UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	Docket Nos. 50-250-SLR and 50-251-SLR
FLORIDA POWER & LIGHT COMPANY	)	ASLBP No. 18-957-01-SLR-BD01
(Turkey Point Nuclear Generating Units 3 and 4)	)	August 27, 2018

APPLICANT'S ANSWER OPPOSING REQUEST FOR HEARING AND PETITION TO INTERVENE SUBMITTED BY FRIENDS OF THE EARTH, NATURAL RESOURCES DEFENSE COUNCIL, AND MIAMI WATERKEEPER

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I. INTRODUCTION

In accordance with 10 C.F.R. § 2.309(i), Florida Power & Light Company ("FPL") hereby timely files its Answer opposing the "Request for Hearing and Petition to Intervene" ("Petition")[1] filed by Friends of the Earth, Natural Resources Defense Council, and Miami Waterkeeper ("Petitioners") on August 1, 2018, regarding its subsequent license renewal ("SLR") application ("SLRA") for Turkey Point Nuclear Generating Units 3 & 4 ("Turkey Point"). Petitioners proffer five contentions challenging FPL's compliance with the National Environmental Policy Act ("NEPA") and the U.S. Nuclear Regulatory Commission ("NRC") environmental regulations in 10 C.F.R. Part 51 ("Part 51"). These proposed contentions seek to challenge the environmental report ("ER") submitted by FPL to the NRC as Appendix E to the Turkey Point SLRA. Petitioners allege deficiencies in the ER's descriptions of:

- mitigation measures (Contention 1-E);
- cumulative impacts (Contention 2-E);
- new and significant information ("NSI") (Contention 3-E);

[1] Request for Hearing and Petition to Intervene Submitted by Friends of the Earth, Natural Resources Defense Council, and Miami Waterkeeper (Aug. 1, 2018) (ML18213A418) ("Petition") (the Petition also included attachments A-Q (Package ML18213A417)).

- the affected environment (Contention 4-E); and
- environmental impacts (Contention 5-E).

To be granted a hearing in this SLR proceeding, Petitioners must demonstrate standing and submit at least one admissible contention. FPL does not challenge Petitioners' standing.[2] All of Petitioners' proposed contentions, however, are inadmissible.

As described further below, the proposed contentions present impermissible challenges to NRC regulations and fail to satisfy the contention admissibility requirements in 10 C.F.R. § 2.309(f)(1). Specifically, Petitioners: (1) seek to contest certain "Category 1" environmental issues that are not subject to challenge in this adjudicatory proceeding; (2) largely ignore the detailed information provided in the ER, and therefore fail to demonstrate a *genuine* dispute with the application; and (3) frequently misconstrue or mischaracterize supporting source materials and therefore fail to adequately support their proposed contentions. Ultimately, none of the proposed contentions satisfy all six of the NRC's "strict by design" contention admissibility requirements in 10 C.F.R. § 2.309(f)(1).

Accordingly, the Atomic Safety and Licensing Board ("Board") should deny the Petition in its entirety, as 10 C.F.R. § 2.309(a) requires that a petitioner submit at least one admissible contention—a requirement that remains unmet here.

[2] Petitioners claim representational standing based on the proximity of certain members to Turkey Point, and include declarations from those members authorizing Petitioners to represent them in this proceeding. *See* Petition at 1-13.

II. BACKGROUND

A. Procedural History

FPL filed its SLRA with the NRC on January 30, 2018, to renew Turkey Point's operating licenses for an additional 20-year period.[3] As part of the SLRA and as required by Part 51, FPL submitted an ER that considers the potential environmental impacts of the requested extension.[4] On May 2, 2018, the NRC published a notice in the *Federal Register* docketing the Turkey Point SLRA and providing an opportunity for interested persons to request a hearing by July 2, 2018.[5] The Acting Secretary of the Commission subsequently extended the hearing request deadline to August 1, 2018, for all interested persons.[6] On August 1, 2018, Petitioners filed their Petition seeking to intervene in this SLR proceeding, requesting a hearing and proposing five contentions.

