EPA's determination regarding a cooling tower requirement, the Commission standard for comparison of a proposed site for power plant "was not to be rejected unless an alternative site was found 'obviously superior.'" *Id.* at 482.

[126] *See* Petition at 21 n.38 (citing U.S. EPA Office of Inspector General, "EPA Oversight Addresses Thermal Variance and Cooling Water Permit Deficiencies But Needs to Address Compliance With Public Notice Requirements," Report No. 13-P-0264 at 1 (May 23, 2013)

https://www.epa.gov/sites/production/files/2015-09/documents/20130523-13-p-0264.pdf)

[127] Petition at 22-24 (citing Environmental Report at 3-12). The 2002 uprate captured a measurement uncertainty and was subject to a categorical exclusion in 10 C.F.R. § 51.22(c)(9). *See* Measurement Uncertainty Recapture Power Uprate Amendments, (Nov. 29, 2002) (Package ML023370142). Based on an environment assessment (published 76 Fed. Reg. 22928, Apr. 25, 2011), the NRC made a finding of no significant impact regarding the 2011 extend power uprate, Point Beach Nuclear Plant (PBNP), Units 1 and 2 – Issuance of License Amendments Regarding Extended Power Uprate (TAC Nos. ME1044 and ME1045) (May 3, 2011) (ML111170513).

Petitioner provides nothing to indicate that Point Beach is operating inconsistent with its WPDES permit, which determined thermal discharge, impingement, and entrainment impacts to be minimal.[128] Even Petitioner acknowledges that an August 2012 memorandum attached to the current WPDES permit concludes that the thermal plume authorized by the thermal discharge limit would cause minimal impacts to such fish and invertebrates communities, although portions of the mixing zone will not be not suitable for all stages of representative species.[129] In addition, general and conclusory statements about "occasional" bird mortality and the cumulative impact analysis do not raise a genuine dispute with the application.[130]

In short, the contention that NEPA and NRC regulations require consideration a cooling tower mitigation as a reasonable alternative to reduce adverse impacts during subsequent license renewal is inadmissible because it fails to satisfy the requirements of 10 C.F.R. § 2.309(f)(1)(vi). While Petitioner raises a site-specific issue, identifies adverse impacts, and correctly states that an applicant's Environmental Report needs to consider mitigation alternatives (i.e., means to reduce or avoid adverse impacts), Petitioner does not provide sufficient information to show a genuine dispute on a material issue of law or fact. Therefore, proposed Contention 1 is not admissible.

2. Proposed Contention 2 Is Not Admissible

Proposed Contention 2 states that:

> Point Beach's continued operation violates 10 [C.F.R.] Part 50, Appendix A, [General Design] Criterion [(GDC)] 14 because the reactor coolant pressure boundary has not been tested so as to have an extremely low probability of abnormal leakage, of rapidly propagating failure, and of gross rupture, and the aging management plan does not provide the requisite reasonable assurance.[131]

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[128] See Environmental Report at Attachment B; 2005 SEIS at §4.1.1 through 4.1.3.

[129] Petition at 24 (citing WPDES permit at 639/705 of pdf).

[130] See Petition at 17, 18-20, 22.

[131] Petition at 31.

Proposed Contention 2 is related to reactor pressure vessel neutron embrittlement and pressurized thermal shock. Reactor pressure vessel neutron embrittlement results from the neutron irradiation of the reactor pressure vessel during reactor operation, which reduces the fracture toughness of ferritic steel in the vessel.[132] Neutron embrittlement could lead to brittle failure during normal and off-normal operating conditions.[133] The NRC's regulations at 10 C.F.R. Part 50, Appendix H require the monitoring of reactor pressure vessel neutron embrittlement to ensure that, consistent with 10 C.F.R. 50.61 and 10 C.F.R. Part 50, Appendix G, the vessel continues to have adequate fracture toughness to prevent brittle failure.[134] And 10 C.F.R. § 50.61 defines pressurized thermal shock as an event or transient that causes "severe overcooling (thermal shock) concurrent with or followed by significant pressure in the reactor vessel."[135] "Capsules" (alternatively referred to as "coupons" by Petitioner)[136] are specimens of the reactor vessel material that are placed near the inside vessel wall so that they "duplicate, as closely as possible, the neutron spectrum, temperature history, and maximum neutron fluence experienced at the reactor vessel's inner surface," while also "typically receiv[ing] neutron fluence exposures that are higher than the inner surface of the reactor vessel."[137] This allows capsules to "be withdrawn and tested [for fracture toughness data] prior to the inner surface receiving an equivalent neutron fluence so that the surveillance test results bound the conditions at the end of … operation."[138]

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[132] *See* NUREG-2192, Standard Review Plan for Review of Subsequent License Renewal Applications for Nuclear Power Plants, 4.2-1 (July 2017) (ML17188A158) (SRP-SLR).

