NUCLEAR REGULATORY COMMISSION ISSUANCES

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July 1, 2021 – December 31, 2021

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PREFACE

This is the ninety-fourth volume of issuances (1–83) of the Nuclear Regulatory Commission and its Atomic Safety and Licensing Boards, Administrative Law Judges, and Office Directors. It covers the period from July 1, 2021, to December 31, 2021.

Atomic Safety and Licensing Boards are authorized by Section 191 of the Atomic Energy Act of 1954. These Boards, comprised of three members, conduct adjudicatory hearings on applications to construct and operate nuclear power plants and related facilities and issue initial decisions which, subject to internal review and appellate procedures, become the final Commission action with respect to those applications. Boards are drawn from the Atomic Safety and Licensing Board Panel, comprised of lawyers, nuclear physicists and engineers, environmentalists, chemists, and economists. The Atomic Energy Commission (AEC) first established Licensing Boards in 1962 and the Panel in 1967.

Between 1969 and 1990, the AEC authorized Atomic Safety and Licensing Appeal Boards to exercise the authority and perform the review functions which would otherwise have been exercised and performed by the Commission in facility licensing proceedings. In 1972, that Commission created an Appeal Panel, from which were drawn the Appeal Boards assigned to each licensing proceeding. The functions performed by both Appeal Boards and Licensing Boards were transferred from the AEC to the Nuclear Regulatory Commission by the Energy Reorganization Act of 1974. Appeal Boards represented the final level in the administrative adjudicatory process to which parties could appeal. Parties, however, were permitted to seek discretionary Commission review of certain board rulings. The Commission also could decide to review, on its own motion, various decisions or actions of Appeal Boards.

On June 29, 1990, however, the Commission voted to abolish the Atomic Safety and Licensing Appeal Panel, and the Panel ceased to exist as of June 30, 1991. Since then, the Commission itself reviews Licensing Board and other adjudicatory decisions, as a matter of discretion. *See* 56 FR 29403 (1991).

The Commission also may appoint Administrative Law Judges pursuant to the Administrative Procedure Act, who preside over proceedings as directed by the Commission.

The hardbound edition of the Nuclear Regulatory Commission Issuances is a final compilation of the monthly issuances. It includes all of the legal precedents for the agency within a six-month period. Any opinions, decisions, denials, memoranda and orders of the Commission inadvertently omitted from the monthly softbounds and any corrections submitted by the NRC legal staff to the printed softbound issuances are contained in the hardbound edition. Cross references in the text and indexes are to the NRCI page numbers which are the same as the page numbers in this publication.

Issuances are referred to as follows: Commission (CLI), Atomic Safety and Licensing Boards (LBP), Administrative Law Judges (ALJ), Directors' Decisions (DD), and Decisions on Petitions for Rulemaking (DPRM).

The summaries and headnotes preceding the opinions reported herein are not to be deemed a part of those opinions or to have any independent legal significance.

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

William J. Froehlich, Chairman
Dr. Gary S. Arnold
Nicholas G. Trikouros

In the Matter of **Docket Nos. 50-266-SLR**
50-301-SLR
(ASLBP No. 21-971-02-SLR-01)

NEXTERA ENERGY POINT BEACH, LLC
(Point Beach Nuclear Plant, Units 1 and 2)

July 26, 2021

On November 16, 2020, NextEra Point Beach, LLC submitted a subsequent license renewal application to renew the Point Beach Nuclear Plant, Units 1 and 2 operating licenses for an additional 20 years. On January 22, 2021, the Nuclear Regulatory Commission (NRC) published a *Federal Register* notice of opportunity to request a hearing and to petition for leave to intervene. On March 23, 2021, Physicians for Social Responsibility Wisconsin filed a petition seeking to intervene in this proceeding, proffering four proposed contentions and requesting a hearing. The Board denied the hearing request, finding that none of the proposed contentions are admissible.

RULES OF PRACTICE: ATOMIC ENERGY ACT

ATOMIC ENERGY ACT: HEARING RIGHT; REQUIREMENT OF HEARING

Under section 189a of the Atomic Energy Act, the NRC is required to "grant

a hearing upon the request of any person whose interest may be affected by the proceeding . . . ." Atomic Energy Act § 189(a)(1)(A), 42 U.S.C. § 2239(a)(1)(A).

RULES OF PRACTICE: STANDING TO INTERVENE

ATOMIC ENERGY ACT: STANDING TO INTERVENE; INJURY IN FACT

In determining whether a petitioner has established standing, the Commission applies contemporaneous judicial concepts of standing that require a petitioner to "(1) allege an injury in fact that is (2) fairly traceable to the challenged action and (3) is likely to be redressed by a favorable decision." *Florida Power and Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-15-25, 82 NRC 389, 394 (2015).

RULES OF PRACTICE: STANDING TO INTERVENE (PROXIMITY PRESUMPTION)

In certain reactor licensing proceedings (e.g., reactor construction permit proceedings and new reactor operating license proceedings), the Commission has expressly authorized the use of a "proximity presumption," which presumes that petitioners have standing if they reside, or otherwise have "frequent contacts," within approximately 50 miles of the facility in question. *See PPL Bell Bend, LLC* (Bell Bend Nuclear Power Plant), CLI-10-7, 71 NRC 133, 138-39 (2010); *Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 915-17 (2009).

RULES OF PRACTICE: STANDING TO INTERVENE (PROXIMITY PRESUMPTION)

Licensing boards routinely have applied the 50-mile proximity presumption in reactor license renewal proceedings, reasoning that "a license renewal allows operation of a reactor over an additional period of time during which the reactor could be subject to the same equipment failures and personnel errors as during operations over the original period of the license." *Exelon Generation Co., LLC* (Limerick Generating Station, Units 1 and 2), LBP-12-8, 75 NRC 539, 547, *rev'd in part on other grounds,* CLI-12-19, 76 NRC 377 (2012); *see Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), LBP-21-4, 93 NRC 179, 197 & n.32 (2021), *appeal pending* (citing *Exelon Generation Co., LLC* (Peach Bottom Atomic Power Station, Units 2 and 3), LBP-19-5, 89 NRC 483, 490-91 (2019), *aff'd on other grounds,* CLI-20-11, 92 NRC 335 (2020);

Florida Power & Light Co. (Turkey Point Nuclear Generating Units 3 and 4), LBP-19-3, 89 NRC 245, 258-59 (2019), *appeal dismissed and referred ruling aff'd,* CLI-20-3, 91 NRC 133 (2020)).

RULES OF PRACTICE: STANDING TO INTERVENE (REPRESENTATIONAL)

An organization that seeks to intervene on behalf of one or more of its members must demonstrate representational standing. To do so, the organization must show that (1) at least one of its members would have standing to sue in their own right; (2) the member has authorized the organization to represent his or her interest; (3) "the interests that the organization seeks to protect are germane to its purpose; and [(4)] neither the claim asserted nor the relief requested requires the member to participate" in the adjudicatory proceeding. *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 323 (1999).

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY); HEARING REQUIREMENT

The Commission's contention admissibility requirements are "strict by design." *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001).

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY); HEARING REQUIREMENT

The petitioner alone bears the burden to satisfy each contention admissibility requirement. *Entergy Nuclear Operations, Inc.* (Palisades Nuclear Plant), CLI-15-23, 82 NRC 321, 329 (2015) (quoting *Statement of Policy on Conduct of Adjudicatory Proceedings,* CLI-98-12, 48 NRC 18, 22 (1998)); *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 2), CLI-15-18, 82 NRC 135, 149 (2015).

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY); HEARING REQUIREMENT

The contention admissibility "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.'" *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-06-24, 64 NRC 111, 118-19 (2006) (quoting *Arizona Public Service*

Co. (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155-56 (1991)).

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY); HEARING REQUIREMENT

A petitioner need not prove its contention at the contention admissibility stage, *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 139 (2004), but the contention admissibility standards require that petitioners "proffer at least some minimal factual and legal foundation in support of their contentions." *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999).

RULES OF PRACTICE: CONTENTIONS (ADMISSIBILITY); HEARING REQUIREMENT

"'Bare assertions and speculation,' even by an expert, are insufficient to trigger a full adjudicatory proceeding." *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-12-15, 75 NRC 704, 714 (2012) (quoting *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-28, 68 NRC 658, 674 (2008)). "[A]n expert opinion that merely states a conclusion . . . without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the Board of the ability to make the necessary, reflective assessment of the opinion . . . ." *USEC, Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006) (citation omitted); *see Power Authority of the State of New York* (James A. Fitzpatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-00-22, 52 NRC 266, 315 (2000).

RULES OF PRACTICE: CONTENTIONS (GOOD CAUSE); AMENDMENT OF CONTENTIONS

"[M]otions for leave to file . . . amended contentions . . . after the [hearing request] deadline . . . will not be entertained absent a determination by the presiding officer that a participant has demonstrated good cause . . . ." 10 C.F.R. § 2.309(c). Once a movant satisfies the motion to amend requirements, *id.* § 2.309(c)(i)-(iii), a new or amended contention must still satisfy the contention admissibility standards in 10 C.F.R. § 2.309(f) to be admitted.

RULES OF PRACTICE: CONTENTIONS (GOOD CAUSE); AMENDMENT OF CONTENTIONS

The Commission and licensing boards "typically consider 30 to 60 days from the initiating event a reasonable deadline for proposing new or amended contentions." *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-12-21, 76 NRC 491, 499 (2012) (footnote omitted).

RULES OF PRACTICE: CHALLENGE TO COMMISSION REGULATIONS

ADJUDICATORY BOARDS: SCOPE OF REVIEW

ADJUDICATORY PROCEEDINGS: SCOPE

ADJUDICATORY HEARINGS: CONSIDERATION OF ISSUES INVOLVED IN RULEMAKING

LICENSING BOARD(S): SCOPE OF REVIEW

Contentions that challenge NRC regulations are outside the scope of NRC adjudicatory proceedings. 10 C.F.R. § 2.335(a); *see Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 559-60 (2005).

RULES OF PRACTICE: CHALLENGE TO COMMISSION REGULATIONS

ADJUDICATORY BOARDS: SCOPE OF REVIEW

ADJUDICATORY PROCEEDINGS: SCOPE

LICENSING BOARD(S): SCOPE OF REVIEW

Contentions that seek to impose requirements stricter than those imposed by the agency are outside the scope of NRC adjudicatory proceedings. *See, e.g., Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 79 n.27 (2014); *NextEra Energy Seabrook, LLC* (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 315 (2012); *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 206 (2000).

RULES OF PRACTICE: CHALLENGE TO PERFORMANCE OF NRC STAFF DUTIES

ADJUDICATORY BOARDS: SCOPE OF REVIEW

ADJUDICATORY PROCEEDINGS: SCOPE

LICENSING BOARD(S): SCOPE OF REVIEW

Contentions that challenge the manner in which the NRC Staff performs its duties are outside the scope of NRC adjudicatory proceedings. *See, e.g., Millstone,* CLI-05-24, 62 NRC at 570; *Baltimore Gas & Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 350 (1998), *aff'd sub nom. Nat'l Whistleblower Ctr. v. NRC,* 208 F.3d 256 (D.C. Cir. 2000), *cert. denied,* 531 U.S. 1070 (2001); *Carolina Power and Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), CLI-80-12, 11 NRC 514, 516 (1980).

RULES OF PRACTICE: CHALLENGE TO COMMISSION REGULATIONS; WAIVER OF RULES OR REGULATIONS

ADJUDICATORY BOARDS: SCOPE OF REVIEW

ADJUDICATORY PROCEEDINGS: SCOPE

ADJUDICATORY HEARINGS: CONSIDERATION OF ISSUES INVOLVED IN RULEMAKING

LICENSING BOARD(S): SCOPE OF REVIEW

Issues "addressed and decided in Commission rulemaking" may not be challenged in an adjudicatory proceeding (absent the filing and granting of a waiver), *see* 10 C.F.R. § 2.335(b), as the Commission has deemed such actions impermissible collateral attacks on NRC rules. *See North Atlantic Energy Service Corp.* (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 217 n.8 (1999); *Curators of the University of Missouri,* CLI-95-1, 41 NRC 71, 170 (1995); *American Nuclear Corp.* (Revision of Orders to Modify Source Materials Licenses), CLI-86-23, 24 NRC 704, 707, 709-10 (1986).

RULES OF PRACTICE: SCOPE OF LICENSE RENEWAL

ADJUDICATORY PROCEEDINGS: SCOPE

LICENSING BOARD(S): SCOPE OF REVIEW

The Commission has limited the safety review of license renewal applications

conducted by the NRC to the matters described in 10 C.F.R. § 54.29(a)(1)-(2). *See Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-26, 56 NRC 358, 363 (2002); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Units 3 and 4), CLI-01-17, 54 NRC 3, 7-8 (2001).

OPERATING LICENSE(S): HEALTH AND SAFETY REGULATIONS

The actions with regard to aging management and time-limited aging analyses (TLAAs) must provide "reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the [current licensing basis (CLB)], and that any changes made to the plant's CLB . . . are in accord with the [Atomic Energy Act] and the Commission's regulations." 10 C.F.R. § 54.29(a).

OPERATING LICENSE(S): HEALTH AND SAFETY REGULATIONS

The CLB is "a term of art comprehending the various Commission requirements applicable to a specific plant that are in effect at the time of the license renewal application. The current licensing basis consists of the license requirements, including license conditions and technical specifications. It also includes the plant-specific design basis information documented in the plant's most recent Final Safety Analysis Report, and any orders, exemptions, and licensee commitments that are part of the docket for the plant's license, i.e., responses to NRC bulletins, generic letters, and enforcement actions, and other licensee commitments documented in NRC safety evaluations or licensee event reports. *See* 10 C.F.R. § 54.3. The current licensing basis additionally includes all of the regulatory requirements found in Parts 2, 19, 20, 21, 30, 40, 50, 55, 72, 73, and 100 with which the particular applicant must comply." *Turkey Point,* CLI-01-17, 54 NRC at 9 (citation omitted).

RULES OF PRACTICE: SCOPE OF LICENSE RENEWAL

ADJUDICATORY BOARDS: SCOPE OF REVIEW

ADJUDICATORY PROCEEDINGS: SCOPE

LICENSING BOARD(S): SCOPE OF REVIEW

The Commission has stated that "[a]djudicatory 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." *Turkey Point,* CLI-01-17,

54 NRC at 10; *see* Nuclear Power Plant License Renewal; Revisions, 60 Fed. Reg. 22,461, 22,482 n.2 (May 8, 1995).

ADJUDICATORY BOARDS: SCOPE OF REVIEW

ADJUDICATORY PROCEEDINGS: SCOPE

LICENSING BOARD(S): SCOPE OF REVIEW

The Commission declared that "[t]o require a full reassessment of [safety issues] at the license renewal stage . . . would be both unnecessary and wasteful. Accordingly, the NRC's license renewal review focuses on those potential detrimental effects of aging that are not routinely addressed by ongoing regulatory oversight programs." *Turkey Point,* CLI-01-17, 54 NRC at 7.

ADJUDICATORY BOARDS: SCOPE OF REVIEW

ADJUDICATORY PROCEEDINGS: SCOPE

LICENSING BOARD(S): SCOPE OF REVIEW

NRC's license renewal safety review focuses on "plant systems, structures, and components for which current [regulatory] activities and requirements may not be sufficient to manage the effects of aging in the period of extended operation." 60 Fed. Reg. at 22,469.

ADJUDICATORY BOARDS: SCOPE OF REVIEW

ADJUDICATORY PROCEEDINGS: SCOPE

LICENSING BOARD(S): SCOPE OF REVIEW

OPERATING LICENSE(S): HEALTH AND SAFETY REGULATIONS

The adequacy of a plant's CLB is not addressed during the license renewal safety review. *Turkey Point,* CLI-01-17, 54 NRC at 23; *see* 10 C.F.R. § 54.30(b).

OPERATING LICENSE(S): HEALTH AND SAFETY REGULATIONS

With respect to each structure, system, or component requiring aging management review, "a license renewal applicant must demonstrate that the 'effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the CLB for the period of extended operation.'" *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim

Nuclear Power Station), CLI-10-14, 71 NRC 449, 456 (2010) (quoting 10 C.F.R. § 54.21(a)(3)).

ADJUDICATORY BOARDS: SCOPE OF REVIEW

ADJUDICATORY PROCEEDINGS: SCOPE

LICENSING BOARD(S): SCOPE OF REVIEW

REGULATIONS: DEFINITIONS (ACTIVE/PASSIVE COMPONENT)

The NRC has limited the scope of the aging management reviews to those structures and components "[t]hat perform an intended function, as described in § 54.4, without moving parts or without a change in configuration or properties" and "[t]hat are not subject to replacement based on a qualified life or specified time period." 10 C.F.R. § 54.21(a)(1)(i)-(ii). As such, "[o]nly passive, long-lived structures and components are subject to an aging management review for license renewal." 60 Fed. Reg. at 22,463.

NEPA: AGENCY RESPONSIBILITIES; CONSIDERATION OF ALTERNATIVES; SCOPE OF REVIEW

NRC: RESPONSIBILITIES UNDER NEPA

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. *See Seabrook,* CLI-12-5, 75 NRC at 338; *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)).

NEPA: AGENCY RESPONSIBILITIES; CONSIDERATION OF ALTERNATIVES; RULE OF REASON; SCOPE OF REVIEW

NRC: RESPONSIBILITIES UNDER NEPA

The NRC's environmental review is limited 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 occurring." *Marsland,* LBP-19-2, 89 NRC at 40 (quoting *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-156, 6 AEC 831, 836 (1973)). In evaluating reasonable impacts, an "agency need not perform analyses concerning events that would be considered 'worst case' scenarios . . . or those considered 'remote and highly speculative.'" *Holtec International* (HI-

STORE Consolidated Interim Storage Facility), LBP-19-4, 89 NRC 353, 375 (2019) (quoting *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 352 (2002); *Limerick Ecology Action, Inc. v. NRC,* 869 F.2d 719, 754-55 (3d Cir. 1989)).

NEPA: AGENCY RESPONSIBILITIES; CONSIDERATION OF ALTERNATIVES; SCOPE OF REVIEW

NRC: RESPONSIBILITIES UNDER NEPA

NEPA affords "agencies . . . broad discretion 'to keep their inquiries within appropriate and manageable boundaries.'" *Marsland,* LBP-19-2, 89 NRC at 40 (quoting *Claiborne,* CLI-98-3, 47 NRC at 103). The Commission has echoed this principle stating that "NEPA requires consideration of 'reasonable' alternatives, not all conceivable ones." *Seabrook,* CLI-12-5, 75 NRC at 338 (quoting *Nat. Res. Def. Council, Inc. v. Morton,* 458 F.2d 827, 834, 837, 838 (D.C. Cir. 1972)).

NEPA: AGENCY RESPONSIBILITIES; CONSIDERATION OF ALTERNATIVES; SCOPE OF REVIEW

NRC: RESPONSIBILITIES UNDER NEPA

The NRC's environmental review does not require a determination of the "best" method for electricity generation, rather the review is limited to the adverse environmental effects of the proposed action, as well as analyses of reasonable alternatives. *See Seabrook,* CLI-12-5, 75 NRC at 338; *Marsland,* LBP-19-2, 89 NRC at 40 (citing *Claiborne,* CLI-98-3, 47 NRC at 87-88); Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. 28,467, 28,473 (June 5, 1996) ("[T]he NRC has no regulatory power to ensure that environmentally superior energy alternatives are used in the future.").

NEPA: AGENCY RESPONSIBILITIES

REGULATIONS: INTERPRETATION (10 C.F.R. § 51.95)

Section 51.95(c)(4) of 10 C.F.R. states that only if "the adverse environmental impacts of license renewal are so great" as to warrant depriving energy planners of the option of a facility's continued operation may the NRC consider denying license renewal altogether.

NEPA: AGENCY RESPONSIBILITIES; SCOPE OF REVIEW

LICENSING BOARD(S): SCOPE OF REVIEW (GENERIC ISSUES)

RULES OF PRACTICE: GENERIC ISSUES

NRC: RESPONSIBILITIES UNDER NEPA

REGULATIONS: INTERPRETATION (10 C.F.R. § 51.53)

The agency's NEPA regulations require that an applicant include in its environmental report "analyses of the environmental impacts of the proposed action . . . for those issues identified as Category 2 issues . . . ." 10 C.F.R. § 51.53(c)(3)(ii). An environmental report "is not required to contain analyses of the environmental impacts of the license renewal issues identified as Category 1," *id.* § 51.53(c)(3)(i), unless there is "any new and significant information regarding the environmental impacts . . ." of a Category 1 issue. *Id.* § 51.53(c)(3)(iv).

NEPA: NEED FOR POWER

REGULATIONS: INTERPRETATION (10 C.F.R. § 51.53)

An applicant or licensee must discuss "the environmental impacts of alternatives and any other matters described in [10 C.F.R.] § 51.45," but an environmental report "is not required to include discussion of need for power or the economic costs and economic benefits of the proposed action or of alternatives to the proposed action" unless such a discussion is "essential" to determine whether an alternative should be included in the ER. 10 C.F.R. § 51.53(c)(2); *see* 61 Fed. Reg. at 28,468.

LICENSING BOARD(S): SCOPE OF REVIEW (GENERIC ISSUES)

NEPA: SCOPE OF REVIEW

RULES OF PRACTICE: ADMISSIBILITY OF CONTENTIONS (GENERIC ISSUES); WAIVER OF RULES OR REGULATIONS

A petitioner may only challenge the Category 1 generic conclusions if the rule is waived by the Commission after filing a successful waiver petition. *See* 10 C.F.R. § 2.335(b). Otherwise Category 1 conclusions "may not be challenged in litigation . . . ." *Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI-07-3, 65 NRC 13, 17-18, *reconsideration denied,* CLI-07-13, 65 NRC 211, 215 (2007).

EPA AUTHORITY: DETERMINATION; NUCLEAR PLANT COOLING SYSTEM

FWPCA: EPA AUTHORITY; NRC AUTHORITY

REGULATIONS: INTERPRETATION (10 C.F.R. § 51.53)

Section 51.53(c)(3)(ii)(B) of 10 C.F.R. only requires an assessment of entrainment, impingement, and thermal impacts if an applicant or licensee cannot provide a current determination under Clean Water Act (CWA) § 316(b) and, if necessary, a variance under CWA § 316(a). Clean Water Act § 316(a), (b), 33 U.S.C. § 1326(a), (b).

EPA AUTHORITY: DETERMINATION; NUCLEAR PLANT COOLING SYSTEM

FWPCA: EPA AUTHORITY; NRC AUTHORITY; STATE AUTHORITY

REGULATIONS: INTERPRETATION (10 C.F.R. § 51.53)

The Commission has held that 10 C.F.R. § "51.53(c)(3)(ii)(B) rests on the presumption that [NRC] need not — indeed *cannot* — review and judge environmental permits issued under the Clean Water Act by the EPA or an authorized state agency." *Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI-07-16, 65 NRC 371, 387 n.77 (2007). Once an applicant or licensee provides the information in section 51.53(c)(3)(ii)(B), the NRC is "required by law to consider the [permitting agency's] decision [on thermal impacts] as binding." *Id.* at 388 (citing *Carolina Power and Light Co.* (H.B. Robinson, Unit 2), ALAB-569, 10 NRC 557, 558 (1979)); *see Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-78-1, 7 NRC 1, 23-28 (1978).

EPA AUTHORITY: DETERMINATION; NUCLEAR PLANT COOLING SYSTEM

FWPCA: EPA AUTHORITY; NRC AUTHORITY; STATE AUTHORITY

REGULATIONS: INTERPRETATION (10 C.F.R. § 51.53)

The NRC's role in evaluating a plant's cooling system is limited — "the permitting agency 'determines what cooling system a nuclear power facility may use[,] and NRC factors the impacts resulting from use of that system into the NEPA [ ] analysis.'" *Vt. Yankee,* CLI-07-16, 65 NRC at 389 (quoting *Seabrook,*

CLI-78-1, 7 NRC at 26). The NRC may not consider alternative cooling systems as that would improperly "second-guess[ ]" the cooling system approved by the permitting agency. *Id.* at 377.

EPA AUTHORITY: DETERMINATION; NUCLEAR PLANT COOLING SYSTEM

FWPCA: EPA AUTHORITY; NRC AUTHORITY; STATE AUTHORITY

LICENSING BOARD(S): AUTHORITY

REGULATIONS: INTERPRETATION (10 C.F.R. § 51.53)

The Commission stated that "[i]n future cases where EPA [or . . . a state permitting agency] has made the necessary factual findings for approval of a specific once-through cooling system for a facility after full administrative proceedings, we expect our adjudicatory boards to do as we have done today, i.e., defer to the agency that issued the section 316(a) permit." *Vt. Yankee,* CLI-07-16, 65 NRC at 389 (quoting *Seabrook,* CLI-78-1, 7 NRC at 28 n.42) (quotations and citation omitted).

EPA AUTHORITY: DETERMINATION; NUCLEAR PLANT COOLING SYSTEM

FWPCA: EPA AUTHORITY; NRC AUTHORITY; STATE AUTHORITY

When Congress enacted CWA section 511(c)(2) it "removed the broad responsibility of multiple federal agencies for water quality standards and [ ] placed that responsibility solely in the hands of the EPA [or an authorized state agency]." *Vt. Yankee*, CLI-07-16, 65 NRC at 388 (citing *H.B. Robinson,* ALAB-569, 10 NRC at 561); *see Seabrook,* CLI-78-1, 7 NRC at 25 ("As Senator Baker explained in introducing the floor amendment which was the forerunner of [CWA] section 511(c)(2), duplication was to be avoided by leaving to EPA and the states the decision as to the water pollution control criteria to which a facility's cooling system would be held." (quoting *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-366, 5 NRC 39, 51-52 (1977))).

LICENSING BOARD(S): AUTHORITY

The Commission has made it clear that licensing boards may not entertain

arguments advanced for the first time in a reply brief. *See USEC, Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 439 (2006).

OPERATING LICENSE(S): HEALTH AND SAFETY REGULATIONS

REGULATIONS: INTERPRETATION (10 C.F.R. § 50.61; 10 C.F.R. PART 50, APPENDIX G)

TECHNICAL ISSUE(S) DISCUSSED: NEUTRON EMBRITTLEMENT

Section 50.61 and Part 50, Appendix G of 10 C.F.R. set forth the neutron embrittlement monitoring requirements. *See* 10 C.F.R. § 50.61; *id.* pt. 50, app. G.

OPERATING LICENSE(S): HEALTH AND SAFETY REGULATIONS

RULES OF PRACTICE: GENERIC ISSUES

TECHNICAL ISSUE(S) DISCUSSED: NEUTRON EMBRITTLEMENT

To monitor neutron embrittlement, licensees periodically withdraw capsules placed near the inside of the vessel wall. 2 Office of Nuclear Reactor Regulation (NRR), NRC, NUREG-2191, Generic Aging Lessons Learned for [SLR] (GALL-SLR) Report, at XI.M31-1 (July 2017) (ADAMS Accession No. ML-17187A204). The capsules "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." *Id.* This method ensures that the supplement "A" capsule is "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 the subsequent period of extended operation." *Id.*

OPERATING LICENSE(S): HEALTH AND SAFETY REGULATIONS

REGULATIONS: INTERPRETATION (10 C.F.R. § 54.21)

Under 10 C.F.R. § 54.21(c)(1)(i)-(iii), the NRC permits licensees to address TLAAs in one of three ways: (i) demonstrating that existing "analyses remain valid for the period of extended operation;" (ii) revising existing analyses to demonstrate their validity "to the end of the period of extended operation; or" (iii) demonstrating that "[t]he effects of aging on the intended function(s) will be adequately managed for the period of extended operation." 10 C.F.R. § 54.21(c)(1)(i)-(iii).

RULES OF PRACTICE: REASONABLE ALTERNATIVES

NEPA: CONSIDERATION OF ALTERNATIVES

TECHNICAL ISSUE(S) DISCUSSED: ALTERNATIVE SOURCES OF ENERGY

The NRC has defined the scope of "reasonable alternatives" that must be considered in a license renewal application. The GEIS states that "[a] reasonable alternative [replacement power] must be commercially viable on a utility scale and operational prior to the expiration of the reactor's operating license, or expected to become commercially viable on a utility scale and operational prior to the expiration of the reactor's operating license." 1 NRR, NRC, NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, at 2-18 (rev. 1 June 2013) (ADAMS Accession No. ML13106A241).

RULES OF PRACTICE: REASONABLE ALTERNATIVES

NEPA: CONSIDERATION OF ALTERNATIVES

TECHNICAL ISSUE(S) DISCUSSED: ALTERNATIVE SOURCES OF ENERGY

The Commission stated 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 the best information available today suggests that commercially viable alternative technology (or combination of technologies) is available now, or will become so in the near future, to supply baseload power." *Seabrook,* CLI-12-5, 75 NRC at 342.