B. SLR Environmental Review

The NRC's license renewal environmental regulations in Part 51 are based on the analyses in its Generic Environmental Impact Statement ("GEIS") for license renewal, which summarizes the findings of a systematic inquiry into the potential environmental consequences of license renewal.[7] The GEIS findings are codified in Table B-1 of Appendix B to Part 51

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3 *See* Letter from M. Nazar, FPL, to NRC, Turkey Point Units 3 and 4 Subsequent License Renewal Application (Jan. 30, 2018) (ML18037A824) ("SLRA").

4 *See* SLRA, App. E. A supplement to the environmental report was also submitted. *See* L-2018-086, Letter from W. Maher, FPL, to NRC Document Control Desk, Appendix E Environmental Report Supplemental Information (Apr. 10, 2018) (ML18102A521) ("ER Supplement") (collectively, SLRA, App. E and the ER Supplement constitute the "ER").

5 *See* Florida Power & Light Company; Turkey Point Nuclear Generating, Unit Nos. 3 and 4; License Renewal Application; Opportunity to Request a Hearing and to Petition for Leave to Intervene, 83 Fed. Reg. 19,304 (May 2, 2018) ("Notice of Hearing Opportunity").

6 Order (June 29, 2018) (ML18180A185).

7 NUREG-1437, Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Vol. 1, Main Report, Rev. 1 (June 2013) (ML13106A241) ("GEIS").

("Table B-1"). The GEIS and Table B-1 assign impact levels (SMALL, MODERATE, or LARGE) to a given environmental resource (*e.g.*, air, surface water, or soil). Additionally, the GEIS and Table B-1 delineate two types of license renewal environmental issues:

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

As part of a license renewal application, applicants must submit an environmental report considering all Category 2 issues,[8] and may incorporate by reference the generic impact findings from the GEIS and Table B-1 for *all* Category 1 issues without performing plant-specific analyses.[9] The NRC Staff draws upon the ER, among other sources of information, to produce a Supplemental EIS for each license renewal application.[10]

III. LEGAL STANDARDS

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

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

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

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

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

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8 10 C.F.R. §§ 51.41, 51.45, 51.53(c)(3)(ii).

9 *Id*. § 51.53(c)(3)(i).

10 *Id*. §§ 51.20(a)(1), (b)(2).

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

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

Failure to comply with any one of these six admissibility requirements is grounds for rejecting a proposed contention.[11] Indeed, these requirements are "strict by design."[12] The rules were "toughened . . . in 1989 because in prior years 'licensing boards had admitted and litigated numerous contentions that appeared to be based on little more than speculation.'"[13] The purpose of the six criteria is to "focus litigation on concrete issues and result in a clearer and more focused record for decision."[14] The Commission has explained that it "should not have to expend resources to support the hearing process unless there is an issue that is appropriate for, and susceptible to, resolution in an NRC hearing."[15]

The petitioner alone bears the burden to meet the standards of contention admissibility.[16] Thus, where a petitioner neglects to provide the requisite support for its contentions, the Board may not cure the deficiency by supplying the information that is lacking or making factual

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[11] *See* Changes to Adjudicatory Process, 69 Fed. Reg. 2182, 2221 (Jan. 14, 2004); *see also Private Fuel Storage, LLC* (Indep. Spent Fuel Storage Installation), CLI-99-10, 49 NRC 318, 325 (1999).

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

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

[14] Changes to Adjudicatory Process, 69 Fed. Reg. at 2202; *see also Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 & 3), LBP-08-13, 68 NRC 43, 61 (2008).

[15] Changes to Adjudicatory Process, 69 Fed. Reg. at 2202.

[16] *See Entergy Nuclear Operations, Inc.* (Palisades Nuclear Plant), CLI-15-23, 82 NRC 321, 325, 329 (2015) (stating "[t]he proponent of a contention is responsible for formulating the contention and providing the necessary support to satisfy the contention admissibility requirements" and "it is Petitioners' responsibility, not the Board's, to formulate contentions and to provide 'the necessary information to satisfy the basis requirement' for admission"); *see also DTE Elec. Co.* (Fermi Nuclear Power Plant, Unit 2), CLI-15-18, 82 NRC 135, 149 (2015) ("the Board may not substitute its own support for a contention").