[133] *Id*.

[134] *See id*.; NUREG-2191, Vol. 2, Generic Aging Lessons Learned for Subsequent License Renewal (GALL-SLR) Report, XI.M31 (July 2017) (ML17187A204) (GALL-SLR Report).

[135] 10 C.F.R. § 50.61(a)(2).

[136] *See, e.g.,* Petition at 34.

[137] GALL-SLR Report at XI.M31-1.

[138] *Id*.

Petitioner claims that "the [Point Beach] reactors contained enough … coupons to last for 40 years of operation" and "there are not enough coupons in the reactor core to test for [reactor vessel neutron] embrittlement … out to 80 years of Point Beach operations."[139] According to Petitioner, this is a concern because in a "seriously embrittled reactor" there is the risk of pressurized thermal shock, which could cause the reactor vessel to "break open and release massive radioactivity into the surrounding area and the environment."[140] And to avoid this scenario, Petitioner contends that there needs to be a "complete physical analysis of the coupons from [the Point Beach] reactors and the five other reactors that are its embrittled cohorts"[141] to determine the reactor vessels' "actual embrittlement" as opposed to using "error-prone analytical calculations…."[142] Without such an analysis, "there is no scientific basis by which the Point Beach reactors should continue operating."[143]

(a) Proposed Contention 2 Does Not Meet 10 C.F.R. § 2.309(f)(1)(vi) Because it Does Not Show that a Genuine Dispute Exists

As an initial matter, proposed Contention 2 is not admissible because it does not show that a genuine dispute exists with NextEra on a material issue of law or fact by referencing to specific portions of the SLRA as required by 10 C.F.R. § 2.309(f)(1)(vi). A petitioner is required to read the pertinent portions of an application, state the applicant's position and the petitioner's opposing view, and explain why it disagrees with the applicant;[144] Petitioner does not do this. The only references made to the SLRA as part of proposed Contention 2 are that an unidentified "aging management plan" does not provide "requisite reasonable assurance" concerning the

[139] Petition at 35.

[140] *Id*. at 35.

[141] *Id*. at 38.

[142] *Id*. at 37.

[143] *Id*. at 38.

[144] 54 Fed. Reg. at 33,170-71.

reactor coolant pressure boundary[145] and that Point Beach "is storing two capsules in the spent fuel … pool …, one from each unit" and that "each reactor still contains a Capsule 'N' … held on 'standby.'"[146] Proposed Contention 2 then proceeds to fault the SLRA for not discussing the withdrawal and testing of coupons and the consideration of embrittlement data from other facilities, but does not reference the specific portions of the SLRA that it claims fail to do this.[147]

The Petitioner asserts without specificity to the SLRA and the aging management programs (AMPs) and time-limited aging analyses (TLAAs) therein that an unnamed AMP does not provide the requisite reasonable assurance concerning the reactor coolant pressure boundary and that the withdrawal and testing of coupons and the consideration of data from other facilities is insufficient with respect to neutron embrittlement and pressurized thermal shock. The Staff notes, however, that the SLRA identifies several AMPs and TLAAs to address these issues; specifically, the "Neutron Fluence Monitoring" AMP, the "Reactor Vessel Material Surveillance" AMP, and the "Reactor Pressure Vessel Neutron Embrittlement" TLAAs,[148] which are based on NRC guidance.[149] These portions of the SLRA provide that NextEra has committed to the "withdrawal and testing of the Supplemental 'A' surveillance capsule," which "will receive between one to two times the peak reactor vessel neutron fluence of interest at the

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[145] Petition at 31.

[146] *Id*. at 36.

[147] *Id*. at 37–38.