RULES OF PRACTICE: REASONABLE ALTERNATIVES

NEPA: CONSIDERATION OF ALTERNATIVES

TECHNICAL ISSUE(S) DISCUSSED: ALTERNATIVE SOURCES OF ENERGY

The Commission stated that its *Seabrook* "ruling does not exclude the possibility that a contention could show a genuine dispute with respect to a technology that, while not commercially viable at the time of the application, is under development for large-scale use and is 'likely to' be available during the period of extended operation." *Seabrook,* CLI-12-5, 75 NRC at 342 n.245 (citing *Carolina Envtl. Study Group v. U.S.,* 510 F.2d 796, 800 (D.C. Cir. 1975)). Thus, while a petitioner may proffer "future-oriented" testimony to demonstrate a genuine

dispute with respect to commercially available technology, it must also show that the solar plus storage technology "is under development for large-scale use . . . ." *Id.*

REGULATIONS: DEFINITIONS (ACTIVE/PASSIVE COMPONENT); INTERPRETATION OF 10 C.F.R. § 54.21

RULES OF PRACTICE: GENERIC ISSUES

TECHNICAL ISSUE(S) DISCUSSED: PLANT DESIGN

Active components are not subject to an aging-management review, as stated in 10 C.F.R. § 54.21(a)(1)(i)-(ii). Turbine blades and shafts are active components — not subject to an aging-management review. 1 NRR, NRC, NUREG-2191, Generic Aging Lessons Learned for [SLR] (GALL-SLR) Report, at VIII A-1 (July 2017) (ADAMS Accession No. ML17187A031).

MEMORANDUM AND ORDER
(Denying Physicians for Social Responsibility Wisconsin's Request for Hearing)

In this docket, licensee NextEra Energy Point Beach, LLC (NEPB, NextEra) has filed an application seeking a twenty-year subsequent (second) license renewal (SLR) of its Renewed Facility Operating Licenses Nos. DPR-24 and DPR-27 to operate its Point Beach Nuclear Plant, Units 1 and 2. Physicians for Social Responsibility Wisconsin (PSR WI, Petitioner) filed a hearing request on March 23, 2021 proffering four contentions challenging NextEra's application.[1] NextEra and the NRC Staff oppose Petitioner's hearing request.[2]

For the reasons set forth below, we find Petitioner has established representational standing to intervene, but failed to meet the Commission's contention admissibility standards. Accordingly, the PSR WI hearing petition must be denied and this proceeding terminated before the Licensing Board.

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[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) [hereinafter Petition].

[2] NextEra Energy Point Beach, LLC's Answer Opposing the Physicians for Social Responsibility Wisconsin's Petition for Leave to Intervene and Request for Hearing (Apr. 19, 2021) [hereinafter NEPB Answer]; NRC Staff's Answer Opposing Physicians for Social Responsibility Wisconsin's Petition to Intervene (Apr. 19, 2021) [hereinafter Staff Answer].

I. BACKGROUND

On November 16, 2020, NEPB submitted an SLR application 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.[3] On January 22, 2021, the Nuclear Regulatory Commission (NRC) published a *Federal Register* notice of opportunity to request a hearing and to petition for leave to intervene.[4] The *Federal Register* notice permitted any person whose interest may be affected to file a request for hearing and petition for leave to intervene within 60 days.[5]

On March 23, 2021, PSR WI filed its petition seeking to intervene in this SLR proceeding, proffering four proposed contentions and requesting a hearing.[6] On April 19, 2021, NEPB and the NRC Staff filed answers opposing the hearing request.[7] NEPB and the NRC Staff did not challenge Petitioner's claims of standing, but argued Petitioner failed to proffer an admissible contention.[8] On April 26, 2021, Petitioner filed a reply and a motion to amend its proposed Contention 2.[9] On May 21, 2021, NEPB filed an answer opposing the motion to

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[3] The Point Beach SLR application, which consists of a cover letter and five enclosures, can be found in an ADAMS package at ADAMS Accession No. ML20329A292. Of particular relevance here are enclosure 3, attachment 1 to the application's cover letter, which is the publicly available version of the application, and enclosure 3, attachment 2 to the application's cover letter, which is the environmental report (ER) appendix to the application. *See* NEPB, Point Beach Nuclear Plant Units 1 and 2 Subsequent License Renewal Application (Public Version), encl. 3, attach. 1 (rev. 0 Nov. 2020) (ADAMS Accession No. ML20329A247) [hereinafter SLRA]; NEPB, Appendix E Applicant's Environmental Report Subsequent Operating License Renewal Point Beach Nuclear Plant Units 1 and 2, encl. 3, attach. 2 (rev. 0 Nov. 2020) (ADAMS Accession No. ML20329A248) [hereinafter ER]. The SLR application seeks to extend the life of Point Beach Units 1 and 2 from 60 to 80 years, after having already had a license renewal extending operation from 40 to 60 years.

[4] NextEra Energy Point Beach, LLC; Point Beach Nuclear Plant, Units 1 and 2, 86 Fed. Reg. 6,684 (Jan. 22, 2021).

[5] *Id.* at 6,685.

[6] *See* Petition at 1, 15-16. The petition is accompanied by several expert and standing declarations. *See* Declaration of Arnold Gundersen (Mar. 23, 2021) [hereinafter Gundersen Decl.]; Declaration of Alvin Compaan, Ph.D. (Mar. 23, 2021) [hereinafter Compaan Decl.]; Declaration of Mark Cooper, Ph.D. (Mar. 23, 2021) [hereinafter Cooper Decl.]; Declarations in Support of Petition of Physicians for Social Responsibility Wisconsin for Leave to Intervene (Mar. 23, 2021).

[7] *See generally* NEPB Answer; Staff Answer.

[8] NEPB Answer at 3; Staff Answer at 6-7.

[9] Physicians for Social Responsibility Wisconsin's Reply in Support of Petition for Leave to Intervene in Point Beach Nuclear Plant, Units 1 and 2 Subsequent License Renewal Proceeding, and Requesting an Adjudicatory Hearing (Apr. 26, 2021) [hereinafter Petitioner Reply]; Physicians for Social Responsibility Wisconsin's Motion to Amend Contention 2 (Inadequately Tested Reactor Coolant Pressure Boundary) (Apr. 26, 2021) [hereinafter Petitioner Motion to Amend]; Petitioner

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amend.[10] On the same day, the NRC Staff filed an answer that did not oppose the motion to amend, but argued the amended contention is inadmissible.[11] On May 28, 2021, Petitioner filed a reply to those answers.[12] On June 22, 2021 oral argument was held, via WebEx, on the four proposed contentions and Petitioner's motion to amend Contention 2.[13]

II. LEGAL STANDARDS

To participate in an SLR proceeding as an intervenor, a petitioner must establish standing and proffer at least one admissible contention.[14] We summarize the applicable legal standards below.[15]

A. Legal Requirements for Standing

In determining whether a petitioner has established standing, the Commission applies contemporaneous judicial concepts of standing that require a petitioner to "(1) allege an injury in fact that is (2) fairly traceable to the challenged action and (3) is likely to be redressed by a favorable decision."[16] Under section 189a of the Atomic Energy Act, the NRC is required to "grant a hearing upon the request of any person whose interest may be affected by the proceeding . . . ."[17] Pursuant to the agency's regulation implementing this general standing requirement, a petitioner's hearing request must state:

Motion to Amend., unnumbered attach., Supplemental Declaration of Arnold Gundersen, Nuclear Engineer (Apr. 26, 2021) [hereinafter Gundersen Supp. Decl.]; Petitioner Motion to Amend., unnumbered attach., Letter to Document Control Desk, NRC, from Nathan Palm, EPRI Boiling Water Reactor Vessel and Internals Project (BWRVIP) Program Manager and Timothy Hanley, BWRVIP Chairman, Exelon (Mar. 22, 2021) [hereinafter EPRI letter].

[10] NextEra Energy Point Beach, LLC's Answer Opposing the Physicians for Social Responsibility Wisconsin's Amendment of Contention 2 (May 21, 2021) [hereinafter NEPB Answer to Motion to Amend].

[11] NRC Staff's Answer to Physicians for Social Responsibility Wisconsin's Motion for Leave to File Amended Proposed Contention 2 at 1-2 (May 21, 2021) [hereinafter Staff Answer to Motion to Amend].

[12] Physicians for Social Responsibility Wisconsin's Combined Reply in Support of Motion to Amend Contention 2 (Inadequately Tested Reactor Coolant Pressure Boundary) (May 28, 2021).

[13] *See* Tr. at 1-142; Licensing Board Order (Scheduling Oral Argument) (May 26, 2021) (unpublished).

[14] 10 C.F.R. § 2.309(d)(1), (f)(1).

[15] *See id.* § 2.309(a).

[16] *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-15-25, 82 NRC 389, 394 (2015).

[17] Atomic Energy Act § 189(a)(1)(A), 42 U.S.C. § 2239(a)(1)(A).

(i) The name, address and telephone number of the requestor or petitioner;

(ii) The nature of the requestor's/petitioner's right under the [Atomic Energy Act] to be made a party to the proceeding;

(iii) The nature and extent of the requestor's/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 requestor's/petitioner's interest.[18]

However, in the context of certain reactor licensing proceedings (e.g., reactor construction permit proceedings and new reactor operating license proceedings), the Commission has expressly authorized the use of a "proximity presumption," which presumes that a petitioner has standing if they reside, or otherwise have "frequent contacts," within approximately 50 miles of the facility in question.[19] "Th[is] presumption rests on [the] finding . . . that persons living within the roughly 50-mile radius of [a] facility face a realistic threat of harm if a release from the facility of radioactive material were to occur."[20]

Licensing boards routinely have applied the 50-mile proximity presumption in reactor license renewal proceedings, reasoning that "a license renewal allows operation of a reactor over an additional period of time during which the reactor could be subject to the same equipment failures and personnel errors as during operations over the original period of the license."[21] The Commission endorsed this approach when it found "no conflict between the basic requirements for standing, as applied in the federal courts, and the NRC's proximity presumption"[22] and held "that the [licensing b]oard correctly applied the proximity presumption."[23]

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[18] 10 C.F.R. § 2.309(d)(1)(i)-(iv).

[19] *See PPL Bell Bend, LLC* (Bell Bend Nuclear Power Plant), CLI-10-7, 71 NRC 133, 138-39 (2010); *Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 915-17 (2009).

[20] *Calvert Cliffs,* CLI-09-20, 70 NRC at 917 (quotations omitted).

[21] *Exelon Generation Co., LLC* (Limerick Generating Station, Units 1 and 2), LBP-12-8, 75 NRC 539, 547, *rev'd in part on other grounds,* CLI-12-19, 76 NRC 377 (2012); *see Virginia Electric and Power Co.* (North Anna Power Station, Units 1 and 2), LBP-21-4, 93 NRC 179, 197 & n.32 (2021), *appeal pending* (citing *Exelon Generation Co., LLC* (Peach Bottom Atomic Power Station, Units 2 and 3), LBP-19-5, 89 NRC 483, 490-91 (2019), *aff'd on other grounds,* CLI-20-11, 92 NRC 335 (2020); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Units 3 and 4), LBP-19-3, 89 NRC 245, 258-59 (2019), *appeal dismissed and referred ruling aff'd,* CLI-20-3, 91 NRC 133 (2020)).

[22] *Calvert Cliffs,* CLI-09-20, 70 NRC at 917 (footnote omitted); *see id.* at 915 n.15 (citing with approval *Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 150 (2001), *aff'd on other grounds,* CLI-01-17, 54 NRC 3 (2001) (applying proximity presumption in reactor operating license renewal proceeding)).

[23] *Id.* at 918 (footnote omitted).

B. Legal Requirements for Contention Admissibility

To intervene in a license renewal proceeding, a petitioner must "set forth with particularity"[24] a timely-filed admissible contention that fulfills the requirements set forth in 10 C.F.R. § 2.309(f)(1)(i)-(vi), which require a petitioner to:

> (i) Provide a specific statement of the issue of law or fact to be raised or controverted . . . ;
>
> (ii) Provide a brief explanation of the basis for the contention;
>
> (iii) Demonstrate that the issue raised in the contention is within the scope of the proceeding;
>
> (iv) Demonstrate that the issue raised in the contention is material to the findings the NRC must make to support the action that is involved in the proceeding;
>
> (v) Provide a concise statement of the alleged facts or expert opinions which support the requestor's/petitioner's position on the issue and on which the petitioner intends to rely at hearing, together with references to the specific sources and documents on which the requestor/petitioner intends to rely to support its position on the issue; [and]
>
> (vi) . . . [P]rovide sufficient information to show that a genuine dispute exists with the applicant/licensee on a material issue of law or fact. 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.[25]

The Commission's contention admissibility requirements are "strict by design."[26] If any of the six requirements in 10 C.F.R. § 2.309(f)(1) are "not met, a contention must be rejected."[27] The petitioner alone bears the burden to satisfy each contention admissibility requirement.[28]

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[24] 10 C.F.R. § 2.309(f)(1).

[25] *Id.* § 2.309(f)(1)(i)-(vi).

[26] *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001).

[27] *Arizona Public Service Co.* (Palo Verde Nuclear Generating Station, Units 1, 2, and 3), CLI-91-12, 34 NRC 149, 155 (1991) (citation omitted); *see USEC, Inc.* (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 437 (2006) ("These requirements are deliberately strict, and we will reject any contention that does not satisfy the [contention admissibility] requirements." (footnotes omitted)).

[28] *Entergy Nuclear Operations, Inc.* (Palisades Nuclear Plant), CLI-15-23, 82 NRC 321, 329 (2015) ("[I]t is Petitioners' responsibility . . . to formulate contentions and to provide 'the necessary information to satisfy the basis requirement' for admission." (quoting *Statement of Policy on Conduct of Adjudicatory Proceedings,* CLI-98-12, 48 NRC 18, 22 (1998))); *DTE Electric Co.* (Fermi Nuclear Power Plant, Unit 2), CLI-15-18, 82 NRC 135, 149 (2015) ("[T]he Board may not substitute its own

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A petitioner must propose contentions that contain "some reasonably specific factual or legal basis."[29] "An admissible contention must explain, with specificity, particular safety or legal reasons requiring rejection of the contested [application]."[30] The contention admissibility "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.'"[31] A petitioner need not prove its contention at the contention admissibility stage,[32] but the contention admissibility standards require that petitioners "proffer at least some minimal factual and legal foundation in support of their contentions."[33] For "issues arising under the National Environmental Policy Act [(NEPA)], participants shall file contentions based on the applicant's environmental report."[34]

To be admissible, the issue raised in a contention must fall within the scope of the proceeding and be material to the findings the NRC must make on the application.[35] A "material" issue is one where "resolution of the dispute would make a difference in the outcome of the licensing proceeding."[36] Contentions that challenge NRC regulations,[37] seek to impose requirements stricter than those imposed by the agency,[38] or challenge the manner in which the NRC Staff

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support for a contention or make arguments for the litigants that were never made by the litigants themselves." (citation omitted)).

[29] *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 213 (2003) (citation omitted).

[30] *Millstone,* CLI-01-24, 54 NRC at 359-60.

[31] *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).

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

[33] *Duke Energy Corp.* (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999).

[34] 10 C.F.R. § 2.309(f)(2).

[35] *Id.* § 2.309(f)(1)(iii)-(iv).

[36] Rules of Practice for Domestic Licensing Proceedings — Procedural Changes in the Hearing Process, 54 Fed. Reg. 33,168, 33,172 (Aug. 11, 1989).

[37] As stated in 10 C.F.R. § 2.335(a), "no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding" without a successful waiver petition. *See Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 559-60 (2005). Therefore, a contention that challenges a statutory requirement or the Commission's regulatory process without a waiver must be rejected.

[38] *See, e.g., Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC, et al.* (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 79 n.27 (2014) ("Contentions that are the subject of general rulemaking by the Commission may not be litigated in individual license proceedings." (citations omitted)); *NextEra Energy Seabrook, LLC* (Seabrook

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performs its duties[39] are outside the scope of NRC adjudicatory proceedings.[40] In addition, issues "addressed and decided in Commission rulemaking" may not be challenged in an adjudicatory proceeding (absent the filing and granting of a waiver),[41] as the Commission has deemed such actions impermissible collateral attacks on NRC rules.[42]

In addition, a petitioner must explain the basis for each proffered contention by providing "alleged facts or expert opinions which support the [ ]petitioner's position . . . and on which the petitioner intends to rely [in litigating the contention] at hearing."[43] However, "'[b]are assertions and speculation,' even by an expert, are insufficient to trigger a full adjudicatory proceeding."[44] Indeed, "an expert opinion that merely states a conclusion . . . without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the Board of the ability to make the necessary, reflective assessment of the opin-

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Station, Unit 1), CLI-12-5, 75 NRC 301, 315 (2012) ("This proposition contravenes our longstanding practice of rejecting, as a collateral attack, any contention calling for requirements in excess of those imposed by our regulations." (footnote omitted)); *GPU Nuclear, Inc.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 206 (2000) (rejecting an "attempt[ ] to impose . . . a requirement more stringent tha[n] the one imposed by the regulations").

[39] *See, e.g., Millstone,* CLI-05-24, 62 NRC at 570 ("[Licensing] boards lack the authority to supervise the NRC Staff in the performance of its regulatory duties." (footnote omitted)); *Balt. Gas & Electric Co.* (Calvert Cliffs Nuclear Power Plant, Units 1 and 2), CLI-98-25, 48 NRC 325, 350 (1998), *aff'd sub nom., Nat'l Whistleblower Ctr. v. NRC,* 208 F.3d 256 (D.C. Cir. 2000), *cert. denied,* 531 U.S. 1070 (2001) ("[I]t is the license application, not the NRC Staff review, that is at issue in our adjudications." (citation omitted)); *Carolina Power and Light Co.* (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), CLI-80-12, 11 NRC 514, 516 (1980) ("Boards do not direct staff in performance of their administrative functions.").

[40] *See* 10 C.F.R. § 2.309(f)(1)(iii).

[41] *Id.* § 2.335(b).

[42] *See North Atlantic Energy Service Corp.* (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 217 n.8 (1999) ("We wish to make clear, however, that a petitioner in an individual adjudication cannot challenge generic decisions made by the Commission in rulemakings." (citations omitted)); *Curators of the University of Missouri,* CLI-95-1, 41 NRC 71, 170 (1995) ("[T]he Intervenors are, in essence, contending that those regulatory provisions are themselves insufficient to protect the public health and safety. This assertion constitutes an improper collateral attack upon our regulations." (footnote omitted)); *American Nuclear Corp.* (Revision of Orders to Modify Source Materials Licenses), CLI-86-23, 24 NRC 704, 709-10 (1986); *id.* at 707 ("[T]he Commission adheres to the fundamental principle of administrative law that its rules are not subject to collateral attack in adjudicatory proceedings.").

[43] 10 C.F.R. § 2.309(f)(1)(v).

[44] *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-12-15, 75 NRC 704, 714 (2012) (quoting *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-08-28, 68 NRC 658, 674 (2008)).

ion . . . ."[45] A licensing board must review the petitioner's information, facts, and expert opinions provided to determine whether they provide adequate support for the proffered contentions.[46]

C. Scope of License Renewal

Under 10 C.F.R. § 54.29, the NRC may grant a license renewal if it finds that specific safety and environmental requirements are satisfied. The NRC review of a license renewal application consists of two simultaneous reviews — a safety review and an environmental review.

1. License Renewal — Safety Review

The Commission has limited the safety review of license renewal applications conducted by the NRC to the matters described in 10 C.F.R. § 54.29:

> A renewed license may be issued by the Commission up to the full term authorized by § 54.31 if the Commission finds that:
>
> (a) Actions have been identified and have been or will be taken with respect 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 § 54.21(a)(1); and
>
> (2) time-limited aging analyses that have been identified to require review under § 54.21(c).[47]

The actions with regard to aging management and time-limited aging analyses (TLAAs) must provide "reasonable assurance that the activities authorized by the renewed license will continue to be conducted in accordance with the [current licensing basis (CLB)], and that any changes made to the plant's CLB . . . are in accord with the [Atomic Energy Act] and the Commission's regulations."[48]

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[45] *USEC, Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006) (citation omitted); *see Power Authority of the State of New York* (James A. Fitzpatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-00-22, 52 NRC 266, 315 (2000) ("Unsupported hypothetical theories or projections, even in the form of an affidavit, will not support invocation of the hearing process.").

[46] *American Centrifuge Plant,* CLI-06-10, 63 NRC at 457.

[47] 10 C.F.R. § 54.29(a)(1)-(2); *see Duke Energy Corp.* (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-26, 56 NRC 358, 363 (2002); *Florida Power & Light Co.* (Turkey Point Nuclear Generating Units 3 and 4), CLI-01-17, 54 NRC 3, 7-8 (2001).

[48] 10 C.F.R. § 54.29(a). The CLB is "a term of art comprehending the various Commission requirements applicable to a specific plant that are in effect at the time of the license renewal

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The Commission has stated that "[a]djudicatory 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."[49] More to the point, the Commission declared that "[t]o require a full reassessment of [safety issues] at the license renewal stage . . . would be both unnecessary and wasteful. Accordingly, the NRC's license renewal review focuses on those potential detrimental effects of aging that are not routinely addressed by ongoing regulatory oversight programs."[50]

NRC's license renewal safety review focuses on "plant systems, structures, and components for which current [regulatory] activities and requirements may not be sufficient to manage the effects of aging in the period of extended operation."[51] License renewal does not address operational issues, because these issues are "effectively addressed and maintained by ongoing agency oversight, review, and enforcement."[52] Issues that are addressed on an ongoing basis need not be addressed during license renewal.[53] The adequacy of a plant's CLB is not addressed during the license renewal safety review.[54]

With respect to each structure, system, or component requiring aging management review, "a license renewal applicant must demonstrate that the 'effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the CLB for the period of extended operation.'"[55] The

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application. The current licensing basis consists of the license requirements, including license conditions and technical specifications. It also includes the plant-specific design basis information documented in the plant's most recent Final Safety Analysis Report, and any orders, exemptions, and licensee commitments that are part of the docket for the plant's license, i.e., responses to NRC bulletins, generic letters, and enforcement actions, and other licensee commitments documented in NRC safety evaluations or licensee event reports. *See* 10 C.F.R. § 54.3. The current licensing basis additionally includes all of the regulatory requirements found in Parts 2, 19, 20, 21, 30, 40, 50, 55, 72, 73, and 100 with which the particular applicant must comply." *Turkey Point,* CLI-01-17, 54 NRC at 9 (citation omitted).

[49] *Turkey Point,* CLI-01-17, 54 NRC at 10; *see* Nuclear Power Plant License Renewal; Revisions, 60 Fed. Reg. 22,461, 22,482 n.2 (May 8, 1995).

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

[51] 60 Fed. Reg. at 22,469.

[52] *Turkey Point,* CLI-01-17, 54 NRC at 9.

[53] *See Oyster Creek,* CLI-06-24, 64 NRC at 117-18; *Turkey Point,* CLI-01-17, 54 NRC at 8-10.

[54] *Turkey Point,* CLI-01-17, 54 NRC at 23; *see* 10 C.F.R. § 54.30(b) ("The licensee's compliance with the obligation under Paragraph (a) of this section to take measures under its current license [to ensure that the intended function of those systems, structures or components will be maintained in accordance with the CLB throughout the term of its current license] is not within the scope of the license renewal review.").

[55] *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-14, 71 NRC 449, 456 (2010) (quoting 10 C.F.R. § 54.21(a)(3)).

NRC has limited the scope of the aging management reviews to those structures and components "[t]hat perform an intended function, as described in § 54.4, without moving parts or without a change in configuration or properties" and "[t]hat are not subject to replacement based on a qualified life or specified time period."[56] As such, "[o]nly passive, long-lived structures and components are subject to an aging management review for license renewal."[57]

2. License Renewal — Environmental Review

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,[58] as well as reasonable alternatives to that action.[59] The NRC's environmental review is limited 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 occurring."[60] In evaluating reasonable impacts, an "agency need not perform analyses concerning events that would be considered 'worst case' scenarios . . . or those considered 'remote and highly speculative.'"[61] As such, NEPA affords "agencies . . . broad discretion 'to keep their inquiries within appropriate and manageable boundaries.'"[62] The Commission has echoed this principle stating that "NEPA requires consideration of 'reasonable' alternatives, not all conceivable ones."[63]

The NRC adopted regulations in 10 C.F.R. Part 51 to implement its NEPA responsibilities.[64] These regulations direct a focused environmental review, delineating certain environmental issues as generic, known as Category 1 issues,

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[56] 10 C.F.R. § 54.21(a)(1)(i)-(ii).

[57] 60 Fed. Reg. at 22,463.

[58] *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)).

[59] *See Seabrook,* CLI-12-5, 75 NRC at 338.

[60] *Marsland,* LBP-19-2, 89 NRC at 40 (quoting *Long Island Lighting Co.* (Shoreham Nuclear Power Station, Unit 1), ALAB-156, 6 AEC 831, 836 (1973)).

[61] *Holtec International* (HI-STORE Consolidated Interim Storage Facility), LBP-19-4, 89 NRC 353, 375 (2019) (quoting *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 352 (2002); *Limerick Ecology Action, Inc. v. NRC,* 869 F.2d 719, 754-55 (3d Cir. 1989)).

[62] *Marsland,* LBP-19-2, 89 NRC at 40 (quoting *Claiborne,* CLI-98-3, 47 NRC at 103).

[63] *Seabrook,* CLI-12-5, 75 NRC at 338 (quoting *Nat. Res. Def. Council, Inc. v. Morton,* 458 F.2d 827, 834, 837, 838 (D.C. Cir. 1972)).

[64] *See* 10 C.F.R. §§ 51.53(c), 51.71, 51.95(c), pt. 51, subpt. A, app. B; *see also* Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. 28,467 (June 5, 1996).

which need not be addressed by an applicant, unless there is "new and significant information."[65] Based on the supporting analysis provided in an agency-prepared Generic Environmental Impact Statement (GEIS), the Category 1 issues are summarized and codified in Table B-1 to Appendix B to 10 C.F.R. Part 51.[66] Conversely, the Commission has defined other environmental issues as site-specific that must be addressed by an applicant or licensee in its environmental report. These issues, known as Category 2 issues, are found at 10 C.F.R. § 51.53(c). Under this framework, 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.[67]

The agency's NEPA regulations require that an applicant include in its environmental report "analyses of the environmental impacts of the proposed action . . . for those issues identified as Category 2 issues . . . ."[68] An environmental report "is not required to contain analyses of the environmental impacts of the license renewal issues identified as Category 1"[69] unless there is "any new and significant information regarding the environmental impacts . . . "of a Category 1 issue.[70]

In addition, an applicant or licensee must discuss "the environmental impacts of alternatives and any other matters described in [10 C.F.R.] § 51.45," but an environmental report "is not required to include discussion of need for power or the economic costs and economic benefits of the proposed action or of alternatives to the proposed action" unless such a discussion is "essential" to determine whether an alternative should be included in the ER.[71]

In sum, an applicant or licensee must provide a plant-specific review of the Category 2 issues in its environmental report and must address any new and

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[65] 10 C.F.R. § 51.53(c)(3)(iv). The generic issues are codified in the Generic Environmental Impact Statement (GEIS) in Appendix B to 10 C.F.R. Part 51.

[66] *See* 1 Office of Nuclear Reactor Regulation (NRR), NRC, NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, at S-1 to -2 (rev. 1 June 2013) (ADAMS Accession No. ML13106A241) [hereinafter GEIS]; *see also* Revisions to Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 78 Fed. Reg. 37,282 (June 20, 2013).

[67] *See Mass. v. NRC,* 522 F.3d 115, 119-21 (1st Cir. 2008).

[68] 10 C.F.R. § 51.53(c)(3)(ii).

[69] *Id.* § 51.53(c)(3)(i).

[70] *Id.* § 51.53(c)(3)(iv).

[71] *Id.* § 51.53(c)(2); *see* 61 Fed. Reg. at 28,468 ("[T]he issue of need for power and generating capacity will no longer be considered in NRC's license renewal decisions.")

significant information that might render the Commission's generic Category 1 determinations inapplicable.[72]

To supplement the GEIS the NRC Staff uses the environmental report to create a Supplemental Environmental Impact Statement (SEIS).[73] 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."[74]

Since the Category 1 generic environmental determinations have been codified in Table B-1 of Appendix B to Subpart A of 10 C.F.R. Part 51, a petitioner may only challenge the Category 1 generic conclusions if the rule is waived by the Commission after filing a successful waiver petition.[75] Otherwise Category 1 conclusions "may not be challenged in litigation . . . ."[76]

III. ANALYSIS

Petitioner's participation is not challenged by either the NRC Staff or NEPB.[77] As explained in Section A, *infra,* we find Petitioner has demonstrated representational standing. However, we find each of the four proffered contentions inadmissible.

A. Standing

We conclude, as have other licensing boards, that the 50-mile proximity presumption should apply in all reactor license renewal proceedings, including SLR proceedings.[78]

An organization that seeks to intervene on behalf of one or more of its members must demonstrate representational standing. To do so, the organization

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[72] *See Exelon Generation Co., LLC* (Limerick Generating Station, Units 1 and 2), CLI-13-7, 78 NRC 199, 212-13 (2013).