assumptions that favor the petitioner to fill the gap.[17] A contention that merely states a conclusion, without reasonably explaining why the application is inadequate, cannot provide a basis for the contention.[18] A "material issue" is one that would "make a difference in the outcome of the licensing proceeding."[19] The petitioner must demonstrate that the subject matter of the contention would impact the grant or denial of a pending license application.[20]

Of particular importance for this Answer, a contention that challenges an NRC rule is outside the scope of the proceeding because, absent a waiver, "no rule or regulation of the Commission . . . is subject to attack . . . in any adjudicatory proceeding."[21] This includes contentions that advocate stricter requirements than agency rules impose or that otherwise seek to litigate a generic determination established by a Commission rulemaking.[22] In license renewal proceedings, contentions on "Category 1" issues—including challenges to an applicant's compliance with the requirement to consider new and significant information for such issues—fundamentally amount to impermissible challenges to the NRC's regulations and therefore are outside the scope of the proceeding.[23]

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17 *See Palisades*, CLI-15-23, 82 NRC at 329; *Fermi*, CLI-15-18, 82 NRC at 149; *Ariz. Pub. Serv. Co.* (Palo Verde Nuclear Station, Units 1, 2, & 3), CLI-91-12, 34 NRC 149, 155 (1991).

18 *USEC, Inc.* (American Centrifuge Plant), CLI-06-10, 63 NRC 451, 472 (2006).

19 *Oconee*, CLI-99-11, 49 NRC at 333-34.

20 *See Indian Point*, LBP-08-13, 68 NRC at 62.

21 10 C.F.R. § 2.335(a).

22 *See Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), LBP-01-6, 53 NRC 138, 159-60, *aff'd*, CLI-01-17, 54 NRC 3 (2001).

23 *Entergy Nuclear Vt. Yankee, LLC* (Vt. Yankee Nuclear Power Station) & *Entergy Nuclear Generation Co. & Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-07-3, 65 NRC 13, 22 (2007).

With respect to the requirement to provide adequate support, a licensing board should examine documents to confirm that they support the proposed contention(s).[24] A petitioner's imprecise reading of a document cannot be the basis for a litigable contention.[25] Likewise, a contention "will be ruled inadmissible if the petitioner 'has offered no tangible information, no experts, no substantive affidavits', but instead only 'bare assertions and speculation.'"[26]

Equally important, the Commission has stated further that the petitioner must "read the pertinent portions of the license application . . . state the applicant's position and the petitioner's opposing view," and explain why it disagrees with the applicant.[27] If a petitioner believes the license application fails to adequately address a relevant issue, then the petitioner is to "explain why the application is deficient."[28] A contention that does not directly controvert a position taken by the applicant in the application is subject to dismissal.[29] For example, if a petitioner submits a contention of omission, but the allegedly missing information is indeed in the license application, then the contention does not raise a genuine dispute.[30]

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[24] *See Vt. Yankee Nuclear Power Corp.* (Vermont Yankee Nuclear Power Station), ALAB-919, 30 NRC 29, 48 (1989), *vacated in part on other grounds and remanded*, CLI-90-04, 31 NRC 333 (1990).

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

[26] *Fansteel, Inc.* (Muskogee, Oklahoma Site), CLI-03-13, 58 NRC 195, 203 (2003) (quoting *GPU Nuclear, Inc*., *et al.* (Oyster Creek Nuclear Generating Station), CLI-00-6, 51 NRC 193, 208 (2000)).

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

[28] Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,170; *see also Palo Verde*, CLI-91-12, 34 NRC at 156.

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

[30] *See Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), LBP-04-15, 60 NRC 81, 95 (2004); *see also Summer*, CLI-10-1, 71 NRC at 21-22.

IV. THE PETITION MUST BE DENIED FOR LACK OF AN ADMISSIBLE CONTENTION

As explained below, Petitioners' proposed contentions are not admissible because they do not satisfy each of the criteria set out in 10 C.F.R. § 2.309(f)(1)(i) through (vi).[31] "The failure of a proposed contention to meet *any one* of these requirements is grounds for its dismissal."[32] Accordingly, the Petition must be rejected.