[148] SLRA at 3.1-1–3.1-2; 3.1-9. Table 3.1-1 of the SLRA also provides that reactor vessel neutron embrittlement is addressed as a TLAA in Section 4.2 of the SLRA and managed with the Reactor Vessel Material Surveillance and Neutron Fluence Monitoring AMPs. SLRA at 3.1-29–3.1-30. In total, the issues of neutron embrittlement and pressurized thermal shock raised in proposed Contention 2 are discussed in the TLAA in Section 4.2 of the SLRA (pages 4.2-1–4.2-24), the capsule withdrawal schedule and reactor vessel neutron embrittlement discussions and the licensee commitments in Appendix A of the SLRA (pages A-25–A-26, A-45–A-51, A-64, and A-84), and the Neutron Fluence Monitoring and Reactor Vessel Material Surveillance AMPs in Appendix B of the SLRA (pages B-29–B-33 and B-148–B-151).

[149] *See* GALL-SLR Report at X.M2 and XI.M31 (discussing a reactor vessel material surveillance AMP and a neutron fluence monitoring AMP that would satisfy 10 C.F.R. Part 54, 10 C.F.R. § 50.61, and 10 C.F.R. Part 50, Appendices G and H); SRP-SLR at 4.2 (discussing "Reactor Pressure Vessel Neutron Embrittlement Analyses" and describing how pressurized thermal shock may be addressed consistent with 10 C.F.R. Part 54 and 10 C.F.R. § 50.61).

end of the" subsequent license renewal period.[150] The SLRA also provides that Point Beach is part of an "irradiation surveillance program … in which member materials are irradiated at host plants" and will use the data from this program as supplemental data.[151] Moreover, the SLRA discusses the consistency of the proposed Point Beach Neutron Fluence Monitoring and Reactor Vessel Material Surveillance AMPs with the corresponding AMPs in the GALL-SLR Report.[152] Therefore, the SLRA contains an extensive discussion of the issues that Petitioner seeks to dispute; however, Petitioner does not address any of this discussion.

Because Petitioner does not acknowledge, let alone dispute, the portions of the SLRA pertinent to its arguments, its proposed Contention 2 does not satisfy the genuine dispute requirement of 10 C.F.R. § 2.309(f)(1)(vi) and thus is not admissible.[153]

(b) Proposed Contention 2 Challenges the NRC's Regulations without a Waiver

Proposed Contention 2 is also not admissible because its argument that "there is no scientific basis by which the Point Beach reactors should continue operating unless there is a complete physical analysis of the coupons from its reactors and the five other reactors that are its embrittled cohorts"[154] challenges the NRC's regulations without a waiver of those regulations.

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[150] SLRA at B-148–B-149; *see also id.* at A-84.

[151] SLRA at B-148–B-149.

[152] *Id*. at B-31, B-150. *See Seabrook*, CLI-12-5, 75 at 315 (citing *Entergy Nuclear Vermont Yankee, LLC* (Vermont Yankee Nuclear Power Station), CLI-10-17, 72 NRC 1, 36 (2010); *Oyster Creek*, CLI-08-23, 68 NRC at 467–68) ("While referencing an AMP in the GALL Report does not insulate that program from challenge in litigation, as discussed above, [petitioners] have not submitted an adequately supported challenge here.").

[153] Proposed Contention 2 also contains numerous statements that criticize the NRC. *See e.g.,* Petition at 31, 37 ("[T]he NRC has systematically removed conservative calculational aspects of the embrittlement process to allow continued operation."). However, "the sole focus of the hearing is on whether the application satisfies NRC regulatory requirements, rather than the adequacy of the NRC staff performance." 54 Fed. Reg. at 33,171. Therefore, these "generalized grievances about NRC policies" also fail to satisfy the genuine dispute requirement of 10 C.F.R. § 2.309(f)(1)(vi) and do not amount to an admissible contention. *See Millstone*, CLI-03-14, 58 NRC at 218 (quoting *Oconee*, CLI-99-11, 49 NRC at 334).

[154] Petition at 38.

Neither the NRC's license renewal guidance and regulations in 10 C.F.R. Part 54 nor the related regulations governing operation of a nuclear power plant in 10 C.F.R. Part 50 require the actions sought by Petitioner. The guidance supporting subsequent license renewal explains that neutron embrittlement and pressurized thermal shock are addressed by the requirements in 10 C.F.R. 50.61 and 10 C.F.R. Part 50, Appendices G and H and that the guidance provides one acceptable method of satisfying these requirements during the subsequent license renewal period.[155] For example, this guidance provides one acceptable program, which requires less testing than Petitioner contends should be required. Under this guidance, an acceptable program could involve the withdrawal and testing of "at least one capsule that has attained … neutron fluence between one and two times the peak reactor vessel wall neutron fluence of interest at the end of the" subsequent license renewal period and that this capsule could come from either the facility's reactor or, if the facility is part of an integrated surveillance program, another host reactor.[156] Therefore, Petitioner's contention seeks to require of NextEra actions that are not required by the NRC's regulations. The Commission's longstanding practice has been to reject such challenges as collateral attacks on the NRC's regulations.[157] Under 10 C.F.R. § 2.335, the NRC's regulations may not be challenged in adjudicatory proceedings absent a waiver; and Petitioner has not requested a waiver here.