[73] 10 C.F.R. § 51.95(c); *see* NRR, NRC, NUREG-1555, Standard Review Plans for Environmental Reviews for Nuclear Power Plants, Supp. 1: Operating License Renewal, Final Report (rev. 1 June 2013) (ADAMS Accession No. ML13106A246); *see also* NRR, NRC, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supp. 23, Regarding Point Beach Nuclear Point Units 1 and 2, Final Report (Aug. 2005) (ADAMS Accession No. ML052230490).

[74] 10 C.F.R. § 51.95(c)(4).

[75] *Id.* § 2.335(b).

[76] *Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI-07-3, 65 NRC 13, 17-18, *reconsid. denied,* CLI-07-13, 65 NRC 211, 215 (2007).

[77] NEPB Answer at 3; Staff Answer at 6-7.

[78] *See supra* note 21.

must show that (1) at least one of its members would have standing to sue in their own right; (2) the member has authorized the organization to represent their interest; (3) "the interests that the organization seeks to protect are germane to its purpose; and [(4)] neither the claim asserted nor the relief requested requires the member to participate" in the adjudicatory proceeding.[79]

Petitioner has provided declarations from members who live within 50 miles of the Point Beach facility and therefore have standing in their own right pursuant to the proximity presumption.[80] The members' declarations authorize Petitioner to represent their interests in this proceeding, thus rendering it unnecessary for them to participate as individuals.[81] Further, Petitioner has demonstrated that the interests it seeks to protect in this proceeding are germane to its organizational purposes.[82] We conclude that Petitioner has met the requirements for standing.

B. Contention 1

1. Background

Contention 1 alleges that "the Environmental Report [(ER)] 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."[83]

Petitioner argues that "[t]he ER unlawfully fails to consider replacement of the once-through cooling system with cooling towers as a reasonable alternative that would 'reduc[e] or avoid[ ] adverse environmental effects' relating to [certain] Category 2 issues,"[84] such as the thermal impacts and impacts of impingement and entrainment of aquatic organisms associated with once-through cooling systems.[85] Petitioner contends the analysis included in the ER of two alternatives, license renewal and the no-action alternative, is insufficient.[86]

Labeling Point Beach Units 1 and 2 as "super predators," Petitioner claims that there are the "recurring effects of killing aquatic organisms and occasional

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[79] *See Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 323 (1999).

[80] *See generally* Declarations in Support of Petition of Physicians for Social Responsibility Wisconsin for Leave to Intervene (Mar. 23, 2021).

[81] *See generally id.*

[82] *See* Petition at 2.

[83] *Id.* at 17.

[84] *Id.* at 18 (quoting 10 C.F.R. § 51.45(c)).

[85] *Id.* at 19.

[86] *Id.* at 19-20.

birds" from the once-through cooling system.[87] Petitioner asserts "[m]itigation in the form of mechanical draft or passive cooling tower systems would sharply reduce the thermal pollution discharges to Lake Michigan," and may reduce water withdrawal "by about 95%" and result in "far fewer animals and plants . . . sacrificed for the generation of electricity."[88] Petitioner states the "ER provides very limited historical data on the plant's aquatic and wildlife killing in Lake Michigan as a result of impingement and entrainment at the plant intakes."[89] Petitioner also contends NEPB failed to consider the cumulative impacts of thermal pollution,[90] incorrectly considered impacts to Lake Michigan rather than to "localized site conditions,"[91] and relied on "ancient [ ] data."[92] Further, Petitioner references several nuclear reactors that were required to switch to closed-cycle cooling from a once-through cooling system.[93]

NEPB counters that Contention 1 is inadmissible on several grounds.[94] NEPB argues Contention 1 impermissibly challenges NRC rules and "is unsupported by information showing that conversion to closed-cycle cooling (the alternative that Petitioner proposes) is reasonable and commercially feasible or that aquatic impacts are significant enough to warrant redesigning and retrofitting the plant."[95] Citing 10 C.F.R. § 51.53(c)(3)(ii)(B),[96] NEPB asserts that no further analysis of thermal impacts is required and that Commission caselaw has made clear that the NRC may not evaluate alternatives to the chosen cooling system.[97]

Even if Contention 1 were not barred as an impermissible attack on an NRC rule, NEPB contends, it is still inadmissible because it is insufficiently supported and fails to demonstrate a genuine dispute with the applicant.[98] NEPB argues that Petitioner does not address the pertinent sections of the SLR application that discuss entrainment and impingement impacts.[99] NEPB further asserts that Petitioner fails to "provide[ ] information indicating that retrofitting the plant with

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[87] *Id.* at 20.

[88] *Id.*

[89] *Id.* at 21.

[90] *Id.* at 24.

[91] *Id.* at 24-25; Tr. at 16 (Lodge).

[92] Petition at 25.

[93] *Id.* at 26-27.

[94] NEPB Answer at 12.

[95] *Id.*

[96] Although section 51.53(c)(3) states that it applies to applicants for "an initial renewed license," the Commission has determined this applies to SLR applicants as well. *See Florida Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-20-3, 91 NRC 133, 141 (2020).

[97] NEPB Answer at 12-15.

[98] *See id.* at 15-25.

[99] *Id.* at 15.

cooling towers is a reasonable alternative to mitigate environmental impacts."[100] Nor does Petitioner, according to NEPB, provide a "reference or source showing that the number of aquatic organisms entrained, impinged, or affected by thermal discharges represents a significant environment impact"[101] such that the duty to analyze mitigation should be greater than small.[102] NEPB generally disputes Petitioner's expert, Arnold Gundersen, and argues the information Mr. Gundersen referenced does not support the contention and fails to demonstrate a genuine dispute.[103] NEPB concludes by stating Petitioner's "allegations are nothing more than a combination of generalizations unrelated to Point Beach and recitation of undisputed data from the ER, sprinkled with rhetoric and devoid of meaningful analysis or expert support."[104]

Likewise, the NRC Staff opposes admission of Contention 1, which it categorizes as a contention of omission, arguing it fails to demonstrate a genuine dispute with the applicant on a material issue of law or fact.[105] The NRC Staff contends that Petitioner has not presented sufficient support for its assertion that consideration of the cooling tower alternative is reasonable and must be included under NEPA or that it is required under NRC regulations.[106] The NRC Staff also argues that Petitioner fails to show why NEPB cannot rely on its Clean Water Act (CWA) permit, as required by 10 C.F.R. § 51.53(c)(3)(ii)(B), since Petitioner did not show that cooling towers are required by the National Pollution Discharge Elimination System (NPDES) permit or by the Wisconsin Department of Natural Resources (WDNR).[107] In addition, the NRC Staff asserts that Petitioner's references to the required installation of cooling towers at other reactors are misplaced, since in those cases the installation was required by the state agency while WDNR imposed no such requirement for Point Beach.[108] Despite the fact that Petitioner referenced an Environmental Protection Agency (EPA) Inspector General report and information on past power uprates from the ER,[109] the NRC Staff concludes stating that "[w]hile 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

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[100] *Id.* at 16.

[101] *Id.* at 17.

[102] *See id.* (citing *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 and 3), CLI-16-7, 83 NRC 293, 323 n.156 (2016)).

[103] *See id.* at 15-25.

[104] *Id.* at 24-25.

[105] Staff Answer at 18-20.

[106] *Id.* at 20-24.

[107] *Id.* at 25-26.

[108] *Id.* at 27-28.

[109] *Id.* at 28.

reduce or avoid adverse impacts), Petitioner does not provide sufficient information to show a genuine dispute on a material issue of law or fact."[110]

2. 10 C.F.R. § 2.309(f)(1)(iii), (iv), (vi) — Impermissible Challenge to an NRC Rule

Contention 1 is inadmissible because it constitutes a collateral attack on an NRC rule. The Commission has held that 10 C.F.R. § "51.53(c)(3)(ii)(B) rests on the presumption that [NRC] need not — indeed *cannot* — review and judge environmental permits issued under the Clean Water Act by the EPA or an authorized state agency."[111] The NRC's role in evaluating a plant's cooling system is limited — "the permitting agency 'determines what cooling system a nuclear power facility may use[,] and NRC factors the impacts resulting from use of that system into the NEPA [ ] analysis.'"[112] The NRC may not consider alternative cooling systems as that would improperly "second-guess[ ]" the cooling system approved by the permitting agency.[113]

Moreover, section 51.53(c)(3)(ii)(B)[114] only requires an assessment of entrainment, impingement, and thermal impacts if an applicant or licensee cannot provide a current determination under Clean Water Act (CWA) section 316(b)[115] and, if necessary, a variance under CWA section 316(a).[116] NEPB provided both a section 316(b) determination and a section 316(a) variance in its ER. Further, if the WDNR issues an update to any of these documents, NEPB is obligated to inform the NRC.[117] Therefore, in the absence of any facts provided by Petitioner

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[110] *Id.* at 29.

[111] *Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI-07-16, 65 NRC 371, 387 n.77 (2007). Petitioner did not seek a waiver to challenge an NRC rule that would be required to waive 10 C.F.R. § 51.53(c)(3)(ii)(B). *See* 10 C.F.R. § 2.335(b); *AmerGen Energy Co., LLC* (Oyster Creek Nuclear Generating Station), CLI-07-8, 65 NRC 124, 133 (2007).

[112] *Vt. Yankee,* CLI-07-16, 65 NRC at 389 (quoting *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), CLI-78-1, 7 NRC 1, 26 (1978)).

[113] *Id.* at 377.

[114] Section 51.53(c)(3)(ii)(B) provides:

"If the applicant's plant utilizes once-through cooling or cooling pond heat dissipation systems, the applicant shall provide a copy of current Clean Water Act 316(b) determinations and, if necessary, a 316(a) variance in accordance with 40 CFR part 125, or equivalent State permits and supporting documentation. If the applicant cannot provide these documents, it shall assess the impact of the proposed action on fish and shellfish resources resulting from thermal changes and impingement and entrainment." 10 C.F.R. § 51.53(c)(3)(ii)(B).

[115] Clean Water Act § 316(b), 33 U.S.C. § 1326(b).

[116] *Id.* § 316(a), 33 U.S.C. § 1326(a).

[117] *See* 10 C.F.R. §§ 54.13(a)-(b), 51.41, 54.35; Tr. at 71-72 (Young).

to suggest that NEPB is operating contrary to its permit, further assessment of entrainment, impingement, or thermal impacts is not required in connection with this SLR proceeding.

Section 1.3 of the Point Beach NPDES permit contains the CWA section 316(b) determination.[118] The WDNR, the state NPDES-permitting authority, concluded that "[t]he cooling water intake . . . represents interim [best technology available] for minimizing adverse environmental impact in accordance with the requirements in s. 283.31(6), Wis. Stats., and section 316 (b) of the [CWA]."[119] Section 8 of the Fact Sheet accompanying the NPDES permit contains the CWA section 316(a) variance determination. There, the WDNR concluded "that the discharge at the maximum heat load of 8,273 MBTU/hr is protective of the balanced, indigenous community of shellfish, fish, and wildlife in and on Lake Michigan and that no temperature limit is needed."[120]

Thus, NRC rules require no further documentation or analysis with respect to the impacts associated with Point Beach's cooling system.[121] A petitioner may not attempt to impose stricter requirements than those required by NRC rules — doing so constitutes a prohibited collateral attack on NRC rules.[122]

Notably, the Commission rejected a substantively similar contention in the *Vermont Yankee* license renewal proceeding.[123] There, a petitioner proffered a contention asserting "that the [e]nvironmental [r]eport contains an insufficient analysis of the thermal impacts" on an adjacent water body.[124] The Commission reversed the licensing board ruling that admitted the contention, concluding that CWA section 511(c)(2)[125] "precludes us from either second-guessing the con-

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[118] Permits issued by WDNR are referred to as Wisconsin Pollution Discharge Elimination System (WPDES) but carry the same legal effect as NPDES permits. ER, attach. B, WPDES Permit No. WI-0000957-08-0 § 1.3 (July 1, 2016) [hereinafter WPDES Permit].

[119] *Id.* Although this is an interim determination, it is still the current determination as required by 10 C.F.R. § 51.53(c)(3)(ii)(B).

[120] WPDES Permit, Letter from Amanda Minks, Water Quality Standards Specialist, WDNR, to Steve Jaeger, Wastewater Engineer, WDNR at 3 (Aug. 29, 2012). Petitioner acknowledged that WDNR approved Point Beach's once-through cooling system. *See* Petition at 24.

[121] Petitioner's argument that the NPDES permit will expire "within about 60 days" and its renewal is "speculation" is not relevant. Petitioner Reply at 3. The Commission has held that the expiration of a NPDES permit before the end of the license renewal term does not affect compliance with 10 C.F.R. § 51.53(c)(3)(ii)(B). *See Vt. Yankee,* CLI-07-16, 65 NRC at 383 (citing Clean Water Act § 332(b)(1)(B), 33 U.S.C. § 1342(b)(1)(B)). In addition, as NEPB counsel noted, the timely renewal doctrine will ensure that the current permit will remain valid until a new permit is issued. Tr. at 26-27 (Lewis).

[122] *See supra* note 38.

[123] *See Vt. Yankee,* CLI-07-16, 65 NRC at 375.

[124] *Id.* at 381 (citations omitted).

[125] When Congress enacted CWA section 511(c)(2) it "removed the broad responsibility of multi-

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clusions in NPDES permits or imposing our own effluent limitations — thermal or otherwise."[126] The CWA, according to the Commission, was specifically intended to deprive the NRC of the authority to "review and judge environmental permits issued under the [CWA] by the EPA or an authorized state agency."[127] Therefore, the Commission indicated, it is beyond NRC's authority to "determine[ ] what cooling system a nuclear power facility may use . . . ."[128]

The Commission made clear how future boards should handle this issue, stating[129]

> In future cases where EPA [or . . . a state permitting agency] has made the necessary factual findings for approval of a specific once-through cooling system for a facility after full administrative proceedings, we expect our adjudicatory boards to do as we have done today, i.e., defer to the agency that issued the section 316(a) permit.[130]

Once an applicant, or in this case a licensee, provides the information in 10 C.F.R. § 51.53(c)(3)(ii)(B), the NRC is "required by law to consider the [permitting agency's] decision [on thermal impacts] as binding."[131]

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ple federal agencies for water quality standards and [ ] placed that responsibility solely in the hands of the EPA [or an authorized state agency]." *Vt. Yankee,* CLI-07-16, 65 NRC at 388 (citing *Carolina Power and Light Co.* (H.B. Robinson, Unit 2), ALAB-569, 10 NRC 557, 561 (1979)); *see Seabrook,* CLI-78-1, 7 NRC at 25 ("As Senator Baker explained in introducing the floor amendment which was the forerunner of [CWA] section 511(c)(2), duplication was to be avoided by leaving to EPA and the states the decision as to the water pollution control criteria to which a facility's cooling system would be held." (quoting *Public Service Co. of New Hampshire* (Seabrook Station, Units 1 and 2), ALAB-366, 5 NRC 39, 51-52 (1977))).

[126] *Vt. Yankee,* CLI-07-16, 65 NRC at 377 (footnote omitted).

[127] *Id.* at 387 n.77.

[128] *Seabrook,* CLI-78-1, 7 NRC at 26.

[129] Commission precedent is binding on licensing boards.

[130] *Vt. Yankee,* CLI-07-16, 65 NRC at 389 (quoting *Seabrook,* CLI-78-1, 7 NRC at 28 n.42) (quotations and citation omitted). In its reply, Petitioner asserts that the WDNR "has not at this point made 'the necessary factual findings for approval of a specific once-through cooling system for a facility after full administrative proceedings.'" Petitioner Reply at 4 (quoting *Vt. Yankee,* CLI-07-16, 65 NRC at 389). This assertion is unsupported and, indeed, contrary to the facts. As NEPB's ER demonstrates, WDNR explicitly made a section 316(b) determination and granted a section 316(a) variance. *See supra* notes 118-120 and accompanying text.

[131] *Vt. Yankee,* CLI-07-16, 65 NRC at 388 (citing *H.B. Robinson,* ALAB-569, 10 NRC at 558); *see Seabrook,* CLI-78-1, 7 NRC at 23-28.

At oral argument, the NRC Staff suggested it "may" rely on the determinations made by the state agency if there is a section 316(b) determination and/or a section 316(a) variance, and that the NRC Staff may consider "state permitting agency concerns" raised by a petitioner. Tr. at 64-66 (Young). It is not clear, however, how this position can be reconciled with CWA section 511 and

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For the above reasons, we find Contention 1 inadmissible as it constitutes a collateral attack upon an NRC rule and because the NRC's consideration of alternative cooling system impacts after an applicant has satisfied 10 C.F.R. § 51.53(c)(3)(ii)(B) is contrary to CWA section 511(c)(2) and Commission precedent. Contention 1 is inadmissible because it impermissibly challenges NRC rules, is not within the scope of the proceeding, does not raise an issue that is material to the findings the NRC must make, and fails to demonstrate a genuine dispute with the applicant in contravention of 10 C.F.R. § 2.309(f)(1)(iii), (iv), and (vi).

C. Contention 2

1. Background

Contention 2, as submitted on March 23, 2021, alleges that

> Point Beach's continued operation violates 10 CFR Part 50, Appendix A, Criterion 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.[132]

According to Petitioner "in recent years, the NRC has systematically removed conservative calculational aspects of the embrittlement process to allow continued operation."[133] Petitioner further alleges that "the NRC has allowed Point Beach and its cohorts to use analytical techniques that ignore the data from sample coupons it could readily test."[134] Petitioner concludes that as a consequence "[t]here is no scientific basis by which the Point Beach reactors should continue operating without a complete physical analysis of the coupons from its reactors . . . ."[135] Petitioner contends that "the Point Beach reactors present a clear and present danger," because the NRC and Point Beach have relied upon "error-prone analytical calculations rather than" performing metallurgical tests on coupons/capsules.[136]

Petitioner further contends that Point Beach is one of "the remaining five worst embrittled atomic power reactors in the country," allegedly (at least in

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Commission precedent indicating a state agency's decision on thermal impacts is "binding" and cannot be "second-guess[ed]" by the NRC. *Vt. Yankee,* CLI-07-16, 65 NRC at 377, 388.

[132] Petition at 31.

[133] *Id.*

[134] *Id.* at 32.

[135] *Id.*

[136] *Id.* at 37.

part) due to the removal of conservatisms from the neutron embrittlement monitoring process.[137] Petitioner claims that Point Beach does not contain enough coupons to test for neutron embrittlement throughout the SLR operating period.[138] Therefore, to compensate for the alleged lack of coupons, Petitioner alleges "the NRC has instead modified its calculations to allow aging, embrittled nuclear power reactors to continue to operate well past their lifespans and certainly into risky uncharted territory."[139] These calculations, according to Petitioner, are "error-prone" and are used by the NRC "to avoid testing [ ] actual embrittlement through the measurement of [ ] actual metallurgical coupons."[140] The lack of capsules and "error-prone analytical calculations" are concerning, Petitioner maintains, because in a "seriously embrittled reactor" there is the risk of pressurized thermal shock, that could cause the reactor vessel to "break open and release massive radioactivity into the surrounding area and the environment."[141]

Further, Petitioner's expert, Arnold Gundersen, states 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."[142] Mr. Gunderson states that Point Beach, "[d]uring the last 50 years of operation . . . has been violating [General Design Criterion] 14 by not testing coupons . . . ."[143] As such, Petitioner contends this aging-related issue is not "adequately dealt with by regulatory processes" and warrants denial of the SLR application.[144] In its reply, Petitioner reiterates its previous arguments and adds new arguments.[145]

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[137] *Id.* at 31-32; Tr. at 17 (Lodge).

[138] Petition at 35 (citing Gundersen Decl. ¶ 7.4.6).

[139] *Id.* at 37 (citing Gundersen Decl. ¶ 7.7.3).

[140] *Id.*; Gundersen Decl. ¶ 7.8.2 ("Instead of evaluating Point Beach's specific metallurgy, the NRC has allowed Point Beach and its cohorts to use analytical techniques that ignore the data from sample coupons it could readily test.").

[141] Petition at 35 (citing Gundersen Decl. ¶ 7.4.5). Pressurized thermal shock is an event or transient that causes "severe overcooling (thermal shock) concurrent with or followed by significant pressure in the reactor vessel." 10 C.F.R. § 50.61(a)(2).

[142] Gundersen Decl. ¶ 7.8.2.

[143] Gundersen Decl. ¶ 7.8.4; Tr. at 84 (Lodge). General Design Criterion 14 requires that "[t]he reactor coolant pressure boundary shall be designed, fabricated, erected, and tested so as to have an extremely low probability of abnormal leakage, of rapidly propagating failure, and of gross rupture." 10 C.F.R. pt. 51, subpt. A, app. A, § II, Criterion 14.

[144] Petition at 38 (quoting *PPL Susquehanna LLC* (Susquehanna Steam Electric Station, Units 1 and 2), LBP-07-4, 65 NRC 281, 309 (2007)).

[145] *See* Petitioner Reply at 6-13. The Commission has made it clear that licensing boards may not entertain arguments advanced for the first time in a reply brief. *See American Centrifuge Plant,*

(Continued)

NEPB maintains Contention 2 is inadmissible because it impermissibly challenges NRC's regulations and the CLB, lacks adequate support, and fails to raise a genuine dispute with the application.[146] NEPB asserts that Petitioner's references to NRC's calculations to determine neutron embrittlement constitute an impermissible challenge to the CLB.[147] Similarly, NEPB contends the various allegations attacking NRC's overall approach to monitoring neutron embrittlement impermissibly challenges NRC Staff decision-making and NRC rules.[148]

NEPB argues that Petitioner's assertion that Point Beach does not contain enough capsules to test through the end of the SLR period lacks adequate support and fails to demonstrate a genuine dispute with the applicant.[149] NEPB states that Petitioner fails to address the Reactor Vessel Material Surveillance Program in the SLR application, which discusses testing of the vessel material.[150] Further, to the extent Petitioner suggests NEPB will not test capsules, NEPB notes that the SLR application explicitly states capsule "A" will be removed and tested.[151] NEPB also asserts the "vague" Petitioner references to "new" operator administrator controls and "error-prone analytical calculations" lack specificity and are not material to the SLR application.[152]

The NRC Staff opposes admission of Contention 2, arguing that Petitioner fails to reference the specific portions of the SLR application it is challenging.[153] The NRC Staff explains that Contention 2 refers to reactor pressure vessel (RPV) neutron embrittlement, which "results from the neutron irradiation of the reactor pressure vessel during reactor operation . . . ."[154] Because severe neutron embrittlement can cause brittle failure,[155] 10 C.F.R. Part 50, Appendix H requires licensees to monitor neutron embrittlement to ensure the RPV "contin-

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CLI-06-9, 63 NRC at 439 (stating that the Commission "will not permit, in a reply, the filing of new arguments or new legal theories that opposing parties have not had an opportunity to address" (footnote omitted)). Contrary to Petitioner's assertion, a licensing board is not "obliged" to address new arguments raised in a reply if no motion to strike is filed. Tr. at 124 (Lodge).

[146] *See* NEPB Answer at 25-35.

[147] *Id.* at 26-27.

[148] *Id.* at 27-29; *id.* at 28 ("As is plainly apparent from these claims, the Petitioner's real quarrel is with generic NRC policies and past decision-making regarding reactor vessel safety, not the Point Beach SLR Application."); *see* Tr. at 29 (Leidich).

[149] *See* NEPB Answer at 29-35.

[150] *Id.* at 29-30.

[151] *Id.* (citing SLRA, app. A, at A-25).

[152] *Id.* at 33-34 (citing Petition at 36, 37).

[153] Staff Answer at 31-33.

[154] *Id.* at 30 (citing NRR, NRC, NUREG-2192, Standard Review Plan for Review of [SLR] Applications for Nuclear Power Plants, at 4.2-1 (July 2017) (ADAMS Accession No. ML17188A158) [hereinafter NUREG-2192]).

[155] *Id.* (citing NUREG-2192 at 4.2-1).

ues to have adequate fracture toughness to prevent brittle failure."[156] 10 C.F.R. § 50.61 and 10 C.F.R. Part 50, Appendix G set forth the neutron embrittlement monitoring requirements.[157] To monitor neutron embrittlement, licensees periodically withdraw capsules[158] placed near the inside of the vessel wall.[159] The capsules "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."[160] This method ensures that the supplement "A" capsule is "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 the subsequent period of extended operation."[161]

Specifically, the NRC Staff contends that Petitioner's reference to an unnamed aging management program is insufficient, as the SLR application contains several aging management programs, none of which were addressed by Petitioner.[162] In addition, the NRC Staff asserts that Petitioner impermissibly challenges NRC rules without a waiver when it seeks "a complete physical analysis of the coupons from its reactors and the five other reactors that are its embrittled cohorts."[163] The NRC Staff states that the coupon analysis sought by Petitioner is not required by NRC rules.[164] Further, the NRC Staff argues that Contention 2 impermissibly challenges current operating issues, contrary to 10 C.F.R. § 2.309(f)(1)(iii).[165]

2. Motion to Amend Contention 2

Before we address the admissibility of Contention 2, we must address Petitioner's motion to amend the contention.[166] Petitioner seeks to amend Contention

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[156] *Id.* (citing NUREG-2192 at 4.2-1; 2 NRR, NRC, NUREG-2191, Generic Aging Lessons Learned for [SLR] (GALL-SLR) Report, § XI.M31 (July 2017) (ADAMS Accession No. ML17187-A204) [hereinafter NUREG-2191, Vol. 2]).

[157] *See* 10 C.F.R. § 50.61; *id.* pt. 50, app. G.

[158] Petitioner refers to capsules as "coupons." *See* Petition at 31-38.

[159] NUREG-2191, Vol. 2 at XI.M31-1.

[160] *Id.*

[161] *Id.*

[162] Staff Answer at 31-33.

[163] *Id.* at 33 (quoting Petition at 38).

[164] *Id.* at 33-34.

[165] *Id.* at 35.

[166] *See generally* Petitioner Motion to Amend.

2 to include three additional sentences, so that amended Contention 2 would read:

> Point Beach's continued operation violates 10 CFR Part 50, Appendix A, Criterion 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. The Electric Power Research Institute has recently admitted that its computer software for predicting embrittlement in boiling water reactors is "nonconservative." Physical specimens and coupons at Point Beach may indeed prove that embrittlement calculations made at Point Beach are not conservative. Without testing the physical specimens and coupons at Point Beach, NextEra is severely risking public safety.[167]

"[M]otions for leave to file . . . amended contentions . . . after the [hearing request] deadline . . . will not be entertained absent a determination by the presiding officer that a participant has demonstrated good cause . . . ."[168] Good cause may be shown where

> (i) The information upon which the filing is based was not previously available;
> (ii) The information upon which the filing is based is materially different from information previously available; and
> (iii) The filing has been submitted in a timely fashion based on the availability of the subsequent information.[169]

Once a movant satisfies the motion to amend requirements, a new or amended contention must still satisfy the contention admissibility standards in 10 C.F.R. § 2.309(f) to be admitted.

The basis for the amendment request was the public release of a February 2021 Electric Power Research Institute letter (EPRI letter) to its membership that stated that its software for monitoring neutron embrittlement in a Boiling Water Reactor (BWR) is "non-conservative" in a specific fluence range.[170]

Petitioner asserts its Amended Contention 2 meets the three-prong test under section 2.309(c) for good cause required to amend contentions after the

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[167] *Id.* at 7.

[168] 10 C.F.R. § 2.309(c).

[169] *Id.* § 2.309(c)(i)-(iii). The Commission and licensing boards "typically consider 30 to 60 days from the initiating event a reasonable deadline for proposing new or amended contentions." *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-12-21, 76 NRC 491, 499 (2012) (footnote omitted).