V. PROPOSED CONTENTION 1-E (MITIGATION MEASURES) IS OUTSIDE THE SCOPE OF THIS PROCEEDING, IMMATERIAL, UNSUPPORTED, LACKS BASIS, AND FAILS TO DEMONSTRATE A GENUINE DISPUTE WITH THE ER

In this proposed contention, Petitioners allege that the ER—specifically Section 7.3—is deficient because it fails to consider cooling towers as an alternative to reduce adverse impacts related to three issues:

- Threatened, endangered, and protected species and essential fish habitat;
- Groundwater use conflicts (plants that withdraw more than 100 gallons per minute); and
- Radionuclides released to groundwater.[33]

As an initial matter, there is an important legal distinction between the requirement to consider "alternatives for reducing adverse impacts,"[34] commonly called *mitigation measures*, and the broader mandate to consider "[a]lternatives to the proposed action,"[35] including what are

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31 *See* 10 C.F.R. §§ 2.309(c)(4), (f)(1).

32 *Dominion Nuclear Conn., Inc.* (Millstone Nuclear Power Station, Units 2 & 3), CLI-05-24, 62 NRC 551, 567-68 (2005) (citing Changes to Adjudicatory Process, 69 Fed. Reg. at 2221) (emphasis added).

33 Petition at 16-19 (citations omitted).

34 10 C.F.R. § 51.53(c)(3)(iii); *see also id*. § 51.45(c) (requiring consideration of "alternatives available for reducing or avoiding adverse environmental effects").

35 *Id*. § 51.45(b)(3).

commonly referred to as *project alternatives*.[36] The distinction is relevant because Petitioners' statement of the contention is framed as a challenge to the ER's discussion of *mitigation measures*,[37] but they reference *project alternative* standards throughout their argument. Therefore, their fundamental legal foundation is flawed. Nevertheless, the ER satisfies *both* requirements.

To the extent Petitioners assert the ER must consider cooling towers in the context of *alternatives to the proposed action* (because they purportedly are within a "range of reasonable alternatives"), that argument is illogical—cooling towers do not produce power and, therefore, cannot be considered an alternative to the proposed project. Nevertheless, as discussed in Subsection A below, the project alternatives discussion in the ER evaluates the use of cooling towers in the context of replacement power facilities. Petitioners do not challenge this discussion.

To the extent Petitioners assert the ER must consider cooling towers in the context of *mitigation measures*, Subsection B below explains that the ER goes beyond the NEPA minimum requirement to merely consider mitigation; FPL has *actually implemented* extensive mitigation measures commensurate with impacts described in the ER. Petitioners identify no defects in those discussions and identify no basis to require further discussion of additional hypothetical mitigation measures such as cooling towers. Nor is there any legal requirement to do so. Accordingly, proposed Contention 1-E must be rejected.

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[36] *See, e.g.*, Regulatory Guide 4.2, Supp. 1, Rev. 1, Preparation of Environmental Reports for Nuclear Power Plant License Renewal Applications at 52 (June 2013) (ML13067A354) ("RG 4.2") (referring to these as "replacement power alternatives" in the license renewal context).

[37] Petition at 16 (quoting mitigation measures language from the relevant regulations); *id.* (explaining Contention 1-E challenges ER § 7.3 regarding mitigation measures).

A. The ER Considers Cooling Towers in Its Discussion of Alternatives to the Proposed Action

Although the proposed contention is framed as a challenge to the ER's discussion of *mitigation measures*, nearly all of Petitioners' substantive discussion is directed at their assertion that cooling towers purportedly are a reasonable *alternative to the proposed action*.[38] But as noted above, any argument that the ER must consider cooling towers as an *alternative to the proposed action*—subsequent license renewal in this case—simply makes no sense. Cooling towers do not produce power and, therefore, cannot be considered an alternative to the proposed project. Moreover, Petitioners, themselves, note that the ER *actually considers* cooling towers in its discussion of alternatives to the proposed action.[39] Specifically, the ER considers:

- A natural gas-fired combined cycle ("NGCC") plant with cooling towers;
- A new nuclear facility with cooling towers; and
- A combination of NGCC with cooling towers plus solar photovoltaic facilities.[40]

Accordingly, to the extent Petitioners claim that the "range of reasonable alternatives" discussed in the ER improperly excluded consideration of cooling towers, their claim is plainly incorrect and thus fails to raise a genuine dispute.[41] Because they offer no critique of this discussion, they also fail to raise a genuine dispute as to its adequacy. And to the extent they fault the ER for evaluating cooling towers as a project alternative rather than a mitigation

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[38] *E.g.*, *id*. at 17 (arguing NEPA requires consideration of "a range of reasonable alternatives"); *id*. at 19-22 (arguing cooling towers are a reasonable alternative because they purportedly are feasible); *id*. at 22-23 (arguing cooling towers are reasonable because they purportedly satisfy the proposed action's purpose and need).