Because proposed Contention 2 challenges the NRC's regulations without a waiver of those regulations, it is not admissible.[158]

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[155] *See* GALL-SLR Report at X.M2 and XI.M31; SRP-SLR at 4.2.

[156] GALL-SLR Report at XI.M31-4–XI.M31-5 ("For an [integrated surveillance program], in some cases the plant Reactor Vessel Material Surveillance program may result in no surveillance capsules being irradiated in the plant's reactor vessel, with the plant relying on data from testing of the [integrated surveillance program] capsules from the host plants of the capsules.").

[157] *Seabrook*, CLI-12-5, 75 NRC at 314–15.

[158] To the extent that Petitioner disagrees with the NRC's regulatory framework with respect to neutron embrittlement and pressurized thermal shock, it may submit a petition for rulemaking pursuant to 10 C.F.R. § 2.802. *See, e.g., NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-19-7, 90 NRC 1, 12 (2019).

(c) Proposed Contention 2 Does Not Meet 10 C.F.R. § 2.309(f)(1)(iii) Because it Challenges Current Operating Issues

Finally, proposed Contention 2 is not admissible because its arguments regarding Point Beach's current compliance with GDC 14 do not satisfy the scope requirement of 10 C.F.R. § 2.309(f)(1)(iii).

Proposed Contention 2 claims that there are not enough coupons for Point Beach to operate for 60 years,[159] that neutron embrittlement is a "present danger,"[160] that there is no record of coupon samples being tested at Point Beach for "at least ten years,"[161] that, "[d]uring the last 50 years of operation, Point Beach has failed to develop an adequate coupon program to physically test the integrity of the [reactor pressure vessels],"[162] that "[t]here is inadequate coupon data specific to Point Beach to justify its continued operation beyond its 50th year,"[163] and that, therefore, "[Point Beach] has been violating GDC 14,"[164] because the Point Beach reactor vessels "[have] not been 'tested so as to have an extremely low probability of abnormal leakage, of rapidly propagating failure, and of gross rupture' for perhaps more than 20 years…."[165]

To the extent that these arguments assert that Point Beach is not in compliance with GDC 14 under its current licenses, they do not satisfy the scope requirement of 10 C.F.R. § 2.309(f)(1)(iii) in this subsequent license renewal proceeding[166] and thus proposed Contention 2 is not admissible.

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[159] Petition at 35, 36.

[160] *Id*. at 37.

[161] *Id*.

[162] *Id*. at 38.

[163] *Id*.

[164] *Id*.

[165] *Id*. at 40–41 (quoting GDC 14).

[166] 10 C.F.R. § 54.30(b) ("The licensee's compliance with the obligation … to take measures under its current license is not within the scope of the license renewal review."); *Turkey Point*, CLI-01-17, 54 NRC at 10 ("Adjudicatory hearings in individual license renewal proceedings will share the same scope of

3. Proposed Contention 3 Is Not Admissible

Proposed Contention 3 states that:

> The … Environmental Report fails to adequately evaluate the full potential for renewable energy sources, such as solar electric power (photovoltaics) to offset the loss of energy production from [Point Beach], and to make the requested license renewal action from 2030 to 2053 unnecessary.[167]

In this contention, Petitioner argues that the Environmental Report should include a solar and storage alternative.[168] Further, Petitioner asserts that the subsequent renewal of the Point Beach licenses is not necessary because the need for power will be greatly reduced during the subsequent license renewal term, due to a combination of the decreasing costs of renewables and increasing energy efficiency.[169]

As discussed below, this contention fails to satisfy the contention admissibility requirements at 10 C.F.R. § 2.309(f)(1)(iii) and (vi). First, to the extent that Petitioner challenges the need for power, the contention is outside the scope of this proceeding.[170] Under the NRC's regulations, the Environmental Report "need not include a discussion of the need for power."[171] Second, to the extent that Petitioner asserts that a solar and storage alternative should have been considered as an alternative in the Environmental Report, Petitioner has not provided sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact.[172] Petitioner has not provided sufficient information to challenge the applicant's conclusion that a solar and storage alternative is not reasonable because this

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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.").