[170] EPRI letter attach. 1, at 1.

hearing request deadline has passed.[171] Turning to the first prong in section 2.309(c)(i), Petitioner asserts that since "the EPRI letter was not publicly available in ADAMS until April 2, 2021," the amendment is based on information not previously available.[172] Second, Petitioner asserts that "[t]he unexpected EPRI admissions . . . strengthens and supplements the material issue of potential nonconservatism in computer modeling that may be undermining the aging management of the [Point Beach] reactor vessels and internals."[173] According to Petitioner, this constitutes information that "is materially different from information previously available"[174] as mandated under section 2.309(c)(ii). Third, Petitioner contends the motion to amend is timely under section 2.309(c)(iii), because it was filed within thirty days of Petitioner becoming aware of the EPRI letter.[175]

NEPB opposes the motion to amend and argues Amended Contention 2 should be rejected because it contains untimely allegations and fails to demonstrate a genuine dispute with the applicant.[176] Specifically, NEPB states that Petitioner's references to baffle-former plates are untimely because those claims could have been raised earlier.[177] In addition, NEPB contends the last two sentences in proposed Amended Contention 2 bear no connection to the EPRI letter and instead constitute an impermissible and untimely "expansion in the wording of the original contention."[178] Further, NEPB argues proposed Amended Contention 2 fails to demonstrate a genuine dispute and must be rejected.[179]

The NRC Staff does not oppose the motion to amend but instead contends that proposed Amended Contention 2 is inadmissible.[180] The NRC Staff concedes that Petitioner met the good cause requirements set forth in 10 C.F.R. § 2.309(c) because (i) the EPRI letter was not available before the hearing request deadline;[181] (ii) "the EPRI Letter appears to be materially different from information previously available";[182] and (iii) the motion was filed within thirty days of the public availability of the EPRI letter.[183] Nevertheless, the NRC Staff

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[171] Petitioner Motion to Amend at 7-8.
[172] *Id.* at 7.
[173] *Id.*
[174] *Id.* (quoting 10 C.F.R. § 2.309(c)(ii)).
[175] *Id.* at 8 (citation omitted).
[176] NEPB Answer to Motion to Amend at 1.
[177] *Id.* at 4-5.
[178] *Id.* at 6.
[179] *Id.* at 7-12.
[180] Staff Answer to Motion to Amend at 1-2.
[181] *Id.* at 6-7.
[182] *Id.* at 7.
[183] *Id.*

asserts proposed Amended Contention 2 is inadmissible because the new information in proposed Amended Contention 2 is not material to the findings the NRC must make, does not raise a genuine dispute with the applicant, raises issues outside the scope of the proceeding, does not support Petitioner's position, and impermissibly challenges NRC rules without a waiver.[184]

The availability of new information may provide good cause for the amendment of a contention. Good cause may be found when a petitioner acts promptly after learning of materially new information. "[N]ewly arising information has long been recognized as providing 'good cause' for acceptance of a late contention."[185] In this case, Petitioner has demonstrated good cause by timely moving to amend its Contention 2 after receiving a public version of the EPRI letter.[186] For the reasons expressed by the NRC Staff, we agree that the EPRI Letter was not previously available, contains information that is materially different from information previously available and was submitted in a timely fashion.[187] Accordingly, we grant the motion to amend Contention 2. However, a new or amended contention must still satisfy the contention admissibility standards in 10 C.F.R. § 2.309(f)(1) to be admitted. We now analyze Contention 2, as amended, against the standards in 10 C.F.R. § 2.309(f)(1).

3. 10 C.F.R. § 2.309(f)(1)(iii), (iv), (vi) — Impermissible Challenge to NRC Rules

Under 10 C.F.R. § 54.21(c)(1)(i)-(iii), the NRC permits licensees to address TLAAs (of which the RPV is one)[188] in one of three ways: (i) demonstrating that existing "analyses remain valid for the period of extended operation;" (ii) revising existing analyses to demonstrate their validity "to the end of the period of extended operation; or" (iii) demonstrating that "[t]he effects of aging on the intended function(s) will be adequately managed for the period of extended operation."[189] In the Point Beach SLR application, NEPB addressed the requirements in 10 C.F.R. § 54.21(c)(1) for each TLAA.[190] And in accordance with 10

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[184] *Id.* at 2, 7-13.

[185] *Consumers Power Co.* (Midland Plant, Units 1 and 2), LBP-82-63, 16 NRC 571, 577 (1982) (citing *Ind. & Mich. Electric Co.* (Donald C. Cook Nuclear Plant, Units 1 and 2), CLI-72-75, 5 AEC 13, 14 (1972); *Cincinnati Gas & Electric Co. et al.* (William H. Zimmer Nuclear Station), LBP-80-14, 11 NRC 570, 574 (1980), *appeal dismissed,* ALAB-595, 11 NRC 860 (1980)).

[186] Petitioner Motion to Amend at 8.

[187] The PSR WI April 26, 2021 motion to amend was filed within 30 days of the EPRI letter being made available to the public. *Id.* at 1 ("The [EPRI] letter was docketed . . . on April 2, 2021[.]").

[188] *See* 10 C.F.R. § 54.21(a)(1)(i).

[189] *Id.* § 54.21(c)(1)(i)-(iii).

[190] *See* SLRA at 1-8, 4.2-4, 4.2-6, 4.2-14, 4.2-18, 4.2-24; *see generally id.* § 4.2.

C.F.R. § 54.3, all TLAA from the initial license renewal have been incorporated into the CLB, so only if a TLAA were being created or revised during SLR would a petitioner be able to challenge it.[191] Petitioner did not identify any new or revised TLAA. Thus, Petitioner's suggestion that the existing analysis is inadequate, is "error-prone," or may not be used challenges the requirements set forth in section 54.21(c)(1), and thus constitutes a collateral attack on NRC rules.[192] Contention 2 is inadmissible because it constitutes a collateral attack on NRC rules regarding neutron embrittlement calculations.

4. 10 C.F.R. § 2.309(f)(1)(iii), (iv), (vi) — Impermissible Challenge to Current Operating Issues

Contention 2 also is inadmissible because it challenges Point Beach's compliance with General Design Criterion (GDC) 14, which sets forth requirements for the plant's design. This constitutes an impermissible challenge to Point Beach's current operation and its CLB. The Commission has held that the adequacy of the CLB is not an issue within the scope of a license renewal proceeding.[193] As such, Petitioner's assertions regarding the CLB and GDC 14 are beyond the scope of this proceeding, not material to the decision the NRC must make, and fail to demonstrate a genuine dispute with the applicant.

On its face, Contention 2 and its bases challenge operations during the current (renewed) operating period and original operating period.[194] In Contention 2 Petitioner argues, not that testing during the SLR term may be insufficient, but rather that "the reactor coolant pressure boundary has not been tested . . . ."[195]

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[191] *See* 10 C.F.R. § 54.3.

[192] To challenge an NRC rule in an adjudicatory proceeding, a petitioner must seek a waiver under 10 C.F.R. § 2.335. Petitioner did not file such a waiver request. *See supra* notes 37-42 and accompanying text.

[193] *Turkey Point,* CLI-01-17, 54 NRC at 23.

[194] Petition at 31 ("[T]he reactor cooling pressure boundary has not been tested."); *id.* at 37 (neutron embrittlement is a "present danger"); *id.* at 37 ("Point Beach [has] relied upon error-prone analytical calculations . . . ."); *id.* at 37 (stating that there is no record of coupon samples being tested at Point Beach for "at least ten years"); *id.* at 38 ("During 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 vessel] . . . ." (quoting Gundersen Decl. ¶ 7.8.4)); *id.* at 38 ("There is inadequate coupon data specific to Point Beach to justify its continued operation beyond its 50th year . . . ." (quoting Gundersen Decl. ¶ 7.8.4)); *id.* at 38 ("[Point Beach] has been violating GDC-14 by not testing coupons . . . ." (quoting Gundersen Decl. ¶ 7.8.4)); *id.* at 40-41 (stating that 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 . . ." (quoting 10 C.F.R. pt. 51, subpt. A, app. A, § II, Criterion 14)); Tr. at 84, 86-87 (Lodge).

[195] Petition at 31. Although Petitioner does provide support for its assertion that capsule testing

(Continued)

Further, Mr. Gundersen asserts that Point Beach has violated GDC 14 for the past 50 years, which is, again, an impermissible challenge that is outside the scope of this proceeding.[196] In addition, with regard to Petitioner's claim that there are not enough capsules, this assertion appears to attack the SLR term as an afterthought and instead focuses on the alleged historical, and present, lack of capsule testing.[197] These assertions are beyond the scope and not material to this proceeding, and do not demonstrate a genuine dispute with the applicant. For the above reasons, amended Contention 2 impermissibly raises issues that challenge the current operating license period, contrary to 10 C.F.R. § 2.309(f)(1)(iii), (iv), and (vi).

5. 10 C.F.R. § 2.309(f)(1)(v), (vi) — Lack of Adequate Support, and Failure to Demonstrate Genuine Dispute

Petitioner's remaining claims supporting Contention 2 lack specificity and adequate support and fail to demonstrate a genuine dispute with the applicant. For example, while Petitioner contends that "there are not enough sample coupons to remove from the reactor and test for embrittlement during the 60-year period of operations, let alone for an additional 20 more years out to 80 years,"[198] it fails to cite to the SLR application that discusses capsule testing. The Reactor Vessel Material Surveillance Program, which is described in the SLR application's Appendix A providing the updated final safety analysis report supplement, states

> This [Aging Management Program] includes withdrawal and testing of the Supplemental "A" surveillance capsule, identified in [Technical Requirements Manual] 2.2. This capsule will receive between one to two times the peak reactor vessel neutron fluence of interest at the end of the [subsequent period of operation] in the TLAAs for [upper shelf energy], [pressurized thermal shock], and [pressure-temperature] limits. The surveillance program adheres to the requirements of 10 CFR Part 50, Appendix H, as well as the American Society for Testing Materials (ASTM) standards incorporated by reference in 10 CFR Part 50, Appendix H.[199]

This capsule contains weld materials representative of Point Beach Units 1 and

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will be insufficient during the SLR term, the overall focus of Petitioner's assertions impermissibly challenge the current operating period. *See* Petition at 35 (citing Gundersen Decl. ¶ 7.4.6).

[196] Gundersen Decl. ¶ 7.8.4.

[197] Petition at 35-36.

[198] *Id.* at 36 (citing Gundersen Decl. ¶ 7.7.2).

[199] SLRA, app. A, at A-25; *see id.,* app. A, at A-158; *id.,* app. B. at B-148 to -149.

2,[200] and once removed, the neutron fluence it received will bound the projected fluence at the end of the SLR operating term.[201] Further, as stated in the SLR application, NEPB receives supplemental data from other Babcock & Wilcox reactors "to (a) monitor irradiation embrittlement to neutron fluences greater than the projected neutron fluence at the end of the [subsequent period of operation], and (b) provide adequate dosimetry monitoring during the [subsequent period of operation]."[202] Petitioner fails to address any of this information. Since Petitioner does not address NEPB's Reactor Vessel Material Surveillance Program, Contention 2 fails to demonstrate a genuine dispute with the applicant and fails to identify the specific sections of the application it is challenging.[203]

Further, Petitioner's contention that NEPB will not conduct an analysis of the capsules or will "ignore the data from sample coupons,"[204] lacks adequate support and fails to demonstrate a genuine dispute with the application. In the SLR application, NEPB states that "[t]he [Reactor Vessel Material Surveillance Aging Management Program] withdraws, and subsequently tests, the capsule at an outage in which the capsule receives a neutron fluence of between one and two times the peak reactor vessel neutron fluence of interest at the end of the [subsequent period of operation]."[205] The explicit language of the application demonstrates that NEPB will conduct a capsule analysis. Further, NEPB's capsule analysis will be conducted in accordance with 10 C.F.R. Part 50, Appendix H, which provides that "[f]or each capsule withdrawal, the test procedures and reporting requirements must meet the requirements of the ASTM E 185 to the extent practicable for the configuration of the specimens in the capsule."[206] Thus, the plain language of the SLR application indicates NEPB will both conduct an analysis of the capsules[207] and do so in accordance with NRC regulations.[208] Accordingly, Petitioner's assertions fail to demonstrate a genuine dispute with the application.

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[200] NRR, NRC, NUREG-1839, Safety Evaluation Report Related to the License Renewal of the Point Beach Nuclear Plant, Units 1 and 2, at 3-97 (Dec. 2005) (ADAMS Accession No. ML-053420137).

[201] SLRA, app. B, at B-150.

[202] NEPB Answer at 30 (citing SLRA, app. A, at A-26; *id.,* app. B at B-148 to -149).

[203] *See Susquehanna Nuclear, LLC* (Susquehanna Steam Electric Station, Units 1 and 2), CLI-17-4, 85 NRC 59, 74 (2017) (citing 10 C.F.R. § 2.309(f)(1)(vi)).

[204] Petition at 32; Gundersen Decl. ¶ 7.8.2.

[205] SLRA, app. B, at B-149.

[206] 10 C.F.R. pt. 50, app. H, § III.B.1.

[207] *See* Tr. at 100-01 (Lewis).

[208] A petitioner may not support a contention by assuming a licensee will violate agency regulations. *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-01-9, 53 NRC 232, 235 (2001) ("[T]he NRC does not presume that a licensee will violate agency regulations wherever the opportunity arises.").

In Contention 2, Petitioner also references an unspecified "aging management plan [that] does not provide the requisite reasonable assurance."[209] Yet, Petitioner does not cite the specific AMP in the SLR application it disputes.[210] This omission is fatal to the contention as it does not demonstrate a genuine dispute with the applicant or identify the specific section of the application in dispute.

Petitioner's remaining allegations are vague and unsupported. The reference to "new" administrative controls that will cause the RPV to crack "unless the operators implement these controls perfectly" is unsupported.[211] It does not contain the requisite specificity required nor does it demonstrate a genuine dispute with the applicant, contrary to 10 C.F.R. § 2.309(f)(1)(v) and (vi).

Petitioner's assertion of "error-prone analytical calculations" are likewise fatally vague and fail to satisfy 10 C.F.R. § 2.309(f)(1)(vi).[212] Petitioner provides no detail about which calculation it references or what is "error-prone" about that calculation. This argument consists of the type of "[b]are assertions and speculation" that do not support an admissible contention, even if supported by an expert.[213] Further, at oral argument it was made clear that the Point Beach calculations being questioned are those specified by 10 C.F.R. § 50.61, and a challenge to those calculations is an impermissible challenge to that rule.[214]

Turning to the amended portion of Contention 2, we observe that the EPRI letter addresses boiling water reactors (BWRs), and thus has no obvious relevance to the reactors at Point Beach, which are pressurized water reactors (PWRs). Further, Petitioner does not explain how the EPRI letter applies here. Petitioner admits that the EPRI letter refers only to BWRs,[215] but suggests the "non-conservatism" is symptomatic of an industry-wide issue in monitoring neu-

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[209] Petition at 31.

[210] The SLR application includes several AMPs, including the "Neutron Fluence Monitoring" AMP and the "Reactor Vessel Material Surveillance" AMP. SLRA at 3.1-1 to -2. We may not assume which AMP Petitioner was referring to, absent the requisite specificity. *See Fermi,* CLI-15-18, 82 NRC at 149 & n.74 (citing *Crow Butte Resources, Inc.* (In Situ Leach Facility, Crawford, Neb.), CLI-09-9, 69 NRC 331, 353-54 (2009); *Crow Butte Resources, Inc.* (N. Trend Expansion Project), CLI-09-12, 69 NRC 535, 565-71 (2009)).

[211] We need not decipher vague pleadings, and we may not create legal arguments for a petitioner. *See supra* note 28.

[212] Petition at 37.

[213] *Oyster Creek,* CLI-08-28, 68 NRC at 674.

[214] *See* Tr. at 97-99 (Leidich, Trikouros); *see also* NEPB Answer to Motion to Amend at 10; Staff Answer to Motion to Amend at 11.

[215] Tr. at 20 (Lodge).

tron embrittlement.[216] This assertion lacks adequate support and fails to demonstrate a genuine dispute with the applicant.

Therefore, Amended Contention 2 is inadmissible because it impermissibly challenges NRC rules, lacks adequate support and specificity, is not within the scope of the proceeding, is not material to the finding the NRC must make, and fails to demonstrate a genuine dispute with the applicant in contravention of 10 C.F.R. § 2.309(f)(1)(iii), (iv), (v), and (vi).

D. Contention 3

1. Background

Contention 3 alleges that "[t]he . . . 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, therefore,] the requested license renewal action from 2030 to 2053 [is] unnecessary."[217] Petitioner's expert, Dr. Alvin Compaan, contends that the SLR application should be denied because NEPB "fail[ed] to adequately assess the solar option."[218] Dr. Compaan states that the declining cost of solar will make the power generated at Point Beach "superfluous,"[219] and that solar plus storage is a viable alternative to replace Point Beach Units 1 and 2.[220] Dr. Compaan provides several options on how solar plus storage could be installed on residential, commercial, and federal conservation land at a sufficient volume to replace the baseload power of Point Beach.[221] Petitioner's other expert, Dr. Mark Cooper, asserts that "[n]uclear power is far too costly,"[222] and concludes that the SLR

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[216] Petitioner suggests that since EPRI "developed software for both light [pressurized] water reactors and boiling water reactors," the conclusions in the EPRI letter regarding BWRs "should prompt very serious discussions and formal inquiry into the adequacy of the software that is used to project the integrity of the reactor vessels at Point Beach." Tr. at 19-20 (Lodge). This is both speculative and irrelevant. As was noted during oral argument, rather than employing software to monitor neutron embrittlement, Point Beach uses the embrittlement curve found at 10 C.F.R. § 50.61. Tr. at 98 (Leidich). Nor does Petitioner provide any support for the assertion that an issue with PWR software exposes an issue with BWR software.

[217] Petition at 41.

[218] Compaan Decl. ¶ 5.

[219] *Id.* ¶ 33.

[220] *See id.* ¶¶ 5-37.

[221] *Id.* ¶¶ 20-24.

[222] Cooper Decl. at 2. Dr. Cooper dedicates much of his declaration to the argument that nuclear energy should be abandoned as a feature of the American energy generation portfolio. *Id.* at 5-6; *see generally id.* However, Dr. Cooper addresses the ER's discussion of solar power only once. *Id.* at 20.

application should be denied for economic reasons[223] and that nuclear energy should be discarded in favor of "distributed and renewable resources."[224] Petitioner further contends that solar is technically feasible on a commercial scale, and therefore must be reviewed as a reasonable alternative in the ER.[225] Petitioner asserts that solar generation is preferable to SLR due to the "harsh economic realities"[226] of nuclear power, the "dramatically-changing circumstances in the regional energy mix,"[227] and the associated low greenhouse gas emissions and environmental impacts from solar energy generation.[228]

NEPB opposes admission of Contention 3, arguing that Petitioner fails to dispute the ER's conclusion that solar plus storage was not a reasonable alternative due to acreage requirements.[229] Instead, NEPB argues, Petitioner generally "assert[ed] that solar power is low cost and available, growing rapidly as an energy source, and capable of being coupled with batteries to provide more reliable power,"[230] albeit without disputing the conclusions in the ER.[231] NEPB notes that Petitioner's expert, Dr. Compaan, provides several options on how the large acreage requirement could be met, but contends those options fail to dispute the underlying conclusion in the ER and therefore fails to demonstrate a genuine dispute.[232] NEPB contends that several aspects of Dr. Compaan's testimony demonstrate the unreasonableness of the solar plus storage option, such as the questionable legality of using U.S. Conservation Reserve Program land for solar power[233] and the fact that "either 87% of suitable residential rooftop space or 68% of commercial rooftop space from the entire state [of Wisconsin] would be needed (together with storage) to replace the power output of Point Beach."[234]

In addition, NEPB contends Dr. Compaan's "theoretical model" of solar plus storage is akin to a contention rejected by the Commission in the *Davis-Besse* proceeding in which the Commission stated that "[t]he mere potential for, or

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[223] *Id.* at 8-9.

[224] *Id.* at 2; Compaan Decl. ¶ 37.

[225] Petition at 55; *see* Compaan Decl. ¶¶ 32-34, 37.

[226] Petition at 53.

[227] Compaan Decl. ¶ 3.

[228] Petition at 48-49; Compaan Decl. ¶¶ 35-37. Petitioner also raises several new arguments in its reply, such as NEPB's discussion of waste management. Petitioner Reply at 20-22. We will not address arguments raised for the first time in a reply brief. *See supra* note 145.

[229] NEPB Answer at 35-49.

[230] *Id.* at 35.

[231] *See id.* at 35-36.

[232] *See id.*

[233] *Id.* at 37-38.

[234] *Id.* at 40 (citing Compaan Decl. ¶ 21).

theoretical capacity of, [an alternative] is insufficient to show . . . commercial viability as a source of baseload power in the [region of interest by license expiration]."[235] In addition, NEPB contends Dr. Compaan "focuses solely on the mere existence of sufficient rooftops and ignores commercial viability altogether."[236]

NEPB further argues that Petitioner fails to demonstrate "the adverse environmental impacts of license renewal are so great," compared with their proposed solar alternative, "that preserving the option of license renewal for energy planning decisionmakers would be unreasonable."[237] NEPB contends that Petitioner's expert, Dr. Cooper, impermissibly raises economic arguments.[238] NEPB states that 10 C.F.R. § 51.45(c) does not require consideration of "the economic or technical benefits and costs of either the proposed action or alternatives except if these benefits and costs are either essential for a determination regarding the inclusion of an alternative in the range of alternatives considered or relevant to mitigation."[239] In this instance, NEPB asserts that "[b]ecause this Contention does not relate to mitigation alternatives, and economics are not essential for the inclusion of the SMR alternative, no discussion of economics is required."[240] As such, NEPB concludes, none of Dr. Cooper's claims are within the scope of this proceeding or demonstrate a genuine dispute.[241]

The NRC Staff also opposes Contention 3, asserting that it is outside the scope of the proceeding and fails to demonstrate a genuine dispute with the applicant on a material issue of law or fact.[242] The NRC Staff contends that to the extent Petitioner disputes the need for power, such an argument is beyond the scope of the proceeding because 10 C.F.R. § 51.53(c)(2) states that an environmental report "need not include a discussion of the need for power."[243] Further, to challenge the need for power, "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."[244] As the NRC Staff notes, Petitioner did not file a waiver petition.[245]

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[235] *Id.* at 41-42 (quoting *FirstEnergy Nuclear Operating Co.* (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 402 (2012)).

[236] *Id.* at 43 (citing Compaan Decl. ¶ 21).

[237] *Id.* at 45 (quoting 10 C.F.R. § 51.95(c)(4)).

[238] *Id.* at 46-49.

[239] *Id.* at 46 (quoting 10 C.F.R. § 51.45(c)).

[240] *Id.* (citing Petition at 42).

[241] *Id.* at 49.

[242] Staff Answer at 36-41.

[243] *Id.* at 36 (quoting 10 C.F.R. § 51.53(c)(2)).

[244] *Id.* at 37 n.178 (citing *Millstone,* CLI-05-24, 62 NRC at 559-60).

[245] *Id.*

In addition, the NRC Staff asserts that Contention 3 fails to raise a genuine dispute with the applicant on a material issue of law or fact because it does not provide sufficient information to demonstrate that the solar plus storage alternative "is commercially viable on a utility scale or that it will become so in the near future."[246] The NRC Staff notes that NEPB listed several reasons why solar plus storage was not a reasonable option, including large land requirements and solar's lower generation capacity than nuclear.[247] Along the same lines, the NRC Staff argues that Petitioner failed to address "the [ER]'s conclusion that the solar alternative is unreasonable due to the environmental impacts of installing such a large solar array,"[248] "ignore[d] the practical and legal realities of such a proposal,"[249] and "does not explain how [NEPB] . . . would have access to the residential and commercial rooftops or the conserved farmlands required for installation of solar arrays."[250] The NRC Staff contends Petitioner's expert analysis using "optimally tilted [solar] panels" is a "minor difference . . . not sufficient to create a genuine dispute with the [ER's]" conclusion that solar energy in Wisconsin has less generation capacity than the U.S. average.[251]

2. 10 C.F.R. § 2.309(f)(1)(v), (vi) — Lack of Adequate Support and Failure to Demonstrate Genuine Dispute

Petitioner's assertion that the solar plus storage alternative should have been considered as a reasonable alternative in the ER lacks adequate support and fails to demonstrate a genuine dispute with NEPB's conclusion that solar plus storage would not be commercially viable on a utility scale and operational prior to expiration of the current Point Beach licenses.[252]

The NRC has defined the scope of "reasonable alternatives" that must be considered in a license renewal application. The GEIS states that "[a] reasonable alternative [replacement power] must be commercially viable on a utility scale and operational prior to the expiration of the reactor's operating license, or expected to become commercially viable on a utility scale and operational prior to the expiration of the reactor's operating license."[253] The Commission stated that to raise a genuine dispute, contentions regarding reasonable alternatives in license renewal proceedings "must provide alleged facts or expert opinion

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[246] *Id.* at 39.
[247] *Id.* at 39-41.
[248] *Id.* at 39.
[249] *Id.*
[250] *Id.* at 40.
[251] *Id.* (citing Compaan Decl. ¶ 5).
[252] 10 C.F.R. § 2.309(f)(1)(v), (vi).
[253] GEIS at 2-18.

sufficient to raise a genuine dispute as to whether the best information available today suggests that commercially viable alternative technology (or combination of technologies) is available now, or will become so in the near future, to supply baseload power."[254]

In line with the GEIS delineation of reasonable replacement power alternatives, NEPB considered three substitutions: (1) an "[Advanced Light-Water Reactor (ALWR)] with mechanical draft cooling towers located at the [Point Beach nuclear] site[;]" (2) a "[c]luster of small modular reactors (SMRs) with mechanical draft cooling towers located at the [Point Beach nuclear] site[;]" and (3) a "[c]onfiguration of natural gas combined cycle units with mechanical draft cooling towers located at the [Point Beach nuclear] site [along with the] [e]xpansion of the Point Beach solar facility . . . ."[255]

In its ER, NEPB concluded that a number of alternatives requiring new generation capacity, including onshore and offshore wind, hydropower, geothermal, biomass, and fuel cell, wave and current energy, petroleum-fired, coal-fired, solar only, and solar plus storage, were not commercially viable alternatives.[256] With respect to solar plus storage, NEPB found it not to be a commercially viable alternative to renewal of Point Beach Units 1 and 2 because "the land use disturbances could result in MODERATE to LARGE impacts on wildlife habitats, vegetation, land use, and aesthetics."[257] For context, NEPB noted that its existing solar array has approximately 565 acres of solar panels which amounts to 100 megawatts of capacity (and no on-site energy storage).[258] NEPB concluded it would take 6,780 acres, plus additional acreage for energy storage, to match the current generating capacity of the Point Beach units.[259] As such, NEPB recognized that solar plus storage "could be a reasonable alternative" but "its generation capacity is far less than nuclear generation" and is not a commercially viable alternative "due to the acreage requirements."[260]

In contrast, Petitioner's assertions that NEPB should have discussed the costs and benefits of solar plus storage to fulfill 10 C.F.R. § 51.53(c)(2) lacks ade-

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[254] *Seabrook,* CLI-12-5, 75 NRC at 342 (quotations and footnote omitted); *see id.* ("Except in rare cases where there is evidence of unusual predictive reliability, it is not workable to consider, for purposes of NEPA analysis, what are essentially hypothetical or speculative alternatives as a source of future baseload power generation." (footnote omitted)).

[255] ER at 7-3 to -4.

[256] *Id.* at 7-6 to -11.

[257] *Id.* at 7-8.

[258] *Id.*

[259] *Id.*

[260] *Id.* at 7-9.

quate support and does not directly challenge information in the ER.[261] Section 51.53(c)(2) states that an ER

> is not required to include discussion of . . . the economic costs and economic benefits . . . 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.[262]

Petitioner and its experts fail to proffer adequate support for its argument that a discussion of the costs and benefits of solar plus storage is essential to determine whether it should be included as an alternative.[263] As noted, NEPB concluded the solar plus storage should not be included as a reasonable alternative "due to the acreage requirements."[264] Petitioner does not explain why a discussion of costs and benefits is essential if NEPB dismissed the alternative due to the large acreage requirements that "could result in MODERATE to LARGE impacts on wildlife habitats, vegetation, land use, and aesthetics."[265] Petitioner alleges that "10 C.F.R. § 51.53(c)(2) oblige[s] [NEPB] to perform a cost-benefit" analysis of solar plus storage "if the environmental impacts of license renewal are great enough to tip the balance against license renewal."[266] Section 51.53(c)(2) contains no such obligation.

Notably, Petitioner does not dispute the reason NEPB cites for concluding solar plus storage is not a reasonable alternative — in fact, it agrees that over 6,000 acres would be needed for the solar plus storage alternative.[267] Petitioner (and its experts) thus have proffered no information to dispute the large acreage requirement for the solar plus storage alternative and the significant environmental impacts of such an allotment that were the basis of NEPB's conclusion

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[261] Petitioner Reply at 15-16.

[262] 10 C.F.R. § 51.53(c)(2) (emphasis added).

[263] Petitioner did not argue that a discussion of the costs and benefits is "relevant to mitigation." *Id.*

[264] ER at 7-9.

[265] *Id.* at 7-8.

[266] Petitioner Reply at 19.

[267] Compaan Decl. ¶ 7. This admission suggests that Petitioner agrees that NEPB relied on the "best information available" to conclude that the solar plus storage alternative requires a significant amount of land, thereby fulfilling the requirements of NEPA. *See Seabrook,* CLI-12-5, 75 NRC at 342; Tr. at 132 (Lodge) ("Yes, we agree and admit that there's a large amount of acreage necessary for the photovoltaic collection.").

that solar plus storage was not a reasonable alternative.[268] This defect is fatal to Contention 3.[269]

In several respects, Petitioner's assertions bolster NEPB's conclusion that solar plus storage is not a reasonable alternative due to acreage requirements. For instance, Dr. Compaan states that 42,000 acres (or 65.7 square miles) is needed "to replace the baseload 1200 [megawatts]" produced by Point Beach.[270] That is *six times* the amount of land NEPB stated it would require.[271] While Dr. Compaan does outline several options by which the acreage requirement can be met — the underlying acreage requirement itself is undisputed.[272]

In its reply, in support of Dr. Compaan and the admissibility of Contention 3, Petitioner cites the Commission's 2012 *Seabrook* decision, stating that it stands for the proposition that the "Board may rely on Dr. Compaan's future-oriented testimony as added evidence of the likelihood of industrial-scale photovoltaic availability during the subsequent license renewal period 2030-2053."[273] Petitioner misinterprets the Commission's decision in *Seabrook.* The Commission stated that its *Seabrook* "ruling does not exclude the possibility that a contention could show a genuine dispute with respect to a technology that, while not commercially viable at the time of the application, is *under development for large-scale use* and is 'likely to' be available during the period of extended operation."[274] Thus, while a petitioner may proffer "future-oriented" testimony to demonstrate a genuine dispute with respect to commercially available technology, it must also show that the solar plus storage technology "is under de-

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[268] Petitioner also references other forms of renewable energy, such as wind. *See* Petition at 47, 48, 50, 52; Gundersen Decl. ¶¶ 5.2, 10.6-10.11. Given the ER discussion regarding such alternatives, *see supra* note 256 and accompanying text, this claim also fails to demonstrate a genuine dispute with the applicant.

[269] The Commission rejected an identical contention in the *Davis-Besse* proceeding, in which Dr. Compaan also submitted an expert declaration. The Commission held that Dr. Compaan had "not identified a 'solar plus storage' combination that can, as a practical matter, produce baseload power either now, or in time to constitute a reasonable alternative to relicensing Davis-Besse." *Davis-Besse,* CLI-12-8, 75 NRC at 405. At oral argument, Petitioner attempted to distinguish this case. Tr. at 106-07 (Lodge). Even if it were timely, we see no reason to depart from the Commission's holding in *Davis-Besse.*

[270] Compaan Decl. ¶¶ 16-17.

[271] *See supra* note 259 and accompanying text.

[272] Compaan Decl. ¶¶ 20-24. In addition, NEPB did not state that the required acreage in Wisconsin does not exist, only that "the land use disturbances [from solar photovoltaic systems] could result in MODERATE to LARGE impacts on wildlife habitats, vegetation, land use, and aesthetics." ER at 7-8. Petitioner did not dispute this analysis.

[273] Petitioner Reply at 15 (citing *Seabrook,* CLI-12-5, 75 NRC at 342 n.245).

[274] *Seabrook,* CLI-12-5, 75 NRC at 342 n.245 (citing *Carolina Envtl. Study Group v. U.S.,* 510 F.2d 796, 800 (D.C. Cir. 1975)) (emphasis added).

velopment for large-scale use . . . ."[275] Petitioner does not make this showing, and thus *Seabrook* does not support its position.

Likewise, Petitioner's focus on the decreasing cost and low greenhouse gas emissions of the solar plus storage alternative misses the mark.[276] NEPB did not conclude the solar plus storage alternative would be prohibitively expensive, only that, due to acreage requirements, it was not a reasonable alternative.[277] Nor did it conclude this alternative was unreasonable based on greenhouse gas emissions.[278] NEPB concluded solar plus storage was not a reasonable alternative due to acreage requirements and the associated environmental impacts,[279] and Petitioner failed to demonstrate a genuine dispute with the applicant on that matter.

Contention 3 is also inadmissible because it lacks adequate support for the proposition that "the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decisionmakers [is] unreasonable."[280] Indeed, Petitioner cites the incorrect legal standards when describing the process for analyzing alternatives, suggesting "[t]here must be [an] examination of every alternative within the nature and scope of the proposed action 'sufficient to permit a reasoned choice.'"[281] The NRC's environmental review does not require a determination of the "best" method for electricity generation, rather the review is limited to the adverse environmental effects of the proposed action, as well as analyses of reasonable alternatives.[282] Section 51.95(c)(4) states that only if "the adverse environmental impacts of license renewal are so great" as to warrant depriving energy planners of the option of a facility's continued operation may the NRC consider denying license renewal altogether.[283] Petitioner made no such showing.[284]

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[275] *Id.*

[276] *See* Compaan Decl. ¶¶ 27, 31, 35-37; Cooper Decl. at 9-20, 23-24; Tr. at 55-56, 117 (Lodge).

[277] ER at 7-8 to -9.

[278] *Id.*

[279] *Id.*

[280] 10 C.F.R. § 51.95(c)(4).

[281] Petition at 54 (citing *Cal. v. Block,* 690 F.2d 753, 761 (9th Cir. 1982); quoting *Methow Valley Citizens Council v. Reg'l Forester,* 833 F.2d 810, 815 (9th Cir. 1987)).

[282] *See supra* notes 58-63 and accompanying text; *see also* 61 Fed. Reg. at 28,473 ("[T]he NRC has no regulatory power to ensure that environmentally superior energy alternatives are used in the future.").

[283] 10 C.F.R. § 51.95(c)(4).

[284] Petitioner does address 10 C.F.R. § 51.95(c)(4) in its reply, but concludes, without support, that NEPB's "ER skirts evidence tending to show that the adverse environmental effects of renewing [Point Beach's] operating license are 'so great[, compared with the set of alternatives,] that preserving the option of license renewal for [energy planning] decisionmakers would be unreasonable.'"

(Continued)

In sum, Contention 3 is inadmissible because, contrary to 10 C.F.R. § 2.309(f)(1)(v) and (vi), it lacks adequate support and fails to demonstrate a genuine dispute with NEPB's conclusion in the ER that the solar plus storage alternative is not a reasonable alternative.

E. Contention 4

1. Background

Contention 4 alleges that "[Point Beach] has an elevated risk of a turbine missile accident owing to the poor alignment of its major buildings and structures."[285] Petitioner contends 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 containment, safety-related components, and the control room."[286] Petitioner further asserts that the ER fails to discuss missiles from "steam turbine shafts or blades."[287] Mr. Gundersen "conclude[s] 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."[288]

NEPB argues Contention 4 "is inadmissible because it is outside of the scope of the proceeding and fails to demonstrate any genuine material dispute with the application."[289] Specifically, NEPB asserts that Contention 4 "challenge[s] the existing design of the plant and therefore represent[s] an impermissible challenge to the plant's CLB."[290] Further, NEPB notes that the turbine blades and shafts mentioned in Contention 4 are active components not subject to aging management review.[291] Alternatively, NEPB contends that extending the aging management review to active components would constitute an impermissible challenge to 10 C.F.R. § 54.21(a)(1)(i)-(ii).[292] NEPB argues that a review of

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Petitioner Reply at 19 (quoting 10 C.F.R. § 51.95(c)(4)). We need not address this argument raised for the first time on reply. *See supra* note 145.

[285] Petition at 56.

[286] *Id.* (citing Gundersen Decl. ¶ 7.3.4).

[287] Petition at 58.

[288] Gundersen Decl. ¶ 7.3.9.

[289] NEPB Answer at 50; *see id.* at 50-53.

[290] *Id.* at 50.

[291] *Id.* (citing 1 NRR, NRC, NUREG-2191, Generic Aging Lessons Learned for [SLR] (GALL-SLR) Report, at VIII A-1 (July 2017) (ADAMS Accession No. ML17187A031) [hereinafter NUREG-2191, Vol. 1]).

[292] *Id.* at 50-51.

such active components is beyond the scope of the proceeding since Petitioner did not file a section 2.335 waiver request showing special circumstances.[293]

NEPB also contends Petitioner inaccurately portrayed 10 C.F.R. § 54.21(a)(3), by claiming it requires a demonstration that the "effects of aging will be adequately managed so that the intended function(s) will be maintained consistent with the CLB for the period of extended operation,"[294] but failed to note that this requirement applies only to passive, not active components.[295] Nor, NEPB contends, does Petitioner's citation to 10 C.F.R. § 54.4(a)(1)(i)-(iii) support Contention 4,[296] because 10 C.F.R. § 54.4(a)(1) discusses "[s]afety-related systems, structures, and components,"[297] but the turbine is not safety-related, and is otherwise excluded from this review as an active component under 10 C.F.R. § 54.21(a)(1)(i).[298] NEPB also asserts that, even if the CLB were subject to challenge in this proceeding, Petitioner failed to speak to any "of the measures in Point Beach's CLB addressing turbine missile risk . . . ."[299]

Similarly, the NRC Staff opposes admission of Contention 4 on the grounds that it addresses a "'current operating issue' . . . not unique" to the SLR term.[300] Thus, the NRC Staff asserts, Contention 4 raises an issue outside the scope of the proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii).

2. 10 C.F.R. § 2.309(f)(1)(iii), (iv), (vi) — Impermissible Challenge to NRC Rules, Beyond the Scope of this Proceeding, Not Material, and Fails to Demonstrate Genuine Dispute

The scope of license renewal is limited to certain age-related issues,[301] and Contention 4 raises an issue outside the scope of those age-related issues. Specifically, Petitioner impermissibly challenges the original design of the facility.[302] Indeed, Petitioner admits it is challenging "a current operating issue"[303] (i.e., the CLB) and recognizes that the physical alignment of the facility stems from its

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[293] *Id.* at 51.

[294] 10 C.F.R. § 54.21(a)(3); *see* Petition at 60-61.

[295] NEPB Answer at 52 (citing 10 C.F.R. § 54.21(a)(1), (3)).

[296] *See* Petition at 60.

[297] 10 C.F.R. § 54.4(a)(1).

[298] NEPB Answer at 52-53.

[299] *Id.* at 53.

[300] Staff Answer at 42 (quoting *Pac. Gas and Electric Co.* (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-15-21, 82 NRC 295, 304 (2015)).

[301] *See supra* notes 49-57 and accompanying text.

[302] Petition at 56 (referring to the design of Point Beach as "[h]istorically" being "dangerously aligned" and stating the "design [of Point Beach] is unsafe").

[303] Petitioner Reply at 22; Tr. at 137-38 (Lodge).

original construction.[304] Contention 4 does not address age-related degradation, nor does it raise an issue unique to the SLR period.[305] Petitioner does not attempt to argue the danger is unique to the SLR term, but instead focuses on the present (and past) danger stating that the "[Point Beach] design *is* unsafe" and has been so since "the late 1960's when [Point Beach] was constructed."[306] Therefore, Contention 4 raises an impermissible challenge to a "current operating issue" not unique to the SLR period.[307]

Further, active components are not subject to an aging-management review, as stated in 10 C.F.R. § 54.21(a)(1)(i)-(ii). The allegedly inadequate turbine blades and shafts are active components — not subject to an aging-management review.[308] Petitioner impermissibly challenges 10 C.F.R. § 54.21(a)(1)(i)-(ii).[309]

Contention 4 constitutes an impermissible challenge to both the CLB and the rule limiting aging management review to passive components, seeks to raise issues outside the scope of this proceeding, is not material to the findings that the NRC Staff must make, and is not supported by any information demonstrating a genuine material dispute, contrary to 10 C.F.R. § 2.309(f)(1)(iii), (iv), and (vi).

IV. ORDER

For the reasons set forth above, we deny Petitioner's hearing request. Under 10 C.F.R. § 2.311, any appeal to the Commission from this Memorandum and Order must be taken within twenty-five (25) days after service.

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[304] *See* Petition at 56.

[305] Petitioner's assertion that "the turbine shafts in Units 1 and 2 are aging and will continue to do so for a score more years in a subsequent license renewal period" does not raise an admissible age-related issue. Petitioner Reply at 22. An assertion that part of the reactor facility will age during the SLR term is an insufficient basis for an admissible contention since, as common sense dictates, all parts of the reactor necessarily will age during the SLR term. The scope of license renewal, however, is narrower. In this regard, an admissible contention must address an age-related issue reviewed as part of NRC's license renewal process. *See supra* notes 49-57 and accompanying text.

[306] Petition at 56, 61 (emphasis added); *see* Gundersen Decl. ¶¶ 6.7, 7.3.1.

[307] *See Diablo Canyon,* CLI-15-21, 82 NRC at 304 (citation omitted).

[308] "The steam turbine performs its intended functions with moving parts. Pursuant to [10 C.F.R. §§] 54.2(a)(1), therefore, it is not subject to an aging management review (AMR)." NUREG-2191, Vol. 1 at VIII A-1. The turbine system is also not within the scope defined by 10 C.F.R. § 54.4. *See* SLRA at 2.2-5 tbl.2.2-1. At oral argument, Petitioner conceded that the turbine shields and turbine blades are active components. Tr. at 138 (Lodge).

[309] With this explanation, it is apparent Petitioner's remaining assertions misstate the law and have no relevance to the SLR term. Petition at 58-61.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

William J. Froehlich, Chairman
ADMINISTRATIVE JUDGE

Dr. Gary S. Arnold
ADMINISTRATIVE JUDGE

Nicholas G. Trikouros
ADMINISTRATIVE JUDGE

Rockville, Maryland
July 26, 2021

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

COMMISSIONERS:

Christopher T. Hanson, Chairman
Jeff Baran
David A. Wright

In the Matter of **Docket No. 50-320-LT**

FIRSTENERGY COMPANIES and TMI-2 SOLUTIONS, LLC (Three Mile Island Nuclear Station, Unit 2)

August 31, 2021

PETITION FOR RECONSIDERATION

Our rules of practice governing petitions for reconsideration are found in 10 C.F.R. §§ 2.323(e), 2.345, and 2.341(d). A petition for reconsideration may not be filed except upon leave of the adjudicatory body that rendered the decision. The petition must demonstrate "a compelling circumstance, such as the existence of a clear and material error in a decision, which could not have been reasonably anticipated, which renders the decision invalid." 10 C.F.R. § 2.345(b).

PETITION FOR RECONSIDERATION

A petition for reconsideration should be based on an "elaboration of an argument already made, an overlooked controlling decision or principle of law, or a factual clarification." *Virginia Electric and Power Co.* (North Anna Power Station, Unit 3), CLI-12-17, 76 NRC 207, 209-10 (2012) (citing *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-05-19, 62 NRC 403, 410 (2005)). "It should not simply reargue matters which we have already considered but rejected." *Id.* at 210 (citing *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-18, 58 NRC 433, 434 (2003)).

MEMORANDUM AND ORDER

Today we address a Petition for Reconsideration of our decision in CLI-21-8, and a Motion to Amend the Petition, both filed by Eric Epstein, Chairman of Three Mile Island Alert (TMIA).[1] For the reasons discussed below, we find that the Petition does not meet the standards for a petition for reconsideration, and we therefore deny it.

In CLI-21-8, we denied TMIA's motion to hold the Three Mile Island Nuclear Station, Unit 2 (TMI-2) license transfer in abeyance, and found that we no longer had jurisdiction over the adjudicatory proceeding and that TMIA's motion did not meet our requirements for reopening a closed record or for staying the license transfer.[2] We also found that this license transfer did not require a new certification under section 401 of the Clean Water Act (CWA).[3]

TMIA asks us to reconsider our decision in CLI-21-8. Our rules of practice governing petitions for reconsideration are found in 10 C.F.R. §§ 2.323(e), 2.345, and 2.341(d). A petition for reconsideration may not be filed except upon leave of the adjudicatory body that rendered the decision.[4] The petition must demonstrate "a compelling circumstance, such as the existence of a clear and material error in a decision, which could not have been reasonably anticipated, which renders the decision invalid."[5] Such a petition should be based on an "elaboration of an argument already made, an overlooked controlling decision or principle of law, or a factual clarification."[6] "It should not simply reargue matters which we have already considered but rejected."[7]

TMIA does not raise a compelling circumstance for us to reconsider our decision in CLI-21-8. TMIA argues that the NRC and Applicants[8] did not comply

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[1] Petition for Reconsideration (July 1, 2021) (Petition); Motion to Amend the Petition for Reconsideration (July 30, 2021) (Motion to Amend). TMI-2 Solutions, LLC, opposed both. TMI-2 Solutions, LLC's Answer Opposing Three Mile Island Alert's Petition for Reconsideration of CLI-21-08 (July 12, 2021); TMI-2 Solutions, LLC's Answer Opposing Three Mile Island Alert's Motion to Amend the Petition for Reconsideration of CLI-21-08 (Aug. 9, 2021) (TMI-2 Solutions Answer to Motion to Amend).

[2] CLI-21-8, 93 NRC 237, 239-41 (2021).

[3] *Id.* at 241-42.

[4] *See* 10 C.F.R. § 2.323(e).

[5] *Id.* § 2.345(b).

[6] *Virginia Electric and Power Co.* (North Anna Power Station, Unit 3), CLI-12-17, 76 NRC 207, 209-10 (2012) (citing *Private Fuel Storage, L.L.C.* (Independent Spent Fuel Storage Installation), CLI-05-19, 62 NRC 403, 410 (2005)).

[7] *Id.* at 210 (citing *Dominion Nuclear Connecticut, Inc.* (Millstone Nuclear Power Station, Unit 2), CLI-03-18, 58 NRC 433, 434 (2003)).

[8] The Applicants in this proceeding are GPU Nuclear, Inc., Metropolitan Edison Company, Jersey Central Power & Light Company, Pennsylvania Electric Company, and TMI-2 Solutions, LLC.

with the CWA with regards to this license transfer, an argument that we explicitly considered and found unavailing in CLI-21-8.[9] In CLI-21-8 we held that "[b]ecause this license transfer does not authorize an activity that could result in a new discharge, the CWA does not require a certification under section 401."[10] While TMIA raises generalized concerns that more water will be used during the decommissioning process, it does not refute with any specificity our holding on the CWA or demonstrate error in our prior decision.[11] In its Motion to Amend, TMIA points to emails it received from the Susquehanna River Basin Commission in a records request as further support for its arguments.[12] However, as noted by TMI-2 Solutions, the attached emails do not appear to support the arguments in the Motion to Amend.[13] The emails state that "water will be provided by Unit 1's approved groundwater withdrawals" and that the anticipated use is "less than 100,000" gallons per day.[14] There is no indication that there will be a new discharge.

TMIA also supports its Petition by pointing to Commissioner Baran's Additional Views, in which he disagreed with the jurisdictional holding in CLI-21-8.[15] While Commissioner Baran disagreed with the jurisdictional findings in that case, he agreed with the majority's position that the abeyance motion should be denied.[16] In CLI-21-8 the entire Commission found that "[o]ur rules do not allow for a motion to hold a closed proceeding in abeyance" and found that TMIA's motion failed to meet the standards for a motion to reopen the record

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[9] CLI-21-8, 93 NRC at 241-42.

[10] *Id.*

[11] Petition at 7. TMIA states that "[t]hese areas will require large quantities of water which necessarily creates radioactive wastewater that has to be isolated and disposed or 'discharged' directly into the Susquehanna River." *Id.* But this statement alone, with no support, does not show an error in our reasoning in CLI-21-8. *See North Anna,* CLI-12-17, 76 NRC at 210 (finding that reiterating an argument without new reasoning or support does not make a compelling case for reconsideration).

[12] Motion to Amend at 7-12, Attach. 1. On August 26, 2021, TMIA submitted additional emails and other records obtained from the Susquehanna River Basin Commission but provided no accompanying motion or explanation of these filings. These filings do not provide a basis to grant TMIA's petition for reconsideration.

[13] TMI-2 Solutions Answer to Motion to Amend at 4-6. We also agree with TMI-2 Solutions that the Motion to Amend suffers from several other defects. *Id.* at 1-6 (noting that this type of motion is not provided for in the Commission's regulations, the Motion to Amend exceeds the page limits, and TMIA did not consult with the other parties).

[14] Motion to Amend at Attach. 1.

[15] Petition at 4-5.

[16] CLI-21-8, 93 NRC at 243. Notably, Commissioner Baran joined the rest of the Commission in the conclusion that section 401 of the CWA does not require a new certification for this license transfer because it does not authorize an activity that could result in a new discharge.

or to stay the license transfer.[17] TMIA does not address or show error in this reasoning.

Because TMIA has not shown any compelling circumstance that would render our decision in CLI-21-8 invalid, it has not met the requirements for a petition for reconsideration. The Petition is therefore denied.

IT IS SO ORDERED.

For the Commission

Annette L. Vietti-Cook
Secretary of the Commission

Dated at Rockville, Maryland,
this 31st day of August 2021.

[17] *Id.* at 241.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Paul S. Ryerson, Chairman
E. Roy Hawkens
Dr. Sue H. Abreu

In the Matter of **Docket Nos. EA-20-006**
EA-20-007
(ASLBP No. 21-969-01-EA-BD01)

TENNESSEE VALLEY AUTHORITY
(Enforcement Action) **November 3, 2021**

In this proceeding concerning an enforcement action against the Tennessee Valley Authority (TVA) the Board grants TVA's motion for summary disposition of Violations 1, 2, and 3 and of Violation 4 in part.

RULES OF PRACTICE: MOTIONS FOR SUMMARY DISPOSITION

The standards for summary disposition are set forth in 10 C.F.R. § 2.710 and "are based upon those the federal courts apply to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure." *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 297 (2010); *see Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993). A Board may grant summary disposition if the relevant pleadings "show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law." 10 C.F.R. § 2.710(d)(2).

RULES OF PRACTICE: MOTIONS FOR SUMMARY DISPOSITION

As the Commission directs, "[c]aution should be exercised in granting summary disposition, which may be denied 'if there is reason to believe that the better course would be to proceed to a full [hearing].'" *Pilgrim,* CLI-10-11, 71 NRC at 298 (quoting *Anderson v. Liberty Lobby,* 477 U.S. 242, 255 (1986)).

RULES OF PRACTICE: MOTIONS FOR SUMMARY DISPOSITION

In ruling on a motion for summary disposition, a licensing board must construe all facts in the light most favorable to the nonmoving party, and any doubt as to the existence of a genuine issue of material fact should be resolved against summary disposition. *Poller v. Columbia Broad. Sys., Inc.,* 368 U.S. 464, 473 (1962); *Pilgrim,* CLI-10-11, 71 NRC at 297-98; *Advanced Med. Sys.,* CLI-93-22, 38 NRC at 102; *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-10-20, 72 NRC 571, 579 (2010).

RULES OF PRACTICE: MOTIONS FOR SUMMARY DISPOSITION (RESPONSES)

In response to a motion for summary disposition, an opposing party "may not rest upon . . . mere allegations or denials," but "must set forth specific facts showing that there is a genuine issue of fact" for hearing. 10 C.F.R. § 2.710(b).

ENERGY REORGANIZATION ACT: EMPLOYEE PROTECTION

Energy Reorganization Act section 211 states that "[n]o employer may discharge . . . or otherwise discriminate against any employee with respect to his compensation, terms, conditions, or privileges of employment" because of the employee's participation in protected activity. Energy Reorganization Act § 211(a)(1), 42 U.S.C. § 5851(a)(1). Section 50.7(a) of 10 C.F.R. states that "[d]iscrimination includes discharge and other actions that relate to compensation, terms, conditions, or privileges of employment." 10 C.F.R. § 50.7(a). Therefore, ERA section 211 and 10 C.F.R. § 50.7 prohibit only retaliation that takes the form of an adverse change in the terms and conditions of employment, and not every type of retaliation that might be possible.

ENERGY REORGANIZATION ACT: EMPLOYEE PROTECTION

Courts have consistently ruled that a violation of ERA section 211 must involve a personnel action that has a tangible impact, such as termination of employment, failure to hire, demotion, or an unwanted transfer. *See, e.g., English*

v. Gen. Elec. Co., 496 U.S. 72 (1990) (involving termination of employment); *Tamosaitis v. URS Inc.,* 781 F.3d 468 (9th Cir. 2015) (involving involuntary transfer with lost compensation); *Hasan v. U.S. Dep't of Labor,* 400 F.3d 1001 (7th Cir. 2005) (involving failure to hire); *Hasan v. U.S. Dep't of Labor,* 298 F.3d 914 (10th Cir. 2002) (involving failure to hire); *Doyle v. U.S. Sec'y of Labor,* 285 F.3d 243 (3d Cir. 2002) (involving failure to hire); *Am. Nuclear Res., Inc. v. U.S. Dep't of Labor,* 134 F.3d 1292, 1294 (6th Cir. 1998) (involving termination of employment); *DeFord v. Sec'y of Labor,* 700 F.2d 281 (6th Cir. 1983) (involving a transfer deemed a demotion); *Consol. Edison Co. of N.Y., Inc. v. Donovan,* 673 F.2d 61 (2d Cir. 1982) (involving termination of employment).

ENERGY REORGANIZATION ACT: EMPLOYEE PROTECTION

As the United States Court of Appeals for the Third Circuit recently observed, when applying the substantive antidiscrimination provision of Title VII (the provision that is essentially identical to ERA section 211), "other courts of appeals have unanimously concluded that 'placing an employee on paid administrative leave where there is no presumption of termination' is not an adverse employment action." *Jones v. Se. Pa. Transp. Auth.,* 796 F.3d 323, 326 (3d Cir. 2015) (quoting *Jones v. Se. Pa. Transp. Auth.,* No. 12-CV-6582-WY, 2014 WL 3887747, at *4 (E.D. Pa. Aug. 7, 2014)).

ENERGY REORGANIZATION ACT: EMPLOYEE PROTECTION

Courts of appeals in at least five circuits have affirmed summary judgment on the ground that placing an employee on leave, with full pay and benefits, is not an adverse employment action. *See, e.g., Michael v. Caterpillar Fin. Servs. Corp.,* 496 F.3d 584, 594 (6th Cir. 2007); *Dendinger v. Ohio,* 207 F. App'x 521, 527 (6th Cir. 2006); *Joseph v. Leavitt,* 465 F.3d 87, 91 (2d Cir. 2006); *Singletary v. Mo. Dep't of Corr.,* 423 F.3d 886, 891-92 (8th Cir. 2005); *Peltier v. United States,* 388 F.3d 984, 988 (6th Cir. 2004); *Von Gunten v. Md.,* 243 F.3d 858, 869 (4th Cir. 2001); *Bowman v. Shawnee State Univ.,* 220 F.3d 456, 461-62 (6th Cir. 2000).

MEMORANDUM AND ORDER
(Granting Summary Disposition of Violations 1, 2, and 3 and of Violation 4 in Part)

Before the Board, in this enforcement proceeding, are motions by the Tennessee Valley Authority (TVA) for: (1) summary disposition of Violations 1,

2, and 3; and (2) summary disposition of Violation 4.[1] The NRC Staff opposes the motions.[2]

We grant TVA's motion to summarily dispose of Violations 1, 2, and 3 for failure to assert an adverse action as a matter of law. For the same reason, we grant TVA's motion for summary disposition of Violation 4 in part, insofar as Violation 4 is based on TVA's decision to place Beth Wetzel on paid administrative leave. We deny the motion insofar as Violation 4 is based on TVA's decision to terminate Ms. Wetzel's employment, because material facts are in dispute.

I. BACKGROUND

A. Factual Background

The facts concerning the NRC Staff's enforcement action against TVA have been previously described in orders of this Board,[3] of another licensing board,[4] and of the Commission.[5] Although the parties disagree about motivation and intent, important facts are not otherwise disputed.

On March 9, 2018, Erin Henderson (then TVA's Director of Corporate Nuclear Licensing) submitted a written complaint to her supervisor, Joseph Shea (then TVA's Vice President of Regulatory Affairs and Support Services), and to TVA's Corporate Director of Nuclear Human Resources, Amanda Poland.[6] Ms. Henderson alleged that individuals in the organization she directly supervised (including Beth Wetzel) and one individual in the onsite licensing organization at the Sequoyah Nuclear Power Plant (Michael McBrearty) had exhibited inappropriate and unprofessional workplace behavior toward her.

Specifically, Ms. Henderson asserted that these individuals "have either directly or indirectly acted in [an] attempt to intimidate and undermine me in

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[1] Tennessee Valley Authority's Motion for Summary Disposition of Violations 1, 2, and 3 (Lack of Adverse Employment Action) (Aug. 16, 2021) [hereinafter TVA Motion Violations 1, 2, and 3]; Tennessee Valley Authority's Motion for Summary Disposition of Violation 4 (Lack of Nuclear Safety-Related Protected Activity) (Aug. 16, 2021) [hereinafter TVA Motion Violation 4].

[2] NRC Staff's Consolidated Response in Opposition to TVA's Motions for Summary Disposition (Sept. 15, 2021) [hereinafter NRC Staff Response].

[3] *See* LBP-21-3, 93 NRC 153, 155-58 (2021).

[4] *See Joseph Shea* (Order Prohibiting Involvement in NRC-Licensed Activities Immediately Effective), LBP-20-11, 92 NRC 409, 411-14 (2020).

[5] *See Joseph Shea* (Order Prohibiting Involvement in NRC-Licensed Activities Immediately Effective), CLI-21-3, 93 NRC 89, 91-94 (2021).

[6] *See* TVA Motion Violations 1, 2, and 3, attach. 6, Formal Complaint of Erin Henderson (Mar. 9, 2018) [hereinafter Henderson Complaint].

my role as a senior regulatory leader."[7] Among other things, she expressed her belief that Mr. McBrearty, in particular, intentionally targeted her because she had previously initiated an investigation into whether Mr. McBrearty's relationship with another TVA employee was inappropriately close.[8] She claimed that the named employees were creating a hostile work environment such that her "ability to fully perform the responsibilities outlined in [her] job description ha[d] been impacted."[9]

1. Mr. McBrearty's Resignation

TVA decided that its Office of General Counsel (TVA OGC) would conduct an investigation, which was assigned to and carried out by TVA OGC attorney John Slater. His initial report, dated May 25, 2018, concluded, as to Mr. McBrearty, that "Ms. Henderson's allegation of harassment and retaliation is substantiated, and Mr. McBrearty's conduct and behavior violated two Federal statutes, a Federal regulation, and three TVA policies."[10] After reviewing the initial report, TVA management placed Mr. McBrearty on paid administrative leave, pending further steps.