[167] Petition at 41.

[168] *Id*. at 45–49.

[169] *Id*. at 49–55.

[170] 10 C.F.R. § 2.309(f)(1)(iii).

[171] 10 C.F.R. § 51.53(c)(2); 10 C.F.R. § 51.45(c).

[172] 10 C.F.R. § 2.309(f)(1)(vi).

proposed alternative would not be commercially viable on a utility scale and operational prior to the expiration of the current Point Beach licenses.[173]

(a) Proposed Contention 3 Does Not Meet 10 C.F.R. § 2.309(f)(1)(iii) Because it is Not Within the Scope of the Proceeding

Insofar as proposed Contention 3 states that "the requested license renewal action from 2030 to 2053 [is] unnecessary,"[174] it is inadmissible.[175] Petitioner has not demonstrated that the contention is within the scope of this proceeding, as is required by 10 C.F.R. § 2.309(f)(1)(iii). Further, Petitioner asserts that its experts have "wreck[ed] the notion … of any alleged economic justification for the continued operation of [Point Beach] today through the early 2030s, let alone the early 2050s"[176] by contending that improvements in solar generation, battery storage, and energy efficiency will make it so that there will be no need for the power generated by Point Beach. But as Petitioner admits, the scope of the environmental review in a license renewal proceeding is defined by 10 C.F.R. Part 51;[177] and under 10 C.F.R. § 51.53(c)(2), an applicant's environmental report "is not required to include discussion of need for power or … economic costs…." Therefore, to the extent proposed Contention 3 challenges the need for power from Pont Beach during the subsequent license renewal period, it is outside the scope of this proceeding and cannot satisfy 10 C.F.R. § 2.309(f)(iii).[178]

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[173] *See* NUREG-1437, Rev. 1, Vol. 1, at 2-18; *see also NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 342 (2012) (internal quotations omitted).

[174] Petition at 41.

[175] 10 C.F.R. § 51.53(c)(2). Additionally, 10 C.F.R. § 51.45(c) states that "[e]nvironmental reports prepared at the license renewal stage under [10 C.F.R.] § 51.53(c) need not discuss the economic … benefits and costs of either the proposed action or alternatives…."

[176] Petition at 44.

[177] *Id*. at 43.

[178] Further, under 10 C.F.R. § 2.335, to challenge the need for power in this subsequent license renewal proceeding, Petitioner would first have to request a waiver of 10 C.F.R. § 51.53(c)(2) and would have to demonstrate special circumstances unique to Point Beach. Petitioner has not requested such a waiver, nor has it satisfied the related procedural requirements. *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 552, 559–60 (2005).

(b) Proposed Contention 3 Does Not Meet 10 C.F.R. § 2.309(f)(1)(vi) Because it Does Not Provide Sufficient Information to Show that a Genuine Dispute Exists with the Application on a Material Issue of Law or Fact

Proposed Contention 3 further challenges the Environmental Report by claiming that it fails to adequately evaluate the full potential for renewable energy sources such as a solar and storage alternative. But the contention is not admissible on these grounds because Petitioner does not provide sufficient information to show that a genuine dispute exists with the Environmental Report as is required by 10 C.F.R. § 2.309(f)(1)(vi).

NEPA requires agencies to take a "hard look" at the environmental impacts of a proposed major Federal Action that could significantly affect the environment, as well as reasonable alternatives to that action.[179] Under NEPA, agencies have "broad discretion 'to keep their inquiries within appropriate and manageable boundaries.'"[180] As the Commission has observed, "NEPA requires consideration of 'reasonable' alternatives, not all conceivable ones."[181]

The NRC has provided clear guidance on "reasonable alternatives" that should be considered in license renewal proceedings. In the 1996 final rule regarding the environmental review for renewal of nuclear power plant operating licenses, the NRC indicated that "[i]n preparing the alternatives analysis, the applicant may consider information regarding alternatives in [the GEIS]"[182] And the GEIS clarifies that a "reasonable alternative must be commercially viable on a utility scale and operational prior to the expiration of the reactor's

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[179] *See Interim Storage Partners LLC* (WCS Consolidated Interim Storage Facility), LBP-19-7, 90 NRC 31, 54 (2019) (quoting *Robertson v. Methow Valley Citizens Council,* 490 U.S. 332, 350 (1989)); *see also Louisiana Energy Services, L.P.* (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87–88 (1998).