Mr. Slater's final investigative report was released on August 10, 2018.[11] Before TVA could consider further steps, however, on August 16, 2018, Mr. McBrearty resigned to take another position.[12]

2. Termination of Ms. Wetzel's Employment

Mr. Slater's May 25, 2018 report did not reach any conclusions concerning Ms. Wetzel's actions. However, his final investigative report addressed actions that Ms. Wetzel took after Ms. Henderson submitted her March 9, 2018 complaint.

On May 7, 2018 — approximately one week after Ms. Wetzel began an

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[7] *Id.* at 1.

[8] *Id.* at 4.

[9] *Id.* at 1.

[10] TVA Motion Violations 1, 2, and 3, attach. 7, Report of Investigation of Erin Henderson's Allegations of Harassment and Hostile Work Environment at 32 (May 25, 2018) [hereinafter Initial Slater Report].

[11] *See* TVA Motion Violations 1, 2, and 3, attach. 8, Report of Investigation of Erin Henderson's Allegations of Harassment and Hostile Work Environment (Aug. 10, 2018) [hereinafter Final Slater Report].

[12] TVA Motion Violations 1, 2, and 3, attach. 1, Statement of Undisputed Material Facts ¶5 [hereinafter TVA Violations 1, 2, and 3 Statement of Undisputed Material Facts]; TVA Motion Violations 1, 2, and 3, attach. 5, Resignation Letter of Michael McBrearty (Aug. 16, 2018).

18-month "loanee" assignment at the Nuclear Energy Institute in Washington, D.C. — she emailed Mr. Shea concerning Ms. Henderson.[13] According to Ms. Wetzel, Ms. Henderson "used HR to investigate people, reported people to [the Employee Concerns Program], threatened to have people for cause drug tested, pulled badging gate records and probably a lot more actions that I'm not aware of."[14] Ms. Wetzel claimed Ms. Henderson "has demonstrated a longstanding pattern of using TVA processes as punitive and retaliatory tools."[15] Ms. Wetzel made similarly critical comments about Ms. Henderson to Mr. Shea in an email dated June 9, 2018,[16] and in text messages later that month and the next.[17]

In his August 10, 2018 investigative report, Mr. Slater addressed the criticisms of Ms. Henderson in Ms. Wetzel's May 7, 2018 email.[18] He found some criticisms to be unsubstantiated and others to be merely "more of the same, with no details" that did not warrant further investigation, and concluded that "Ms. Wetzel continues to make the same allegations regarding Ms. Henderson to Mr. Shea to the point that it rises to the level of disrespectful conduct."[19]

On August 30, 2018, TVA OGC provided Mr. Shea with a memorandum that evaluated Ms. Wetzel's conduct by TVA lawyers other than Mr. Slater and recommended that Ms. Wetzel's "employment with TVA be terminated as a result of her involvement in a pattern of harassment and retaliation directed at Erin Henderson."[20] Mr. Shea decided to separate Ms. Wetzel from her employment by TVA in accordance with TVA OGC's recommendations.

On September 19, 2018, Mr. Shea presented a proposed disciplinary action concerning Ms. Wetzel to a TVA Executive Review Board. The purpose of such reviewing boards is to ensure that a proposed personnel action is consistent with company practices and not taken in retaliation for protected activities.[21] An Executive Review Board consists of TVA employees who are independent of the proposed action; typically, it includes a Senior Vice President; representatives from Human Resources, TVA OGC, and the Employee Concerns Program; and

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[13] TVA Motion Violation 4, attach. 5, Email from Beth Wetzel to Joseph Shea at 2-3 (May 7, 2018).

[14] *Id.* at 2.

[15] *Id.*

[16] *See* TVA Motion Violation 4, attach. 7, Email from Beth Wetzel to Joseph Shea (June 9, 2018).

[17] *See* TVA Motion Violation 4, attach. 8, Text Messages from Beth Wetzel to Joseph Shea.

[18] Final Slater Report at 19 n.69.

[19] *Id.* at 20 n.69.

[20] TVA Motion Violation 4, attach. 11, Investigation into Harassment and Hostile Work Environment Allegations in Nuclear Licensing Organization - Involvement of Beth Wetzel at 1 (Aug. 30, 2018).

[21] TVA Motion Violation 4, attach. 2, Wetzel Executive Review Board Package at 4 (Sept. 19, 2018) [hereinafter Wetzel ERB Package].

the Chairperson of TVA's Nuclear Safety Culture Monitoring Panel.[22] The proposal under consideration was first to provide Ms. Wetzel "[a]n offer of a no fault separation agreement," but "[i]f not accepted, termination will be implemented."[23]

The Executive Review Board expressly considered whether Ms. Wetzel's "involvement in a protected activity contributed in any way to the proposed action recommendation," and concluded that it did not.[24] It further found that terminating Ms. Wetzel's employment was "based on legitimate, non-retaliatory reasons," and "compliant with TVA policies, procedures and/or past practices."[25]

On October 15, 2018, TVA placed Ms. Wetzel on paid administrative leave and offered her a no-fault separation agreement.[26] Ms. Wetzel signed such an agreement on December 5, 2018, but rescinded her signature on December 11, 2018.[27] An Executive Review Board update took place in December 2018, which again did not raise any objection to the proposed personnel action.[28] TVA terminated Ms. Wetzel's employment on January 14, 2019.[29]

B. Procedural History

The NRC Staff claims that TVA's actions were really a "pretext" to punish Mr. McBrearty and Ms. Wetzel for raising various safety concerns.[30] After conducting its own investigation, the NRC Staff initiated three separate enforcement actions that resulted in enforcement orders or notices of violations.

First, based on his role in the termination of Ms. Wetzel's employment, the NRC Staff issued an order, effective immediately, banning Mr. Shea from any involvement in NRC-licensed activities for five years.[31] The NRC Staff justified making the Shea Enforcement Order immediately effective — even before a licensing board could conduct a hearing to which Mr. Shea was entitled —

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[22] *Id.* at 10-12.

[23] *Id.* at 1.

[24] *Id.* at 8.

[25] *Id.* at 23.

[26] TVA Motion Violation 4, attach. 1, Statement of Undisputed Material Facts ¶ 8 [hereinafter TVA Violation 4 Statement of Undisputed Material Facts].

[27] *Id.* ¶ 9.

[28] *Id.* ¶ 10; *see* TVA Motion Violation 4, attach. 12, Wetzel Executive Review Board Package Update (Dec. 18, 2018).

[29] TVA Violation 4 Statement of Undisputed Material Facts ¶ 11.

[30] TVA Order for Civil Penalty, Appendix at 2, 4 (Oct. 29, 2020) (ADAMS Accession No. ML20297A552) [hereinafter TVA Order Appendix].

[31] Order Prohibiting Involvement in NRC-Licensed Activities Immediately Effective (Aug. 24, 2020) (ADAMS Accession No. ML20219A676) [hereinafter Shea Enforcement Order].

because of "the significance of the underlying issues, Mr. Joseph Shea's position within TVA that has a very broad sphere of influence, and the deliberate nature of the actions."[32] The Shea Enforcement Order concluded that "the NRC lacks the requisite reasonable assurance that licensed activities can be conducted in compliance with the Commission's requirements and that the health and safety of the public will be protected if Mr. Joseph Shea were permitted at this time to be involved in NRC-licensed activities."[33]

The Licensing Board assigned to Mr. Shea's request for a hearing on the Shea Enforcement Order disagreed.[34] Ruling at the outset only on whether the NRC Staff had justified making the Shea Enforcement Order immediately effective, the Board majority concluded "that the [NRC] Staff ha[d] not provided any evidence to support its inference that the [Executive Review Board] and [TVA] OGC acted as 'cover' to hide deliberate misconduct by Mr. Shea."[35] Without such evidence, the Licensing Board ruled the conclusions of the Executive Review Board and TVA OGC "support Mr. Shea's assertions that he believed he was taking the proper action."[36] On review, the Commission affirmed unanimously.[37]

Thereafter, rather than defend its Shea Enforcement Order in a hearing on the merits, the NRC Staff decided to abandon its case against Mr. Shea completely. On January 22, 2021, the NRC Staff informed Mr. Shea that, "[u]pon further review of the facts of your case and in light of the Commission's ruling [in CLI-21-3], we are hereby rescinding the August 24, 2020, Order in its entirety."[38]

Second, the NRC Staff issued a notice of violation to Ms. Henderson, charging her with deliberate misconduct based on her role concerning Mr. McBrearty and Ms. Wetzel.[39] The NRC Staff stated that it declined to issue an order prohibiting Ms. Henderson from involvement in NRC-licensed activities, however, "because [she was] not the decisionmaker that placed the former employees on paid administrative leave or terminated the former corporate employee."[40] Nonetheless, the notice publicly identified Ms. Henderson by name and warned

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[32] *Id.* at 3.

[33] *Id.* at 3-4.

[34] *See Shea,* LBP-20-11, 92 NRC at 418-22.

[35] *Id.* at 421-22.

[36] *Id.* at 422.

[37] *See Shea,* CLI-21-3, 93 NRC at 96-99.

[38] Letter from George A. Wilson, NRC, to Joseph Shea at 1 (Jan. 22, 2021) (ADAMS Accession No. ML21021A351).

[39] Cover Letter and Notice of Violation to Ms. Erin Henderson re: Notice of Violation, NRC Office of Investigations Report Nos. 2-2018-033 and 2-2019-015 (IA-20-009) (Aug. 24, 2020) (ADAMS Accession No. ML20218A584).

[40] *Id.* at 2.

that "additional deliberate violations could result in more significant enforcement action or criminal penalties."[41]

After the Commission's ruling in Mr. Shea's case,[42] the NRC Staff likewise decided to abandon its claims against Ms. Henderson. On January 22, 2021, the NRC Staff informed Ms. Henderson that, "[u]pon further review of the facts of your case and in light of the January 15, 2021, Commission ruling in CLI-21-03, we are hereby rescinding the August 24, 2020, Notice of Violation."[43]

Third, on October 29, 2020, the NRC Staff issued an Order to TVA assessing a Civil Penalty of $606,942 (the "Order") — the matter that remains pending before this Board.[44] As explained in the Appendix to the Order,[45] the penalty imposed on TVA is based on four alleged violations of 10 C.F.R. § 50.7 and section 211 of the Energy Reorganization Act.[46]

Violation 1 charges that Ms. Henderson's March 9, 2018 complaint discriminated against Mr. McBrearty for engaging in protected activity. Violation 1 further charges that her complaint triggered an investigation by the TVA OGC based, at least in part, on Mr. McBrearty's engaging in protected activity.[47]

Violation 2 charges that TVA discriminated against Mr. McBrearty when, on May 25, 2018, it placed him on paid administrative leave based, at least in part, on his engaging in protected activity.[48]

Violation 3 charges that Ms. Henderson's March 9, 2018 complaint discriminated against Ms. Wetzel for engaging in protected activity.[49] It further charges that her complaint triggered an investigation by TVA OGC that resulted in Ms. Wetzel being placed on paid administrative leave followed by termination of her employment based, at least in part, on her engaging in protected activity.[50] (Insofar as Violation 3 addresses Ms. Wetzel's administrative leave and termination of her employment, it duplicates Violation 4.)

Violation 4 charges that TVA discriminated against Ms. Wetzel when it

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[41] *Id.*

[42] *See Shea,* CLI-21-3, 93 NRC at 96-99.

[43] Letter from George A. Wilson, NRC, to Erin Henderson at 1 (Jan. 22, 2021) (ADAMS Accession No. ML21021A368).

[44] In the Matter of Tennessee Valley Authority, Chattanooga, TN, 85 Fed. Reg. 70,203 (Nov. 4, 2020); TVA Order for Civil Penalty (Oct. 29, 2020) (ADAMS Accession No. ML20297A544) [hereinafter TVA Order].

[45] *See* TVA Order Appendix at 1-6.

[46] Energy Reorganization Act § 211, 42 U.S.C. § 5851.

[47] TVA Order Appendix at 1-2.

[48] *Id.* at 2-3.

[49] *Id.* at 3-4.

[50] *Id.*

placed her on paid administrative leave and terminated her employment, based, at least in part, on her engaging in protected activity.[51]

Notwithstanding the NRC Staff's decision to abandon its claims of deliberate misconduct against Mr. Shea and Ms. Henderson individually, the NRC Staff acknowledges that it pursues civil monetary penalties against TVA on the same theory: that is, that the TVA OGC investigation and Executive Review Board process were merely "cover" for TVA's unlawful discrimination against Mr. McBrearty and Ms. Wetzel for engaging in protected activity.[52] TVA's internal investigations, the NRC Staff claims, "were not objective, serious inquiries, but instead sought from the outset to validate pre-formed conclusions in order to substantiate Ms. Henderson's complaint."[53] According to the NRC Staff, TVA intended to "gather evidence in a biased and incomplete manner to use as reasons to terminate both Mr. McBrearty's and Ms. Wetzel's employment."[54]

TVA disputes the NRC Staff's claimed violations and has exercised its right to demand an evidentiary hearing.[55] After the close of discovery, including substantial document disclosures, interrogatories, and depositions of some nineteen individuals, TVA submitted its pending motions, which together seek summary disposition of all four asserted violations.[56] The Board heard oral argument on October 14, 2021.[57]

II. LEGAL STANDARDS

A. Summary Disposition

In this Subpart G proceeding, the standards for summary disposition are set forth in 10 C.F.R. § 2.710 and "are based upon those the federal courts apply to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure."[58] The Board may grant summary disposition if the relevant

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[51] *Id.* at 4.

[52] Tr. at 77 (Ms. Kirkwood).

[53] NRC Staff Response at 3.

[54] *Id.*

[55] *See* Tennessee Valley Authority's Answer and Request for Hearing (Nov. 30, 2020).

[56] To permit consideration of TVA's summary disposition motions, the Board briefly paused the hearing schedule. *See* Licensing Board Order (Suspending Scheduling Order and Directing Responses to Summary Disposition Motions) (Aug. 18, 2021) (unpublished).

[57] Tr. at 142-212.

[58] *Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 297 (2010); *see Advanced Medical Systems, Inc.* (One Factory Row, Geneva, Ohio 44041), CLI-93-22, 38 NRC 98, 102-03 (1993).

pleadings "show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law."[59]

In response to a motion for summary disposition, an opposing party "may not rest upon . . . mere allegations or denials," but "must set forth specific facts showing that there is a genuine issue of fact" for hearing.[60] At the same time, however, all facts must be construed in the light most favorable to the nonmoving party, and any doubt as to the existence of a genuine issue of material fact should be resolved against summary disposition.[61] As the Commission directs, "[c]aution should be exercised in granting summary disposition, which may be denied 'if there is reason to believe that the better course would be to proceed to a full [hearing].'"[62]

B. Retaliation for Protected Activity

To understand the scope of the NRC's authority and responsibility, "[w]e look first to the statute."[63]

Section 211 of the Energy Reorganization Act of 1974 (ERA) (42 U.S.C. § 5851) and the NRC's implementing regulation (10 C.F.R. § 50.7) are not as broad as the antiretaliation provisions in some other statutes. ERA section 211 states that "[n]o employer may discharge . . . or otherwise discriminate against any employee with respect to his compensation, terms, conditions, or privileges of employment" because of the employee's participation in protected activity.[64] Likewise, 10 C.F.R. § 50.7(a) states that "[d]iscrimination includes discharge and other actions that relate to compensation, terms, conditions, or privileges of employment."[65] Therefore, ERA § 211 and 10 C.F.R. § 50.7 prohibit only retaliation that takes the form of an adverse change in the terms and conditions of employment, and not every type of retaliation that might be possible.

Other statutes that are not at issue make additional kinds of retaliatory conduct unlawful. For example, the antiretaliation provisions of the False Claims Act

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[59] 10 C.F.R. § 2.710(d)(2).

[60] *Id.* § 2.710(b).

[61] *Poller v. Columbia Broad. Sys., Inc.,* 368 U.S. 464, 473 (1962); *Pilgrim,* CLI-10-11, 71 NRC at 297-98; *Advanced Med. Sys.,* CLI-93-22, 38 NRC at 102; *Progress Energy Florida, Inc.* (Levy County Nuclear Power Plant, Units 1 and 2), LBP-10-20, 72 NRC 571, 579 (2010).

[62] *Pilgrim,* CLI-10-11, 71 NRC at 298 (quoting *Anderson v. Liberty Lobby,* 477 U.S. 242, 255 (1986)).

[63] *U.S. Department of Energy* (High-Level Waste Repository), LBP-10-11, 71 NRC 609, 618 (2010).

[64] Energy Reorganization Act § 211(a)(1), 42 U.S.C. § 5851(a)(1).

[65] 10 C.F.R. § 50.7(a).

expressly protect an employee who is "suspended, threatened [or] harassed."[66] On their face, ERA section 211 and 10 C.F.R. § 50.7 do not address such conduct. Likewise, the provisions of Title VII of the Civil Rights Act of 1964 provide broader protection for victims of retaliation than for those who are victims of discrimination itself.[67] Yet it is the latter provision in Title VII — the narrower prohibition against employment discrimination itself — that is virtually identical to the language of ERA section 211 and 10 C.F.R. § 50.7.[68]

A non-exhaustive list of protected activity is set forth in 10 C.F.R. § 50.7(a)(1) that includes such actions as providing information about alleged violations to the Commission or to an NRC licensee, testifying in Commission and other proceedings, and refusing to engage in an unlawful practice.[69] The touchstone for protected activity is that it "must implicate safety definitively and specifically."[70]

III. DISCUSSION

A. Violation 1

Violation 1 is based on two separate but related actions: (1) Ms. Henderson's March 9, 2018 complaint (insofar as it addressed Mr. McBrearty's conduct); and (2) TVA's investigation of Mr. McBrearty's conduct in response to Ms. Henderson's complaint. It therefore raises two issues.

First, did Ms. Henderson's act of complaining about Mr. McBrearty's conduct, in itself, change his "compensation, terms, conditions, or privileges of employment," as required to violate ERA section 211 and 10 C.F.R. § 50.7? We conclude that it did not.

When Ms. Henderson submitted her complaint on March 9, 2018, although it led to a subsequent investigation, it did not at that moment affect the terms or conditions of Mr. McBrearty's employment in any way. To our knowledge, no federal court or administrative tribunal has ever interpreted the act of an

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[66] 31 U.S.C. § 3730(h)(1).

[67] *Burlington N. & Santa Fe Ry. Co. v. White,* 548 U.S. 53, 67 (2006).

[68] *Compare* Civil Rights Act of 1964 § 703(a)(1), 42 U.S.C. § 2000e-2(a)(1), *with* Energy Reorganization Act of 1974 § 211(a)(1), 42 U.S.C. § 5851(a)(1).

[69] *See* 10 C.F.R. § 50.7(a)(1)(i)-(v).

[70] *Am. Nuclear Res., Inc. v. U.S. Dep't of Labor,* 134 F.3d 1292, 1295 (6th Cir. 1998); *see Hoffman v. NextEra Energy, Inc.,* 2013 WL 6979709, ARB No. 12-062, ALJ No. 2010-ERA-011, at *6 (ARB Dec. 17, 2013) (noting that courts have construed the ERA's "catch-all" provision "as requiring, in light of the ERA's overarching purpose of protecting acts implicating nuclear safety, that an employee's actions must implicate safety 'definitively and specifically' to constitute whistleblower protected activity under [42 U.S.C. § 5851(a)(1)(F)]").

employee complaining about another employee as impacting "compensation, terms, conditions, or privileges of employment," and the NRC Staff cites none.

The NRC Staff's theory that an employee's complaint might constitute a violation of ERA section 211 and 10 C.F.R. § 50.7 is novel and unprecedented, and it has no support in the language of those provisions. In contrast, courts have consistently ruled that a violation of ERA section 211 must involve a personnel action that has a tangible impact, such as termination of employment, failure to hire, demotion, or an unwanted transfer.[71]

Second, did TVA's investigation of Ms. Henderson's complaint about Mr. McBrearty's conduct change his "compensation, terms, conditions, or privileges of employment"? Again, we conclude that it did not.

TVA policy requires employees to cooperate with such investigations.[72] As the United States Court of Appeals for the Sixth Circuit (which includes Tennessee, where the alleged retaliation in this case occurred) ruled in *Kuhn v. Washtenaw County,* an investigation cannot be a violation when its subject "suffered no disciplinary action, demotion, or change in job responsibilities during the course of the investigation."[73]

Apart from TVA's decision to place Mr. McBrearty on paid administrative leave after the investigation's preliminary findings (which we address below), the NRC Staff does not explain how TVA's investigation of Mr. McBrearty impacted his employment in the tangible way necessary to violate ERA section 211 and 10 C.F.R. § 50.7. Mr. McBrearty voluntarily resigned from TVA, to accept another position, before the investigation was concluded.

Moreover, as a practical matter, how would an employer know whether protected activity is the basis for a complaint before investigating it? On their face, a small number of Ms. Henderson's allegations suggest that she was unhappy with Mr. McBrearty's possible role in prompting an NRC safety inspection.[74] But, more broadly, Ms. Henderson claimed that various individuals were creating a hostile work environment that was adversely affecting her job

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[71] *See, e.g., English v. Gen. Elec. Co.,* 496 U.S. 72 (1990) (involving termination of employment); *Tamosaitis v. URS Inc.,* 781 F.3d 468 (9th Cir. 2015) (involving involuntary transfer with lost compensation); *Hasan v. U.S. Dep't of Labor,* 400 F.3d 1001 (7th Cir. 2005) (involving failure to hire); *Hasan v. U.S. Dep't of Labor,* 298 F.3d 914 (10th Cir. 2002) (involving failure to hire); *Doyle v. U.S. Sec'y of Labor,* 285 F.3d 243 (3d Cir. 2002) (involving failure to hire); *Am. Nuclear Res.,* 134 F.3d at 1294 (involving termination of employment); *DeFord v. Sec'y of Labor,* 700 F.2d 281 (6th Cir. 1983) (involving a transfer deemed a demotion); *Consol. Edison Co. of N.Y., Inc. v. Donovan,* 673 F.2d 61 (2d Cir. 1982) (involving termination of employment).

[72] TVA Motion Violations 1, 2, and 3, attach. 14, Employee Discipline Policy, TVA-SPP-11.316, Rev. 0005 app'x B at 3 (Effective Date July 2, 2017).

[73] 709 F.3d 612, 626 (6th Cir. 2013).

[74] NRC Staff Response at 11.

performance.[75] She expressed her belief that Mr. McBrearty, in particular, intentionally targeted her because she had previously initiated an investigation into whether Mr. McBrearty's relationship with another TVA employee was inappropriately close.[76]

Thus, Ms. Henderson herself alleged retaliatory conduct that it was incumbent on TVA to investigate.

The NRC Staff's arguments that Ms. Henderson's complaint and TVA's investigation nonetheless violate ERA section 211 and 10 C.F.R. § 50.7 are not persuasive. According to the NRC Staff, "the relevant legal inquiry is not whether an employee was ultimately discharged or demoted, but instead, whether the challenged action would deter a reasonable worker from engaging in protected activity."[77]

That may be the relevant legal inquiry under other statutes, but not under the statute with which the NRC Staff has charged TVA. In asserting that the impact on other employees is the only relevant inquiry under ERA section 211 and 10 C.F.R. § 50.7, the NRC Staff ignores the language of these provisions and misreads relevant caselaw.

For example, the NRC Staff purports to rely on the Supreme Court's decision in *Burlington Northern & Santa Fe Railroad Co. v. White,* which interpreted the antiretaliation provision of Title VII of the Civil Rights Act of 1964, for the proposition that a prohibition limited to employment-related actions would not deter many other forms of retaliation.[78] But the Supreme Court did not say that this Board should rewrite ERA section 211 to cover additional forms of retaliation. The Supreme Court said just the opposite: that normally we should presume that "Congress intended its different words to make a legal difference."[79]

Precisely because "[t]he language of the substantive [antidiscrimination] provision differs from that of the antiretaliation provision in important ways,"[80] the Supreme Court ruled that the antiretaliation provision[81] of Title VII reaches conduct not covered by the substantive antidiscrimination provision. Specifically, the Supreme Court held that the substantive antidiscrimination provision of Title VII is limited in scope to "actions that affect employment or alter the conditions

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[75] Henderson Complaint at 1.

[76] *Id.* at 4.

[77] NRC Staff Response at 17 (citing *Vander Boegh v. EnergySolutions, Inc.,* 536 F. App'x 522, 529 (6th Cir. 2013)).

[78] *Id.* at 16-17.

[79] *Burlington N.,* 548 U.S. at 62-63.

[80] *Id.* at 61.

[81] *See* Civil Rights Act of 1964 § 704(a), 42 U.S.C. § 2000e-3(a).

of the workplace," while "[n]o such limiting words appear in the antiretaliation provision."[82]

The language of ERA section 211 and 10 C.F.R. § 50.7 is virtually identical to the language of the substantive antidiscrimination provision of Title VII, not to the broader antiretaliation provision.[83] Thus, when confronted with virtually the same language as in ERA section 211 and 10 C.F.R. § 50.7, the Supreme Court interpreted such language to reach only "actions that affect employment or alter the conditions of the workplace."[84] The NRC Staff's contention that the Board should disregard these limitations in the relevant statutory language is not at all supported by the Supreme Court's decision, which directs the opposite.

Similarly unsupported is the NRC Staff's claim that controlling caselaw in the United States Court of Appeals for the Sixth Circuit now applies the broader antiretaliation test of Title VII to determine whether an action is adverse under ERA section 211.[85] Purportedly in support, the NRC Staff cites *Vander Boegh v. EnergySolutions, Inc.*[86] But *Vander Boegh* does not support the NRC Staff's claim for several reasons.

First, as an unpublished decision, *Vander Boegh* is not binding precedent under the Sixth Circuit's rules.[87] Regardless what the case says, it cannot accurately be described as "the most recent caselaw in the Sixth Circuit that governs the interpretation of ERA section 211," as the NRC Staff claims.[88]

Second, *Vander Boegh* involved not only ERA claims, but also claims under the False Claims Act and various environmental statutes.[89] As NRC Staff counsel conceded at oral argument,[90] the court's unpublished decision does not distinguish among these differing causes of action when it speaks of an "adverse employment action."

Yet, as explained above, other statutes address broader categories of retalia-

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[82] *Burlington N.,* 548 U.S. at 62.

[83] *Compare* Civil Rights Act of 1964 § 703(a)(1), 42 U.S.C. § 2000e-2(a)(1) ("It shall be an unlawful employment practice for an employer (1) to fail or refuse to hire or to discharge any individual, or otherwise to discriminate against any individual with respect to his compensation, terms, conditions, or privileges of employment, because of such individual's race, color, religion, sex, or national origin[.]"), *with* Energy Reorganization Act of 1974 § 211(a)(1), 42 U.S.C. § 5851(a)(1) ("No employer may discharge any employee or otherwise discriminate against any employee with respect to his compensation, terms, conditions, or privileges of employment because the employee [engaged in protected activity.]").

[84] *Burlington N.,* 548 U.S. at 62.

[85] NRC Staff Response at 16-18.

[86] 536 F. App'x at 529.

[87] 6 Cir. R. 32.1(b).

[88] NRC Staff Response at 16.

[89] *Vander Boegh,* 536 F. App'x at 527.

[90] Tr. at 184 (Mr. Gillespie).

tion than ERA section 211 does. Indeed, the provisions of the False Claims Act expressly protect an employee who is "suspended, threatened [or] harassed,"[91] regardless whether retaliation takes the form of a concrete employment action. So, because it lumped various causes of action together, one cannot tell how the *Vander Boegh* court would have interpreted ERA section 211 standing alone.

Third, whether Mr. Vander Boegh had suffered an adverse employment action was not even disputed.[92] As the Sixth Circuit explained: "Undisputedly, the decision not to hire Vander Boegh constitutes an adverse employment action."[93] On its facts, *Vander Boegh* says nothing at all about whether an employee's complaint or an employer's investigation of that complaint can violate ERA section 211.

Likewise unsupported is the NRC Staff's claim that the Department of Labor Administrative Review Board holds that the sole test for a violation of ERA section 211 is whether an employer's action "could well have dissuaded a reasonable worker from engaging in protected activity."[94] Purportedly in support, the NRC Staff cites *Overall v. Tennessee Valley Authority.*[95]

But that is not what *Overall* says. Rather, in applying ERA section 211 (and ruling in TVA's favor), the *Overall* Administrative Review Board said that the test for an adverse employment action is (1) whether the employer (TVA) "took a 'tangible employment action' that resulted in a significant change [in Mr. Overall's] employment status;"[96] *and* (2) whether TVA's actions were "harmful to the point that they could well have dissuaded a reasonable worker from engaging in protected activity."[97] By focusing on the second part of the test — and simply ignoring the first — the NRC Staff misreads *Overall* and misapprehends what it stands for.

The NRC Staff cites several cases[98] for the proposition that, in appropriate circumstances, a retaliatory investigation can be a violation of other statutes, such as the broader antiretaliation provision of Title VII, discussed above, or the even broader prohibitions of the Whistleblower Protection Act.[99] But the NRC

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[91] 31 U.S.C. § 3730(h)(1).

[92] *Vander Boegh,* 536 F. App'x at 528.

[93] *Id.* at 529.

[94] NRC Staff Response at 18 (citing *Overall v. Tenn. Valley Auth.,* ARB No. 04-073, ALJ No. 1999-ERA-025, slip op. at 11 (ARB July 16, 2007)).

[95] *Overall,* 1999-ERA-025, slip op. at 11.

[96] *Id.*

[97] *Id.*

[98] *See* NRC Staff Response at 37-44.

[99] *Compare* 5 U.S.C. § 2302(a)(2)(A)(i)-(xiii) (listing more than a dozen prohibited personnel actions), *with* Energy Reorganization Act of 1974 § 211(a)(1)(A)-(F), 42 U.S.C. § 5851(a)(1)(A)-(F).

Staff cites no case that interprets the language of ERA section 211 and 10 C.F.R. § 50.7 (or similar provisions in any other statute) to create a violation based on an employee's complaint or an employer's investigation of that complaint.

As a matter of law, we grant summary disposition of Violation 1 in favor of TVA.

B. Violation 2

Violation 2 is based on TVA's placing Mr. McBrearty on administrative leave, with full pay and benefits, for 83 days. It therefore raises this issue: Did Mr. McBrearty's administrative leave change his "compensation, terms, conditions or privileges of employment," as required to violate ERA section 211 and 10 C.F.R. § 50.7?

Overwhelming caselaw — most of it decided by federal courts of appeals affirming summary judgments in favor of employers — directs that it did not. As the United States Court of Appeals for the Third Circuit recently observed, when applying the substantive antidiscrimination provision of Title VII (the provision that is essentially identical to ERA section 211), "other courts of appeals have unanimously concluded that 'placing an employee on paid administrative leave where there is no presumption of termination' is not an adverse employment action."[100]

As the Third Circuit explained, "[a] paid suspension is neither a refusal to hire nor a termination, and by design it does not change compensation."[101] Likewise, the Third Circuit ruled, it does not effect a "'serious and tangible' alteration of the 'terms, conditions, or privileges of employment.'"[102] As the court concluded: "We therefore agree with our sister courts that a suspension with pay, 'without more,' is not an adverse employment action."[103]

For the same reasons, courts of appeals in at least four other circuits (including the Sixth Circuit, where the relevant events took place) have affirmed summary judgment on the ground that placing an employee on leave, with full pay and benefits, is not an adverse employment action.[104] In the face of this

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[100] *Jones v. Se. Pa. Transp. Auth.,* 796 F.3d 323, 326 (3d Cir. 2015) (quoting *Jones v. Se. Pa. Transp. Auth.,* No. 12-CV-6582-WY, 2014 WL 3887747, at *4 (E.D. Pa. Aug. 7, 2014)).

[101] *Id.*

[102] *Id.* (quoting *Storey v. Burns Int'l Sec. Servs.,* 390 F.3d 760, 764 (3d Cir. 2004)).

[103] *Id.* (quoting *Joseph v. Leavitt,* 465 F.3d 87, 91 (2d Cir. 2006)).

[104] *See, e.g., Michael v. Caterpillar Fin. Servs. Corp.,* 496 F.3d 584, 594 (6th Cir. 2007); *Dendinger v. Ohio,* 207 F. App'x 521, 527 (6th Cir. 2006); *Joseph,* 465 F.3d at 91; *Singletary v. Mo. Dep't of Corr.,* 423 F.3d 886, 891-92 (8th Cir. 2005); *Peltier v. United States,* 388 F.3d 984, 988 (6th Cir. 2004); *Von Gunten v. Md.,* 243 F.3d 858, 869 (4th Cir. 2001); *Bowman v. Shawnee State Univ.,* 220 *(Continued)*

unanimous authority, the NRC Staff cites not a single appellate decision that interprets the language of ERA section 211 and 10 C.F.R. § 50.7 (or similar provisions of any other statute) to create a violation based on placing an employee on administrative leave with full pay and benefits.[105]

The only cited case that involved statutory language similar to ERA section 211, in which summary judgment was denied, is *Richardson v. Petasis.*[106] In *Richardson,* the district court denied summary judgment based not solely on the imposition of administrative leave, "but also its conditions."[107] Specifically, the court determined that "continued employment was explicitly conditioned upon [plaintiff's] completion of certain tasks," and "uncontroverted evidence" demonstrated that the employer had prevented the plaintiff from completing those necessary tasks.[108] *Richardson* does not challenge the well-established rule that paid administrative leave, without more, is not a violation of the provisions of ERA section 211.

In the absence of supporting precedents, the NRC Staff nonetheless contends that "determination of what constitutes an adverse action is dependent on the context."[109] It is true that courts have implied that the imposition of administrative leave must be "reasonable,"[110] and have cautioned that an "exceptionally dilatory" investigation while an employee is on leave might give rise to a violation.[111]

But no such facts were found to prevent summary judgment in other cases, and no such facts exist here. Indeed, almost half the administrative leave cases discussed in the NRC Staff's brief involved administrative leave that lasted as long as or longer than Mr. McBrearty's 83 days.[112] Like the many federal courts of appeals that have affirmed summary judgment on this issue, we do not conclude that the NRC Staff has raised a genuine dispute for hearing on Violation 2.

As a matter of law, we grant summary disposition of Violation 2 in favor of TVA.

F.3d 456, 461-62 (6th Cir. 2000). Although some of these decisions failed to anticipate the Supreme Court's ruling in *Burlington Northern,* 548 U.S. at 62, insofar as they address the language of the substantive antidiscrimination provision of Title VII (which is virtually identical to the language of ERA section 211), and not the broader language of Title VII's antiretaliation provision, their reasoning remains sound.

[105] *See* NRC Staff Response at 20-29.

[106] 160 F. Supp. 3d 88 (D.D.C. 2015).

[107] *Id.* at 118.

[108] *Id.*

[109] NRC Staff Response at 22 (citing *Burlington N.,* 548 U.S. at 69).

[110] *Joseph,* 465 F.3d at 91-92.

[111] *Id.* at 92.

[112] *See* NRC Staff Response at 20-29; Tr. at 163-65 (Mr. Lepre).

C. Violation 3

Much like Violation 1, Violation 3 is based on two separate but related actions: (1) Ms. Henderson's March 9, 2018 complaint (insofar as it addressed Ms. Wetzel's conduct); and (2) TVA's investigation of Ms. Wetzel's conduct. For the same reasons we grant summary disposition of Violation 1, as explained above, we grant summary disposition of Violation 3 in favor of TVA as a matter of law.

Insofar as Violation 3 also addresses Ms. Wetzel's administrative leave and termination of her employment, it duplicates Violation 4 and is dismissed for that reason.

D. Violation 4

Violation 4 charges that TVA discriminated against Ms. Wetzel when it placed her on administrative leave and terminated her employment, allegedly based, at least in part, on her engaging in protected activity. Insofar as Violation 4 is based on placing Ms. Wetzel on paid administrative leave, we grant summary disposition in favor of TVA as a matter of law for the same reasons we grant summary disposition of Violation 2, as explained above.

We deny summary disposition of Violation 4 with respect to TVA's termination of Ms. Wetzel's employment. Although to date the NRC Staff has come forward with scant evidence of TVA's having terminated Ms. Wetzel's employment for engaging in protected activity, we cannot say (construing the evidence in favor of the NRC Staff, as we must at this stage) that there can be no doubt as to the existence of genuine issues of material fact.

For example, Ms. Henderson's March 9, 2018 complaint to Mr. Shea contained at least one allegation that mentioned Ms. Wetzel's protected activity: that is, that Ms. Wetzel might have initiated an NRC inspection of her organization.[113] Also undisputed is that Ms. Henderson's complaint was the reason that Mr. Shea asked TVA OGC to investigate. Mr. Shea denies that the allegations in Ms. Henderson's complaint ultimately were the grounds for terminating Ms. Wetzel's employment,[114] but that necessarily raises issues of witness credibility and inferences to be drawn from the evidence.

Similar issues are raised as to whether Ms. Wetzel's complaints about Ms. Henderson after March 9, 2018 were related to safety. TVA contends that,

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[113] NRC Staff Response, attach. 1, Statement of Disputed Material Facts ¶ 14 [hereinafter NRC Staff Statement of Disputed Material Facts]; Henderson Complaint at 6-7.

[114] *See* TVA Motion Violation 4 at 28 (citing TVA Motion Violation 4, attach. 15, Excerpts from Joseph Shea's Pre-Decisional Enforcement Conference Transcript at 144-46 (June 25, 2020)).

on their face, they were not related to safety at all.[115] Yet the NRC Staff responds with the charge that "TVA presents Ms. Wetzel's protected activities as individually siloed occurrences."[116] According to the NRC Staff, Ms. Wetzel's protected activities were interrelated: "They build on each other and should be considered in their proper context — as a series of linked complaints addressing Ms. Wetzel's persistent concerns about a chilled work environment at TVA."[117] Whether this is so, the Board concludes, would best be decided on the facts developed at an evidentiary hearing.

Additional fact issues exist concerning Mr. Shea's role with the Executive Review Board. Mr. Shea's evaluation was presented to the Executive Review Board as the basis for decision.[118] Although TVA claims that "the undisputed facts show that the [Executive Review Board] was unaware that Ms. Wetzel had allegedly contacted the NRC,"[119] in actuality the NRC Staff does dispute this conclusion, based on Mr. Shea's involvement in the process and his familiarity with the content of Ms. Henderson's March 9, 2018 complaint.[120]

Finally, we are not persuaded to dismiss Violation 4, at this time, based on the difference between Violation 4 as originally noticed and as later clarified or expanded in the TVA Order Appendix. Specifically, the TVA Order Appendix alleges protected activity by Ms. Wetzel — "alleged contact with the NRC"[121] — that is not explicitly mentioned in either TVA's notice of violation or in the restatement of Violation 4 set forth in the TVA Order Appendix itself.

TVA contended at oral argument that the difference deprived TVA of its full right to present its case to the NRC enforcement staff prior to a formal hearing, as guaranteed by section 234(b) of the Atomic Energy Act of 1954, 42 U.S.C. § 2282(b).[122] Likewise, TVA claimed its notice of violation failed to include all information required by 10 C.F.R. § 2.205.[123]

As TVA counsel acknowledged, it advanced these arguments for the first time at oral argument.[124] Yet TVA was previously aware of the basis for them.[125]

Because TVA failed to make these arguments in its summary disposition motion or to seek permission to make them in a reply brief — and because

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[115] *See id.* at 14-23.

[116] NRC Staff Response at 54.

[117] *Id.*

[118] TVA Motion Violation 4 at 7; NRC Staff Statement of Disputed Material Facts ¶ 60.

[119] TVA Motion Violation 4 at 29; Wetzel ERB Package at 5.

[120] NRC Staff Response at 56.

[121] TVA Order Appendix at 4.

[122] Tr. at 156 (Ms. Leidich).

[123] Tr. at 206-07 (Ms. Leidich).

[124] Tr. at 157 (Ms. Leidich).

[125] TVA Motion Violation 4 at 15 n.70, 26-29.

these issues also might be better decided on the facts developed at an evidentiary hearing — we do not decide them now. If it chooses, TVA may raise these arguments again in its hearing briefs or in motions to exclude evidence.

Otherwise, the evidentiary hearing on Violation 4 shall address two issues: (1) whether the NRC Staff can demonstrate by a preponderance of the evidence that TVA terminated Ms. Wetzel's employment based, at least in part, on her engaging in protected activity; and (2) if so, whether TVA can demonstrate by clear and convincing evidence that it would have terminated her employment regardless of the protected activity.[126]

IV. ORDER

For the foregoing reasons:

TVA's motion for summary disposition of Violation 1 is *granted.*

TVA's motion for summary disposition of Violation 2 is *granted.*

TVA's motion for summary disposition of Violation 3 is *granted.*

TVA's motion for summary disposition of Violation 4 is *granted* in part, insofar as Violation 4 is based on TVA's decision to place Ms. Wetzel on paid administrative leave.

TVA's motion for summary disposition of Violation 4 is *denied* insofar as Violation 4 is based on TVA's decision to terminate Ms. Wetzel's employment.

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Paul S. Ryerson, Chairman
ADMINISTRATIVE JUDGE

E. Roy Hawkens
ADMINISTRATIVE JUDGE

Dr. Sue H. Abreu
ADMINISTRATIVE JUDGE

Rockville, Maryland
November 3, 2021

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[126] *See Shea,* CLI-21-3, 93 NRC at 93 n.18.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:

Paul S. Ryerson, Chairman
E. Roy Hawkens
Dr. Sue H. Abreu

In the Matter of **Docket Nos. EA-20-006**
EA-20-007
(ASLBP No. 21-969-01-EA-BD01)

TENNESSEE VALLEY AUTHORITY
(Enforcement Action) **November 10, 2021**

In this proceeding concerning an enforcement action against the Tennessee Valley Authority the Board grants the parties' joint motion for termination.

ORDER
(Granting Joint Motion for Termination)

Before the Board is the parties' joint motion to terminate this enforcement proceeding.[1]

On November 8, 2021, after the Board's Memorandum and Order of November 3, 2021 granting summary disposition in part,[2] the NRC Staff rescinded

[1] Joint Motion for Termination of Enforcement Proceeding (Nov. 8, 2021).
[2] LBP-21-6, 94 NRC 61, 64 (2021).

entirely the Notice of Violation[3] and civil monetary penalty Order[4] that it had issued to the Tennessee Valley Authority.[5]

Because there is no longer a live controversy, the parties' joint motion is *granted,* and this proceeding is *terminated.*

It is so ORDERED.

THE ATOMIC SAFETY AND
LICENSING BOARD

Paul S. Ryerson, Chairman
ADMINISTRATIVE JUDGE

E. Roy Hawkens
ADMINISTRATIVE JUDGE

Dr. Sue H. Abreu
ADMINISTRATIVE JUDGE

Rockville, Maryland
November 10, 2021

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[3] Notice of Violation and Proposed Imposition of Civil Penalty to TVA, NRC Office of Investigations (EA-20-006 & EA-20-007) (Aug. 24, 2020) (ADAMS Accession No. ML20232B803).

[4] In the Matter of Tennessee Valley Authority, Chattanooga, TN, 85 Fed. Reg. 70,203 (Nov. 4, 2020); TVA Order Imposing Civil Monetary Penalty (Oct. 29, 2020) (ADAMS Accession No. ML20297A544).

[5] Letter from Mark Lombard, NRC, to Jim Barstow, TVA (Nov. 8, 2021) (ADAMS Accession No. ML21312A380).

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it is the license application, not the NRC Staff review, that is at issue in NRC adjudications; LBP-21-5, 94 NRC 1, 22 n.39 (2021)

Bowman v. Shawnee State Univ., 220 F.3d 456, 461-62 (6th Cir. 2000)
placing an employee on leave, with full pay and benefits, is not an adverse employment action; LBP-21-6, 94 NRC 61, 77-78 (2021)

Burlington N. & Santa Fe Ry. Co. v. White, 548 U.S. 53, 61 (2006)
because language of substantive antidiscrimination provision differs from that of the antiretaliation provision in important ways, antiretaliation provision of Title VII of the Civil Rights Act reaches conduct not covered by the substantive antidiscrimination provision; LBP-21-6, 94 NRC 61, 74 (2021)

Burlington N. & Santa Fe Ry. Co. v. White, 548 U.S. 53, 62 (2006)
substantive antidiscrimination provision of Title VII of the Civil Rights Act is limited in scope to actions that affect employment or alter the conditions of the workplace, while no such limiting words appear in the antiretaliation provision; LBP-21-6, 94 NRC 61, 74-75 (2021)

Burlington N. & Santa Fe Ry. Co. v. White, 548 U.S. 53, 62-63 (2006)
board should presume that Congress intended its different words to make a legal difference; LBP-21-6, 94 NRC 61, 74 (2021)

Burlington N. & Santa Fe Ry. Co. v. White, 548 U.S. 53, 67 (2006)
Title VII of the Civil Rights Act provides broader protection for victims of retaliation than for those who are victims of discrimination itself; LBP-21-6, 94 NRC 61, 72 (2021)

Burlington N. & Santa Fe Ry. Co. v. White, 548 U.S. 53, 69 (2006)
determination of what constitutes an adverse action is dependent on the context; LBP-21-6, 94 NRC 61, 78 (2021)

Cal. v. Block, 690 F.2d 753, 761 (9th Cir. 1982)
there must be an examination of every alternative within the nature and scope of the proposed action sufficient to permit a reasoned choice; LBP-21-5, 94 NRC 1, 52 (2021)

Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 915 n.15, 917 (2009)
no conflict exists between the basic requirements for standing, as applied in federal courts, and NRC's proximity presumption; LBP-21-5, 94 NRC 1, 19 (2021)

Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 915-17 (2009)
NRC has authorized use of a proximity presumption, which presumes that petitioner who resides, or otherwise has frequent contacts, within approximately 50 miles of the facility has standing; LBP-21-5, 94 NRC 1, 19 (2021)

Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 917 (2009)
proximity presumption rests on the finding that persons living within the roughly 50-mile radius of a facility face a realistic threat of harm if a release from the facility of radioactive material were to occur; LBP-21-5, 94 NRC 1, 19 (2021)

Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-09-20, 70 NRC 911, 918 (2009)
licensing board correctly applied the proximity presumption; LBP-21-5, 94 NRC 1, 19 (2021)

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Calvert Cliffs 3 Nuclear Project, LLC, and UniStar Nuclear Operating Services, LLC (Calvert Cliffs Nuclear Power Plant, Unit 3), CLI-14-8, 80 NRC 71, 79 n.27 (2014)
- contentions that are the subject of general rulemaking by the Commission may not be litigated in individual licensing proceedings; LBP-21-5, 94 NRC 1, 21 n.38 (2021)
- contentions that challenge NRC regulations seeking to impose requirements stricter than those imposed by the agency are inadmissible; LBP-21-5, 94 NRC 1, 21 n.38 (2021)

Carolina Envtl. Study Group v. U.S., 510 F.2d 796, 800 (D.C. Cir. 1975)
- petitioner may proffer future-oriented testimony to demonstrate a genuine dispute about commercially available technology, but it must show that the technology is under development for large-scale use; LBP-21-5, 94 NRC 1, 51 (2021)

Carolina Power and Light Co. (H.B. Robinson, Unit 2), ALAB-569, 10 NRC 557, 558 (1979)
- NRC is required by law to consider the permitting agency's decision on thermal impacts as binding; LBP-21-5, 94 NRC 1, 33 (2021)

Carolina Power and Light Co. (H.B. Robinson, Unit 2), ALAB-569, 10 NRC 557, 561 (1979)
- EPA or authorized state agency has sole responsibility for water quality standards; LBP-21-5, 94 NRC 1, 33 n.125 (2021)

Carolina Power and Light Co. (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), CLI-80-12, 11 NRC 514, 516 (1980)
- boards do not direct NRC Staff in performance of their administrative functions; LBP-21-5, 94 NRC 1, 22 n.39 (2021)

Cincinnati Gas & Electric Co. (William H. Zimmer Nuclear Station), LBP-80-14, 11 NRC 570, 574 (1980), appeal dismissed, ALAB-595, 11 NRC 860 (1980)
- newly arising information has long been recognized as providing good cause for acceptance of a late contention; LBP-21-5, 94 NRC 1, 40 (2021)

Consol. Edison Co. of N.Y., Inc. v. Donovan, 673 F.2d 61 (2d Cir. 1982)
- violation of ERA section 211 must involve a personnel action that has a tangible impact, such as termination of employment, failure to hire, demotion, or an unwanted transfer; LBP-21-6, 94 NRC 61, 73 n.71 (2021)

Consumers Power Co. (Midland Plant, Units 1 and 2), LBP-82-63, 16 NRC 571, 577 (1982)
- newly arising information has long been recognized as providing good cause for acceptance of a late contention; LBP-21-5, 94 NRC 1, 40 (2021)

Crow Butte Resources, Inc. (In Situ Leach Facility, Crawford, Nebraska), CLI-09-9, 69 NRC 331, 353-54 (2009)
- board may not assume what petitioner is referring to, absent the requisite specificity; LBP-21-5, 94 NRC 1, 44 n.210 (2021)

Crow Butte Resources, Inc. (Marsland Expansion Area), LBP-19-2, 89 NRC 18, 40 (2019)
- NEPA affords agencies broad discretion to keep their inquiries within appropriate and manageable boundaries; LBP-21-5, 94 NRC 1, 25 (2021)
- NRC is required to take a hard look at environmental impacts of a proposed major federal action that could significantly affect the environment; LBP-21-5, 94 NRC 1, 25 (2021)
- NRC's environmental review is limited 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 occurring; LBP-21-5, 94 NRC 1, 25 (2021)

Crow Butte Resources, Inc. (North Trend Expansion Project), CLI-09-12, 69 NRC 535, 565-71 (2009)
- board may not assume what petitioner is referring to, absent the requisite specificity; LBP-21-5, 94 NRC 1, 44 n.210 (2021)

Curators of the University of Missouri, CLI-95-1, 41 NRC 71, 170 (1995)
- challenges to generic decisions made by NRC in rulemakings are, in essence, contending that those provisions are insufficient to protect the public health and safety; LBP-21-5, 94 NRC 1, 22 n.42 (2021)

DeFord v. Sec'y of Labor, 700 F.2d 281 (6th Cir. 1983)
- violation of ERA section 211 must involve a personnel action that has a tangible impact, such as termination of employment, failure to hire, demotion, or an unwanted transfer; LBP-21-6, 94 NRC 61, 73 n.71 (2021)

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placing an employee on leave, with full pay and benefits, is not an adverse employment action; LBP-21-6, 94 NRC 61, 77 (2021)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Unit 2), CLI-03-14, 58 NRC 207, 213 (2003)
petitioner must propose contentions that contain some reasonably specific factual or legal basis; LBP-21-5, 94 NRC 1, 21 (2021)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Unit 2), CLI-03-18, 58 NRC 433, 434 (2003)
petition for reconsideration should not simply reargue matters already considered but rejected; CLI-21-10, 94 NRC 57, 58 (2021)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 358 (2001)
contention admissibility requirements are strict by design; LBP-21-5, 94 NRC 1, 20 (2021)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-01-24, 54 NRC 349, 359-60 (2001)
admissible contention must explain, with specificity, particular safety or legal reasons requiring rejection of the contested application; LBP-21-5, 94 NRC 1, 21 (2021)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 559-60 (2005)
contention that challenges a statutory requirement or NRC's regulatory process without a waiver must be rejected; LBP-21-5, 94 NRC 1, 21 n.37 (2021)
to challenge need for power, petitioner would first have to request a waiver of 10 C.F.R. 51.53(c)(2) and demonstrate special circumstances unique to the facility; LBP-21-5, 94 NRC 1, 47 (2021)

Dominion Nuclear Connecticut, Inc. (Millstone Nuclear Power Station, Units 2 and 3), CLI-05-24, 62 NRC 551, 570 (2005)
licensing boards lack authority to supervise NRC Staff in performance of its regulatory duties; LBP-21-5, 94 NRC 1, 22 n.39 (2021)

Doyle v. U.S. Sec'y of Labor, 285 F.3d 243 (3d Cir. 2002)
violation of ERA section 211 must involve a personnel action that has a tangible impact, such as termination of employment, failure to hire, demotion, or an unwanted transfer; LBP-21-6, 94 NRC 61, 73 n.71 (2021)

DTE Electric Co. (Fermi Nuclear Power Plant, Unit 2), CLI-15-18, 82 NRC 135, 149 (2015)
board may not substitute its own support for a contention or make arguments for the litigants that were never made by the litigants themselves; LBP-21-5, 94 NRC 1, 20-21 n.28 (2021)

DTE Electric Co. (Fermi Nuclear Power Plant, Unit 2), CLI-15-18, 82 NRC 135, 149 & n.74 (2015)
board may not assume what petitioner is referring to, absent the requisite specificity; LBP-21-5, 94 NRC 1, 44 n.210 (2021)

Duke Energy Corp. (McGuire Nuclear Station, Units 1 and 2; Catawba Nuclear Station, Units 1 and 2), CLI-02-26, 56 NRC 358, 363 (2002)
safety review of license renewal applications conducted by NRC is limited to matters described in 10 C.F.R. 54.29(a)(1)-(2); LBP-21-5, 94 NRC 1, 23 (2021)

Duke Energy Corp. (Oconee Nuclear Station, Units 1, 2, and 3), CLI-99-11, 49 NRC 328, 334 (1999)
contention admissibility standards require that petitioners proffer at least some minimal factual and legal foundation in support of their contentions; LBP-21-5, 94 NRC 1, 21 (2021)

English v. Gen. Elec. Co., 496 U.S. 72 (1990)
violation of ERA section 211 must involve a personnel action that has a tangible impact, such as termination of employment, failure to hire, demotion, or an unwanted transfer; LBP-21-6, 94 NRC 61, 73 n.71 (2021)

Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc. (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 297 (2010)
summary disposition standards in Subpart G proceeding are based on those applied by federal courts to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure; LBP-21-6, 94 NRC 61, 70 (2021)

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Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc. (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 297-98 (2010)
all facts must be construed in the light most favorable to the nonmoving party, and any doubt as to the existence of a genuine issue of material fact should be resolved against summary disposition; LBP-21-6, 94 NRC 61, 71 (2021)

Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc. (Pilgrim Nuclear Power Station), CLI-10-11, 71 NRC 287, 298 (2010)
caution should be exercised in granting summary disposition, which may be denied if there is reason to believe that the better course would be to proceed to a full hearing; LBP-21-6, 94 NRC 61, 71 (2021)

Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc. (Pilgrim Nuclear Power Station), CLI-10-14, 71 NRC 449, 456 (2010)
license renewal applicant must demonstrate that effects of aging will be adequately managed so that the intended function(s) of structures, systems, or components requiring aging management review will be maintained consistent with the CLB for the period of extended operation; LBP-21-5, 94 NRC 1, 24 (2021)

Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc. (Pilgrim Nuclear Power Station), CLI-12-15, 75 NRC 704, 714 (2012)
bare assertions and speculation, even by an expert, are insufficient to trigger a full adjudicatory proceeding; LBP-21-5, 94 NRC 1, 22 (2021)

Entergy Nuclear Generation Co. and Entergy Nuclear Operations, Inc. (Pilgrim Nuclear Power Station), CLI-12-21, 76 NRC 491, 499 (2012)
reasonable deadline for proposing new or amended contentions is typically considered to be 30 to 60 days from the initiating event; LBP-21-5, 94 NRC 1, 38 n.169 (2021)

Entergy Nuclear Operations, Inc. (Indian Point, Units 2 and 3), CLI-16-7, 83 NRC 293, 323 n.156 (2016)
petitioner must provide a reference or source showing that the number of aquatic organisms entrained, impinged, or affected by thermal discharges represents a significant environmental impact such that the duty to analyze mitigation should be greater than small; LBP-21-5, 94 NRC 1, 30 (2021)

Entergy Nuclear Operations, Inc. (Palisades Nuclear Plant), CLI-15-23, 82 NRC 321, 329 (2015)
petitioner alone bears the burden to satisfy each contention admissibility requirement; LBP-21-5, 94 NRC 1, 20 n.28 (2021)

Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc. (Vermont Yankee Nuclear Power Station), CLI-07-3, 65 NRC 13, 17-18, *reconsideration denied,* CLI-07-13, 65 NRC 211, 215 (2007)
Category 1 conclusions may not be challenged in litigation absent a waiver of the rule; LBP-21-5, 94 NRC 1, 27 (2021)

Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (Vermont Yankee Nuclear Power Station), CLI-07-16, 65 NRC 371, 375, 381 (2007)
contention asserting that environmental report contained an insufficient analysis of the thermal impacts on an adjacent water body was inadmissible; LBP-21-5, 94 NRC 1, 32 (2021)

Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (Vermont Yankee Nuclear Power Station), CLI-07-16, 65 NRC 371, 377 (2007)
duplication is to be avoided by leaving to EPA and the states the decision as to the water pollution control criteria to which a facility's cooling system would be held; LBP-21-5, 94 NRC 1, 33 (2021)
NRC may not consider alternative cooling systems as that would improperly second-guess the cooling system approved by the permitting agency; LBP-21-5, 94 NRC 1, 31 (2021)

Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (Vermont Yankee Nuclear Power Station), CLI-07-16, 65 NRC 371, 377, 388 (2007)
NRC precedent indicates a state agency's decision on thermal impacts is binding and cannot be second-guessed by NRC; LBP-21-5, 94 NRC 1, 33-34 n.131 (2021)

Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (Vermont Yankee Nuclear Power Station), CLI-07-16, 65 NRC 371, 383 (2007)
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Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (Vermont Yankee Nuclear Power Station), CLI-07-16, 65 NRC 371, 387 n.77 (2007)
NRC cannot review and judge environmental permits issued under the Clean Water Act by the EPA or an authorized state agency; LBP-21-5, 94 NRC 1, 31, 33 (2021)

Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (Vermont Yankee Nuclear Power Station), CLI-07-16, 65 NRC 371, 388 (2007)
EPA or authorized state agency has sole responsibility for water quality standards; LBP-21-5, 94 NRC 1, 33 n.125 (2021)
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Entergy Nuclear Vermont Yankee, LLC, and Entergy Nuclear Operations, Inc. (Vermont Yankee Nuclear Power Station), CLI-07-16, 65 NRC 371, 389 (2007)
NRC adjudicatory boards are expected to defer to the agency that issued the section 316(a) permit; LBP-21-5, 94 NRC 1, 33 (2021)
permitting agency determines what cooling system a nuclear power facility may use and NRC factors impacts resulting from use of that system into the NEPA analysis; LBP-21-5, 94 NRC 1, 31 (2021)

Exelon Generation Co., LLC (Limerick Generating Station, Units 1 and 2), CLI-13-7, 78 NRC 199, 212-13 (2013)
license renewal applicant or licensee must provide a plant-specific review of Category 2 issues in its environmental report and address any new and significant information that might render NRC's generic Category 1 determinations inapplicable; LBP-21-5, 94 NRC 1, 26-27 (2021)

Exelon Generation Co., LLC (Limerick Generating Station, Units 1 and 2), LBP-12-8, 75 NRC 539, 547, *rev'd in part on other grounds,* CLI-12-19, 76 NRC 377 (2012)
license renewal allows operation of a reactor over an additional period of time during which the reactor could be subject to the same equipment failures and personnel errors as during operations over the original period of the license; LBP-21-5, 94 NRC 1, 19 (2021)

Exelon Generation Co., LLC (Peach Bottom Atomic Power Station, Units 2 and 3), LBP-19-5, 89 NRC 483, 490-91 (2019), *aff'd on other grounds,* CLI-20-11, 92 NRC 335 (2020)
license renewal allows operation of a reactor over an additional period of time during which the reactor could be subject to the same equipment failures and personnel errors as during operations over the original period of the license; LBP-21-5, 94 NRC 1, 19 (2021)

FirstEnergy Nuclear Operating Co. (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 402 (2012)
mere potential for, or theoretical capacity of, an alternative is insufficient to show commercial viability as a source of baseload power in the region of interest by license expiration; LBP-21-5, 94 NRC 1, 47 (2021)

FirstEnergy Nuclear Operating Co. (Davis-Besse Nuclear Power Station, Unit 1), CLI-12-8, 75 NRC 393, 405 (2012)
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Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 7-8 (2001)
safety review of license renewal applications conducted by NRC is limited to matters described in 10 C.F.R. 54.29(a)(1)-(2); LBP-21-5, 94 NRC 1, 23 (2021)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 8-10 (2001)
issues that are addressed on an ongoing basis need not be addressed during license renewal; LBP-21-5, 94 NRC 1, 24 (2021)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 9 (2001)
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license renewal does not address operational issues because these issues are effectively addressed and maintained by ongoing agency oversight, review, and enforcement; LBP-21-5, 94 NRC 1, 24 (2021)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 10 (2001)

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NRC's license renewal review focuses on those potential detrimental effects of aging that are not routinely addressed by ongoing regulatory oversight programs; LBP-21-5, 94 NRC 1, 24 (2021)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-01-17, 54 NRC 3, 23 (2001)

adequacy of a plant's current licensing basis is not addressed during the license renewal safety review; LBP-21-5, 94 NRC 1, 24, 41 (2021)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-15-25, 82 NRC 389, 394 (2015)

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NRC applies contemporaneous judicial concepts of standing; LBP-21-5, 94 NRC 1, 18 (2021)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), CLI-20-3, 91 NRC 133, 141 (2020)

section 51.53(c)(3) applies to applicants for subsequently renewed licenses; LBP-21-5, 94 NRC 1, 29 n.96 (2021)

Florida Power & Light Co. (Turkey Point Nuclear Generating Plant, Units 3 and 4), LBP-01-6, 53 NRC 138, 150 (2001), *aff'd on other grounds,* CLI-01-17, 54 NRC 3 (2001)

no conflict exists between the basic requirements for standing, as applied in federal courts, and NRC's proximity presumption applied in reactor operating license renewal proceeding; LBP-21-5, 94 NRC 1, 19 n.22 (2021)

Florida Power & Light Co. (Turkey Point Nuclear Generating Units 3 and 4), LBP-19-3, 89 NRC 245, 258-59 (2019), *appeal dismissed and referred ruling aff'd,* CLI-20-3, 91 NRC 133 (2020)

license renewal allows operation of a reactor over an additional period of time during which the reactor could be subject to the same equipment failures and personnel errors as during operations over the original period of the license; LBP-21-5, 94 NRC 1, 19 (2021)

GPU Nuclear, Inc. (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 206 (2000)

attempt to impose a requirement more stringent than the one imposed by regulations will be rejected; LBP-21-5, 94 NRC 1, 22 n.38 (2021)

Hasan v. U.S. Dep't of Labor, 298 F.3d 914 (10th Cir. 2002)

violation of ERA section 211 must involve a personnel action that has a tangible impact, such as termination of employment, failure to hire, demotion, or an unwanted transfer; LBP-21-6, 94 NRC 61, 73 n.71 (2021)

Hasan v. U.S. Dep't of Labor, 400 F.3d 1001 (7th Cir. 2005)

violation of ERA section 211 must involve a personnel action that has a tangible impact, such as termination of employment, failure to hire, demotion, or an unwanted transfer; LBP-21-6, 94 NRC 61, 73 n.71 (2021)

Hoffman v. NextEra Energy, Inc., 2013 WL 6979709, ARB No. 12-062, ALJ No. 2010-ERA-011, at *6 (ARB Dec. 17, 2013)

courts have construed ERA's catch-all provision as requiring that employee's actions must implicate safety definitively and specifically to constitute whistleblower protected activity; LBP-21-6, 94 NRC 61, 72 n.70 (2021)

Holtec International (HI-STORE Consolidated Interim Storage Facility), LBP-19-4, 89 NRC 353, 375 (2019)

in evaluating reasonable environmental impacts, NRC need not analyze worst-case scenarios or those considered remote and highly speculative; LBP-21-5, 94 NRC 1, 25 (2021)

Indiana & Michigan Electric Co. (Donald C. Cook Nuclear Plant, Units 1 and 2), CLI-72-75, 5 AEC 13, 14 (1972)

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Jones v. Se. Pa. Transp. Auth., No. 12-CV-6582-WY, 2014 WL 3887747, at *4 (E.D. Pa. Aug. 7, 2014)
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Joseph Shea (Order Prohibiting Involvement in NRC-Licensed Activities Immediately Effective), CLI-21-3, 93 NRC 89, 93 n.18 (2021)
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Kuhn v. Washtenaw County, 709 F.3d 612, 626 (6th Cir. 2013)
discrimination investigation cannot be a violation when its subject suffered no disciplinary action, demotion, or change in job responsibilities during the course of the investigation; LBP-21-6, 94 NRC 61, 73 (2021)

Limerick Ecology Action, Inc. v. NRC, 869 F.2d 719, 754-55 (3d Cir. 1989)
in evaluating reasonable environmental impacts, NRC need not analyze worst-case scenarios or those considered remote and highly speculative; LBP-21-5, 94 NRC 1, 25 (2021)

Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), ALAB-156, 6 AEC 831, 836 (1973)
NRC's environmental review is limited 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 occurring; LBP-21-5, 94 NRC 1, 25 (2021)

Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 87-88 (1998)
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Louisiana Energy Services, L.P. (Claiborne Enrichment Center), CLI-98-3, 47 NRC 77, 103 (1998)
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Mass. v. NRC, 522 F.3d 115, 119-21 (1st Cir. 2008)
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Methow Valley Citizens Council v. Reg'l Forester, 833 F.2d 810, 815 (9th Cir. 1987)
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NextEra Energy Seabrook, LLC (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 315 (2012)
longstanding NRC practice is to reject, as a collateral attack, any contention calling for requirements in excess of those imposed by its regulations; LBP-21-5, 94 NRC 1, 21-22 n.38 (2021)

NextEra Energy Seabrook, LLC (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 338 (2012)
NEPA requires consideration of reasonable alternatives, not all conceivable ones; LBP-21-5, 94 NRC 1, 25 (2021)
NRC is required to take a hard look at environmental impacts of a proposed major federal action that could significantly affect the environment as well as reasonable alternatives to that action; LBP-21-5, 94 NRC 1, 25 (2021)

NextEra Energy Seabrook, LLC (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 342 (2012)
applicant relied on best information available to conclude that the solar plus storage alternative requires a significant amount of land, thereby fulfilling the requirements of NEPA; LBP-21-5, 94 NRC 1, 50 n.267 (2021)
contentions regarding reasonable alternatives in license renewal proceedings must provide alleged facts or expert opinion sufficient to raise a genuine dispute about commercially viable alternative technology for baseload power generation; LBP-21-5, 94 NRC 1, 49 & n.254 (2021)

NextEra Energy Seabrook, LLC (Seabrook Station, Unit 1), CLI-12-5, 75 NRC 301, 342 n.245 (2012)
petitioner may proffer future-oriented testimony to demonstrate a genuine dispute about commercially available technology, but it must show that the technology is under development for large-scale use; LBP-21-5, 94 NRC 1, 51 (2021)

North Atlantic Energy Service Corp. (Seabrook Station, Unit 1), CLI-99-6, 49 NRC 201, 217 n.8 (1999)
petitioner in an individual adjudication cannot challenge generic decisions made by NRC in rulemakings; LBP-21-5, 94 NRC 1, 22 n.42 (2021)

NRDC v. Morton, 458 F.2d 827, 834, 837, 838 (D.C. Cir. 1972)
NEPA requires consideration of reasonable alternatives, not all conceivable ones; LBP-21-5, 94 NRC 1, 25 (2021)

Overall v. Tenn. Valley Auth., ARB No. 04-073, ALJ No. 1999-ERA-025, slip op. at 11 (ARB July 16, 2007)
test for an adverse employment action is whether employer took a tangible employment action that resulted in a significant change in employment status; LBP-21-6, 94 NRC 61, 76 (2021)
test for an adverse employment action is whether employer's actions were harmful to the point that they could well have dissuaded a reasonable worker from engaging in protected activity; LBP-21-6, 94 NRC 61, 76 (2021)

Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), CLI-15-21, 82 NRC 295, 304 (2015)
contention that addresses a current operating issue that is not unique to the subsequent license renewal term is inadmissible; LBP-21-5, 94 NRC 1, 54 (2021)

Peltier v. United States, 388 F.3d 984, 988 (6th Cir. 2004)
placing an employee on leave, with full pay and benefits, is not an adverse employment action; LBP-21-6, 94 NRC 61, 77 (2021)

Poller v. Columbia Broad. Sys., Inc., 368 U.S. 464, 473 (1962)
all facts must be construed in the light most favorable to the nonmoving party, and any doubt as to the existence of a genuine issue of material fact should be resolved against summary disposition; LBP-21-6, 94 NRC 61, 71 (2021)

Power Authority of the State of New York (James A. Fitzpatrick Nuclear Power Plant; Indian Point, Unit 3), CLI-00-22, 52 NRC 266, 315 (2000)
unsupported hypothetical theories or projections, even in the form of an affidavit, will not support invocation of the hearing process; LBP-21-5, 94 NRC 1, 22-23 & n.45 (2021)

PPL Bell Bend, LLC (Bell Bend Nuclear Power Plant), CLI-10-7, 71 NRC 133, 138-39 (2010)
NRC has authorized use of a proximity presumption, which presumes that petitioner who resides, or otherwise has frequent contacts, within approximately 50 miles of the facility has standing; LBP-21-5, 94 NRC 1, 19 (2021)

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Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 323 (1999)
organization seeking to intervene on behalf of one or more of its members must demonstrate representational standing; LBP-21-5, 94 NRC 1, 27-28 (2021)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-01-9, 53 NRC 232, 235 (2001)
NRC does not presume that a licensee will violate agency regulations wherever the opportunity arises; LBP-21-5, 94 NRC 1, 43 n.208 (2021)
petitioner may not support a contention by assuming a licensee will violate agency regulations; LBP-21-5, 94 NRC 1, 43 n.208 (2021)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-02-25, 56 NRC 340, 352 (2002)
in evaluating reasonable environmental impacts, NRC need not analyze worst-case scenarios or those considered remote and highly speculative; LBP-21-5, 94 NRC 1, 25 (2021)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-04-22, 60 NRC 125, 139 (2004)
contention admissibility rules require a clear statement of the basis for the contentions and submission of supporting information and references to specific documents and sources that establish validity of the contention; LBP-21-5, 94 NRC 1, 21 (2021)

Private Fuel Storage, L.L.C. (Independent Spent Fuel Storage Installation), CLI-05-19, 62 NRC 403, 410 (2005)
petition for reconsideration should be based on an elaboration of an argument already made, an overlooked controlling decision or principle of law, or a factual clarification; CLI-21-10, 94 NRC 57, 58 (2021)

Progress Energy Florida, Inc. (Levy County Nuclear Power Plant, Units 1 and 2), LBP-10-20, 72 NRC 571, 579 (2010)
all facts must be construed in the light most favorable to the nonmoving party, and any doubt as to the existence of a genuine issue of material fact should be resolved against summary disposition; LBP-21-6, 94 NRC 61, 71 (2021)

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-366, 5 NRC 39, 51-52 (1977)
duplication is to be avoided by leaving to EPA and the states the decision as to the water pollution control criteria to which a facility's cooling system would be held; LBP-21-5, 94 NRC 1, 33 n.125 (2021)

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-78-1, 7 NRC 1, 23-28 (1978)
NRC is required by law to consider the permitting agency's decision on thermal impacts as binding; LBP-21-5, 94 NRC 1, 33 (2021)

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-78-1, 7 NRC 1, 25 (1978)
duplication is to be avoided by leaving to EPA and the states the decision as to the water pollution control criteria to which a facility's cooling system would be held; LBP-21-5, 94 NRC 1, 33 n.125 (2021)

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-78-1, 7 NRC 1, 26 (1978)
it is beyond NRC's authority to determine what cooling system a nuclear power facility may use; LBP-21-5, 94 NRC 1, 33 (2021)
permitting agency determines what cooling system a nuclear power facility may use and NRC factors impacts resulting from use of that system into the NEPA analysis; LBP-21-5, 94 NRC 1, 31 (2021)

Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), CLI-78-1, 7 NRC 1, 28 n.42 (1978)
NRC adjudicatory boards are expected to defer to the agency that issued the section 316(a) permit; LBP-21-5, 94 NRC 1, 33 (2021)

Richardson v. Petasis, 160 F. Supp. 3d 88, 118 (D.D.C. 2015)
summary judgment was denied based not solely on imposition of administrative leave, but also its conditions; LBP-21-6, 94 NRC 61, 78 (2021)

summary judgment was denied where continued employment was explicitly conditioned on plaintiff's completion of certain tasks that employer prevented plaintiff from completing; LBP-21-6, 94 NRC 61, 78 (2021)

Singletary v. Mo. Dep't of Corr., 423 F.3d 886, 891-92 (8th Cir. 2005)
placing an employee on leave, with full pay and benefits, is not an adverse employment action; LBP-21-6, 94 NRC 61, 77 (2021)

Statement of Policy on Conduct of Adjudicatory Proceedings, CLI-98-12, 48 NRC 18, 22 (1998)
it is petitioners' responsibility to formulate contentions and to provide necessary information to satisfy the basis requirement for admission; LBP-21-5, 94 NRC 1, 20 n.28 (2021)

Storey v. Burns Int'l Sec. Servs., 390 F.3d 760, 764 (3d Cir. 2004)
paid suspension does not effect a serious and tangible alteration of the terms, conditions, or privileges of employment; LBP-21-6, 94 NRC 61, 77 (2021)

Susquehanna Nuclear, LLC (Susquehanna Steam Electric Station, Units 1 and 2), CLI-17-4, 85 NRC 59, 74 (2017)
contention fails to demonstrate a genuine dispute with the applicant and fails to identify the specific sections of the application it is challenging; LBP-21-5, 94 NRC 1, 43 (2021)

Tamosaitis v. URS Inc., 781 F.3d 468 (9th Cir. 2015)
violation of ERA section 211 must involve a personnel action that has a tangible impact, such as termination of employment, failure to hire, demotion, or an unwanted transfer; LBP-21-6, 94 NRC 61, 73 n.71 (2021)

U.S. Department of Energy (High-Level Waste Repository), LBP-10-11, 71 NRC 609, 618 (2010)
to understand the scope of the NRC's authority and responsibility, Commission looks first to the statute; LBP-21-6, 94 NRC 61, 71 (2021)

USEC, Inc. (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 437 (2006)
contention admission requirements are deliberately strict, and any contention that does not satisfy the requirements of 10 C.F.R. 2.309(f)(1) will be rejected; LBP-21-5, 94 NRC 1, 20 n.27 (2021)

USEC, Inc. (American Centrifuge Plant), CLI-06-9, 63 NRC 433, 439 (2006)
licensing boards may not entertain arguments advanced for the first time in a reply brief; LBP-21-5, 94 NRC 1, 35-36 n.145 (2021)

USEC, Inc. (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 457 (2006)
licensing board must review petitioner's information, facts, and expert opinions to determine whether they provide adequate support for the proffered contentions; LBP-21-5, 94 NRC 1, 23 (2021)

USEC, Inc. (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006)
expert opinion that merely states a conclusion without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the Bboard of the ability to make the necessary, reflective assessment of the opinion; LBP-21-5, 94 NRC 1, 22-23 (2021)

Vander Boegh v. EnergySolutions, Inc., 536 F. App'x 522, 529 (6th Cir. 2013)
relevant legal inquiry is not whether an employee was ultimately discharged or demoted, but instead, whether the challenged action would deter a reasonable worker from engaging in protected activity; LBP-21-6, 94 NRC 61, 74 (2021)

Virginia Electric and Power Co. (North Anna Power Station, Unit 3), CLI-12-17, 76 NRC 207, 209-10 (2012)
petition for reconsideration should be based on an elaboration of an argument already made, an overlooked controlling decision or principle of law, or a factual clarification; CLI-21-10, 94 NRC 57, 58 (2021)

Virginia Electric and Power Co. (North Anna Power Station, Unit 3), CLI-12-17, 76 NRC 207, 210 (2012)
petition for reconsideration should not simply reargue matters already considered but rejected; CLI-21-10, 94 NRC 57, 58, 59 n.11 (2021)

Virginia Electric and Power Co. (North Anna Power Station, Units 1 and 2), LBP-21-4, 93 NRC 179, 197 & n.32 (2021)
license renewal allows operation of a reactor over an additional period of time during which the reactor could be subject to the same equipment failures and personnel errors as during operations over the original period of the license; LBP-21-5, 94 NRC 1, 19 (2021)

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Von Gunten v. Md., 243 F.3d 858, 869 (4th Cir. 2001)
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10 C.F.R. 2.309(c)
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10 C.F.R. 2.309(c)(i)-(iii)
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10 C.F.R. 2.309(d)(1)
intervention petitioner must establish standing and proffer at least one admissible contention; LBP-21-5, 94 NRC 1, 18 (2021)
10 C.F.R. 2.309(d)(1)(i)-(iv)
hearing request must state name, address, and phone number of petitioner, nature of petitioner's right under the AEA to be made a party to the proceeding, nature and extent of the petitioner's interest in the proceeding, and possible effect of any decision or order issued in the proceeding on petitioner's interest; LBP-21-5, 94 NRC 1, 19 (2021)
10 C.F.R. 2.309(f)(1)
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if any of the six requirements are not met, a contention must be rejected; LBP-21-5, 94 NRC 1, 20 (2021)
intervention petitioner must establish standing and proffer at least one admissible contention; LBP-21-5, 94 NRC 1, 18 (2021)
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10 C.F.R. 2.309(f)(1)(i)-(vi)
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10 C.F.R. 2.309(f)(1)(iii)
contention alleging that environmental report fails to analyze alternative of thermal pollution mitigation as a means of reducing threats to aquatic biota and migratory birds is inadmissible; LBP-21-5, 94 NRC 1, 34 (2021)
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contention that licensee's continued operation violates 10 C.F.R. Part 50, Appendix A, Criterion 14 because the reactor coolant pressure boundary has not been tested for abnormal leakage, rapidly propagating failure, and gross rupture is inadmissible; LBP-21-5, 94 NRC 1, 38, 41-42 (2021)
contention that plant has an elevated risk of a turbine missile accident owing to the poor alignment of its major buildings and structures is inadmissible; LBP-21-5, 94 NRC 1, 54 (2021)
physical analysis of coupons from reactors to determine embrittlement is not required by NRC rules; LBP-21-5, 94 NRC 1, 37 (2021)
10 C.F.R. 2.309(f)(1)(iii)-(iv)
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10 C.F.R. 2.309(f)(1)(iv)
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contention that plant has an elevated risk of a turbine missile accident owing to the poor alignment of its major buildings and structures is inadmissible; LBP-21-5, 94 NRC 1, 54 (2021)
10 C.F.R. 2.309(f)(1)(v)
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contention that there are not enough sample coupons to remove from the reactor and test for embrittlement during the 60-year period of operations is inadmissible; LBP-21-5, 94 NRC 1, 42-45 (2021)
petitioner must explain the basis for each proffered contention by providing alleged facts or expert opinions that support petitioner's position and on which the petitioner intends to rely at hearing; LBP-21-5, 94 NRC 1, 22 (2021)
10 C.F.R. 2.309(f)(1)(vi)
contention alleging that environmental report fails to analyze alternative of thermal pollution mitigation as a means of reducing threats to aquatic biota and migratory birds is inadmissible; LBP-21-5, 94 NRC 1, 34 (2021)
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10 C.F.R. 2.309(f)(2)
for issues arising under the National Environmental Policy Act, participants shall file contentions based on applicant's environmental report; LBP-21-5, 94 NRC 1, 21 (2021)
10 C.F.R. 2.323(e)
petition for reconsideration may not be filed except upon leave of the adjudicatory body that rendered the decision; CLI-21-10, 94 NRC 57, 58 (2021)
10 C.F.R. 2.335
to challenge an NRC rule in an adjudicatory proceeding, petitioner must seek a waiver of the rule; LBP-21-5, 94 NRC 1, 41 (2021)
10 C.F.R. 2.335(a)
no NRC rule or regulation is subject to attack in any adjudicatory proceeding without a successful waiver petition; LBP-21-5, 94 NRC 1, 21 n.37 (2021)
10 C.F.R. 2.335(b)
issues addressed and decided in Commission rulemaking may not be challenged in an adjudicatory proceeding absent the filing and granting of a waiver; LBP-21-5, 94 NRC 1, 22, 31 n.111 (2021)
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10 C.F.R. 2.345(b)
petition for reconsideration must demonstrate a compelling circumstance, such as existence of a clear and material error in a decision, which could not have been reasonably anticipated, which renders the decision invalid; CLI-21-10, 94 NRC 57, 58 (2021)

10 C.F.R. 2.710
summary disposition standards in Subpart G proceeding are based on those applied by federal courts to motions for summary judgment under Rule 56 of the Federal Rules of Civil Procedure; LBP-21-6, 94 NRC 61, 70 (2021)

10 C.F.R. 2.710(b)
party opposing summary disposition may not rest upon mere allegations or denials, but must set forth specific facts showing that there is a genuine issue of fact for hearing; LBP-21-6, 94 NRC 61, 71 (2021)

10 C.F.R. 2.710(d)(2)
board may grant summary disposition if the relevant pleadings show that there is no genuine issue as to any material fact and that the moving party is entitled to a decision as a matter of law; LBP-21-6, 94 NRC 61, 70-71 (2021)

10 C.F.R. 50.7
administrative leave, with full pay and benefits did not change employee's compensation, terms, conditions, or privileges of employment and thus did not violate this section; LBP-21-6, 94 NRC 61, 77 (2021)
language of this section is virtually identical to language of the substantive antidiscrimination provision of Title VII of the Civil Rights Act, not to its broader antiretaliation provision; LBP-21-6, 94 NRC 61, 75 (2021)
only actions that affect employment or alter the conditions of the workplace are covered; LBP-21-6, 94 NRC 61, 75 (2021)

10 C.F.R. 50.7(a)
discrimination includes discharge and other actions that relate to compensation, terms, conditions, or privileges of employment; LBP-21-6, 94 NRC 61, 71 (2021)
only retaliation that takes the form of an adverse change in the terms and conditions of employment is prohibited, not every type of retaliation that might be possible; LBP-21-6, 94 NRC 61, 72 (2021)

10 C.F.R. 50.7(a)(1)(i)-(v)
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10 C.F.R. 50.61
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neutron embrittlement monitoring requirements are provided; LBP-21-5, 94 NRC 1, 37 (2021)
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10 C.F.R. 50.61(a)(2)
pressurized thermal shock is an event or transient that causes severe overcooling concurrent with or followed by significant pressure in the reactor vessel; LBP-21-5, 94 NRC 1, 35 (2021)

10 C.F.R. Part 50, Appendix G
neutron embrittlement monitoring requirements are provided; LBP-21-5, 94 NRC 1, 37 (2021)

10 C.F.R. Part 50, Appendix H
licensees must monitor neutron embrittlement to ensure that the reactor pressure vessel continues to have adequate fracture toughness to prevent brittle failure; LBP-21-5, 94 NRC 1, 35-36 (2021)

10 C.F.R. Part 50, Appendix H, § III.B.1
for each capsule withdrawal, test procedures and reporting requirements must meet ASTM E 185 to the extent practicable for the configuration of the specimens in the capsule; LBP-21-5, 94 NRC 1, 43 (2021)

10 C.F.R. 51.41
if state issues an update to any of water discharge permit documents, it is obligated to inform the NRC; LBP-21-5, 94 NRC 1, 31 (2021)

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10 C.F.R. 51.45
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10 C.F.R. 51.45(c)
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10 C.F.R. 51.53(c)
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10 C.F.R. 51.53(c)(2)
assertions that licensee should have discussed costs and benefits of solar plus storage lacks adequate support and does not directly challenge information in the environmental report; LBP-21-5, 94 NRC 1, 49-50 (2021)
cost-benefit analysis of solar plus storage is not required if environmental impacts of license renewal are great enough to tip the balance against license renewal; LBP-21-5, 94 NRC 1, 50 (2021)
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need for power is beyond the scope of a subsequent license renewal proceeding; LBP-21-5, 94 NRC 1, 47 (2021)
10 C.F.R. 51.53(c)(3)(i)
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10 C.F.R. 51.53(c)(3)(ii)
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10 C.F.R. 51.53(c)(3)(ii)(B)
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10 C.F.R. 51.53(c)(3)(iv)
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10 C.F.R. 51.95(c)
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10 C.F.R. 51.95(c)(4)
consideration of economic or technical benefits and costs of either the proposed action or alternatives is not required unless they are essential for a determination regarding inclusion of mitigation alternatives; LBP-21-5, 94 NRC 1, 47 (2021)
contention is inadmissible because it lacks adequate support for the proposition that the adverse environmental impacts of license renewal are so great that preserving the option of license renewal for energy planning decisionmakers is unreasonable; LBP-21-5, 94 NRC 1, 52 & n.284 (2021)

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10 C.F.R. pt. 51, subpt. A, app. A, § II, Criterion 14

reactor coolant pressure boundary must be designed, fabricated, erected, and tested so as to have an extremely low probability of abnormal leakage, of rapidly propagating failure, and of gross rupture; LBP-21-5, 94 NRC 1, 35 n.143 (2021)

reactor vessels must be tested so as to have an extremely low probability of abnormal leakage, of rapidly propagating failure, and of gross rupture; LBP-21-5, 94 NRC 1, 41 n.194 (2021)

10 C.F.R. 54.2(a)(1)

steam turbine performs its intended functions with moving parts and thus is not subject to an aging management review; LBP-21-5, 94 NRC 1, 55 n.308 (2021)

10 C.F.R. 54.3

all time-limited aging analyses from the initial license renewal are incorporated into the current licensing basis; LBP-21-5, 94 NRC 1, 40-41 (2021)

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only if a time-limited aging analysis were being created or revised during a subsequent license renewal would a petitioner be able to challenge it; LBP-21-5, 94 NRC 1, 41 (2021)

10 C.F.R. 54.13(a)-(b)

if state issues an update to any of water discharge permit documents, it is obligated to inform the NRC; LBP-21-5, 94 NRC 1, 31 (2021)

10 C.F.R. 54.21(a)(1)(i)

reactor pressure vessel is subject to time-limited aging analysis; LBP-21-5, 94 NRC 1, 40 (2021)

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10 C.F.R. 54.21(a)(1)(i)-(ii)

active components are not subject to an aging-management review; LBP-21-5, 94 NRC 1, 55 (2021)

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10 C.F.R. 54.21(a)(3)

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expert opinion that merely states a conclusion without providing a reasoned basis or explanation for that conclusion is inadequate because it deprives the board of the ability to make the necessary, reflective assessment of the opinion; LBP-21-5, 94 NRC 1 (2021)
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relevant legal inquiry is not whether an employee was ultimately discharged or demoted, but instead, whether the challenged action would deter a reasonable worker from engaging in protected activity; LBP-21-6, 94 NRC 61 (2021)

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POINT BEACH NUCLEAR PLANT, Units 1 and 2); Docket Nos. 50-266-SLR, 50-301-SLR
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