[180] *Crow Butte Resources, Inc.* (Marsland), LBP-19-2, 89 NRC 18, 40 (quoting *Claiborne,* CLI-98-3, 47 NRC at 103).

[181] *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 338 (2012).

[182] Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. 28,467, 28,484 (Jun. 5, 1996). The NRC reaffirmed this guidance in the 2013 final rule that adopted revision 1 to the GEIS. *See* Revisions to Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 78 Fed. Reg. 37,281 (Jun. 20, 2013).

operating license, or expected to become commercially viable on a utility scale and operational prior to the expiration of the reactor's operating license."[183]

The Commission has explained that to raise a genuine dispute, contentions regarding reasonable alternatives in license renewal proceedings "must provide alleged facts or expert opinion sufficient to raise a genuine dispute as to whether … commercially viable alternate technology … is available now, or will become so in the near future."[184] Petitioner has failed to raise a genuine dispute here because it does not provide sufficient information to demonstrate that its proposed solar and storage option is commercially viable on a utility scale or that it will become so in the near future.

The crux of Petitioner's argument is that the determination in the Environmental Report that "discrete solar is an unreasonable alternative to the proposed action … due to the acreage requirements" is incorrect.[185] But Petitioner fails to articulate a genuine dispute with the Environmental Report's conclusion that the solar alternative is unreasonable due to the environmental impacts of installing such a large solar array. Moreover, Petitioner's claim that commercial and residential rooftop installations could provide the needed land area ignores the practical and legal realities of such a proposal, which render the suggestion unreasonable in an environmental review.

Despite the lengthy discussion in the Petition, Petitioner does not demonstrate a genuine dispute of a material fact with the Environmental Report. In the Environmental Report, NextEra addresses this very issue: "solar with battery storage could be a reasonable alternative;

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[183] NUREG-1437, Rev. 1, Vol. 1, at 2-18. This is consistent with guidance provided by the Council on Environmental Quality that reasonable alternatives comprise "those that are *practical or feasible* from the technical and economic standpoint and using common sense…." Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18,026, 18,027 (Mar. 23, 1981).

[184] *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 342 (2012) (internal quotations omitted).

[185] Compaan Declaration at 5; Petition at 45.

however, its generation capacity is far less than nuclear generation … [and] the solar generation capacity estimated for a Wisconsin location is also approximately two-thirds of that estimated by [the Energy Information Administration] as a U.S. average."[186] Even Petitioner's expert acknowledges that "[NextEra's] discussion of the solar resource appropriate for flat solar modules … in Wisconsin is approximately valid."[187] Petitioner's expert does claim to use "a more appropriate estimation method that includes optimally tilted panels and the small losses that occur with inverters that convert DC to AC power";[188] but this minor difference is not sufficient to create a genuine dispute with the Environmental Report.

Further, Petitioner does not explain how NextEra, a merchant generator, would have access to the residential and commercial rooftops or the conserved farmlands required for installation of solar arrays. Aside from noting that rooftops and conserved farmlands exist, Petitioner provides no details on how NextEra would acquire the legal authority to install solar arrays on private rooftops or on the farmlands already entered into the conservation program, both of which would be necessary to implement the alternative proposed in the contention. Even if NextEra were to gain access to these rooftops and farmlands, Petitioner has not shown that this distributed generation would be viable by the time Point Beach's current licenses expire and at the scale needed to replace the power generated by the reactors.[189] As noted above, "[a] reasonable alternative must be commercially viable *on a utility scale* and operational prior to the expiration of the reactor's operating license."[190] NextEra considered solar power as an alternative, determined that it was not commercially viable, and listed several reasons to support

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[186] Environmental Report at § 7.2.2.2.2.

[187] Compaan Declaration at 4.

[188] *Id*.

[189] *See* NUREG-1437, Rev. 1, Vol. 1, at 2-18.

[190] *Id.* (emphasis added).

that conclusion.[191] Proposed Contention 3 does not address these material issues. Because Petitioner has failed to provide sufficient information showing that a genuine dispute exists with the Environmental Report on a material issue of law or fact, Petitioner has failed to proffer an admissible contention under 10 C.F.R. § 2.309(f)(1)(vi).

In sum, proposed Contention 3 is not admissible under 10 C.F.R. § 2.309(f)(1)(iii) or 10 C.F.R. § 2.309(f)(1)(vi). To the extent that Petitioner challenges the need for power, the contention is outside the scope of the proceeding because the Environmental Report "need not include a discussion of the need for power…."[192] To the extent that Petitioner asserts that a solar and storage alternative should have been considered as a reasonable alternative, Petitioner has not provided sufficient information to show that a genuine dispute exists with the Environmental Report on a material issue of law or fact because Petitioner has not provided sufficient information to challenge NextEra's conclusion that this alternative would not be commercially viable on a utility scale and operational prior to the expiration of the current Point Beach licenses.[193]

4. Proposed Contention 4 Is Not Admissible

Proposed Contention 4 states that

> [Point Beach] has an elevated risk of a turbine missile accident owing to the poor alignment of its major buildings and structures.[194]

This contention argues that Point Beach has "a turbine hall that is dangerously aligned relative to the reactor buildings and control rooms" and that this "design is unsafe, because a turbine failure will send 600 [pound] pieces of shrapnel hurtling at 600 [miles per hour] into the

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[191] *See* Environmental Report at § 7.2.2.2.2.

[192] 10 C.F.R. § 51.53(c)(2).

[193] *See* NUREG-1437, Rev. 1, Vol. 1, at 2-18; *see also NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 342 (2012) (internal quotations omitted).

[194] Petition at 56.

containment, safety-related components, and the control room."[195] It also argues that, although the application discusses "aging management to guard against missiles from fragmented components," it does not discuss missiles from "steam turbine shafts or blades."[196] Proposed Contention 4 concludes that "to reduce the risk of damage to safety-related systems, structures, and components, [Point Beach] should be required to install an energy-absorbing turbine missile shield around its turbine."[197]

As conceded by Petitioner, the danger from these potential turbine missiles has to do with the physical alignment of Point Beach's buildings as part of the original design of the facility,[198] which has existed since the construction of Point Beach. The physical alignment of Point Beach's buildings is, by its very nature, neither germane to age-related degradation nor unique to the period covered by the SLRA;[199] operation during the subsequent license renewal period will not affect the alignment of Point Beach's buildings. Therefore, the potential danger due to turbine missiles based on this alignment of buildings is a "current operating issue" that is not unique to whether the Point Beach licenses should be renewed.[200] "A central principle of [the NRC's] license renewal regulations is that such issues must be addressed as they arise."[201] Accordingly, proposed Contention 4 is not within the scope of this subsequent license renewal proceeding as required by 10 C.F.R. § 2.309(f)(1)(iii) and thus is not admissible.[202]

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[195] *Id*. at 56.

[196] *Id*. at 58.

[197] *Id*.

[198] *Id*. at 56.

[199] *See Millstone*, CLI-05-24, 62 NRC at 560–61.

[200] *See Pacific Gas and Elec. Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-15-21, 82 NRC 295, 304–5 (2015) (internal quotations omitted).

[201] *Id*. at 304 (citing 60 Fed. Reg. at 22,463-64; *Millstone*, CLI-05-24, 62 NRC at 560–61).

[202] Petitioner's assertion that "Point Beach should be required to install an energy-absorbing turbine missile shield around its turbine," Petition at 58, is more appropriately pursued under 10 C.F.R. § 2.206, *see Millstone*, CLI-05-24, 62 NRC at 561.

CONCLUSION

The Board should deny the PSR WI petition for failure to proffer at least one admissible contention.

Respectfully submitted,

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Dated this 19th day of April 2021

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of NEXTERA ENERGY POINT BEACH, LLC (Point Beach Nuclear Plant, Units 1 and 2)	Docket No. 50-266 & 50-301-SLR

Certificate of Service

Pursuant to 10 C.F.R § 2.305, I hereby certify that copies of the foregoing "NRC STAFF'S ANSWER OPPOSING PHYSICIANS FOR SOCIAL RESPONSIBILITY WISCONSIN'S PETITION TO INTERVENE," dated April 19, 2021, have been served upon the Electronic Information Exchange (the NRC's E-Filing System), in the captioned proceeding, this 19th day of April 2021.

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Dated at Rockville, Maryland
this 19th day of April 2021