[39] *Id*. at 18 (noting that "closed-cycle cooling with mechanical draft cooling towers" are evaluated in all three replacement power alternatives considered as alternatives to the proposed action).

[40] ER at 7-3 to 7-4, 7-22, 8-5.

[41] *Millstone*, LBP-04-15, 60 NRC at 95; *see also Summer*, CLI-10-1, 71 NRC at 21-22.

alternative, they offer no explanation for how this distinction is material to the outcome of the proceeding.

B. Petitioners Identify No Duty to Evaluate Cooling Towers as a Mitigation Measure

Petitioners allege that the ER is deficient because it does not contain a separate evaluation of cooling towers as a *mitigation measure*. However, Petitioners fail to demonstrate an obligation to do so under NEPA or Part 51. Nor is there one.

Petitioners' demand for this separate assessment of cooling towers appears to be based on their belief that the ER does not address mitigation measures *at all*. Specifically, they claim "[t]he ER purports to satisfy NEPA's obligation to consider [mitigation measures] in two short, conclusory paragraphs [in ER Section 7.3] devoid of any substantive analysis."[42] But this assertion is simply untrue. Petitioners ignored the portion of those paragraphs explaining that "*existing* mitigation measures [are] discussed in Chapter 4" of the ER.[43] As detailed below, the discussions in Chapter 4 (and other portions of the ER cited therein) provide "substantive analysis" of existing mitigation measures, which Petitioners inexplicably ignore.

Notwithstanding, Petitioners argue that cooling towers must be considered as a mitigation measure merely because they purportedly would remedy certain alleged adverse impacts to Category 2 issues. Even if true, this alone would not establish a duty to consider cooling towers because the ER's discussion of *existing* mitigation measures goes well beyond, and therefore satisfies, the requirements in NEPA and Part 51.

More specifically, the Supreme Court has interpreted NEPA to include an implicit duty to discuss mitigation measures—but *only to the extent necessary* to provide a complete picture of

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[42] Petition at 18-19 (referring to ER § 7.3).

[43] ER at 7-39 (emphasis added); *see also* ER § 6.2.

the *impacts* of the project.[44] In *Methow Valley*—the seminal Supreme Court case on this subject—the Court rejected a lower court ruling that would have imposed a more stringent requirement that "a complete mitigation plan be actually formulated and adopted."[45] As a result, the existence of formulated, finalized, and adopted mitigation measures—such as those described in ER Chapter 4—go *beyond* what NEPA requires.[46] Petitioners do not identify any legal requirement to consider additional hypothetical mitigation measures such as cooling towers when actual state- and county-approved mitigation measures are in place—because no such requirement exists.

Furthermore, merely stating that cooling towers could remedy certain alleged impacts does not identify a duty to consider them as a mitigation measure absent a showing that cooling towers would be a *proportional* response the alleged impacts.[47] As the Commission recently explained, "[u]nder basic NEPA principles, it is reasonable to tailor the degree of mitigation analysis to the significance of the impact to be mitigated."[48] Likewise, NRC guidance explains that "[t]he consideration of mitigation measures should be in proportion to the potential adverse impact."[49] Thus, where license renewal impacts are expected to be "SMALL," the NRC's lowest

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44 *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 353, 359 (1989).

45 *Methow Valley*, 490 U.S. at 352.

46 *See generally Methow Valley*, 490 U.S. 332 (rejecting the 9th Circuit's decision below, which sought to impose such a requirement).

47 Petitioners argue that cooling towers are "reasonable and feasible." *E.g.*, Petition at 19 & n.89 (citing Expert Report of Bill Powers, P.E., Powers Engineering (May 14, 2018) (Petition Attach. K). But mitigation measures need only be considered if they are *proportional* to some unmitigated impact—an entirely different standard (which Petitioners ignore). Notwithstanding, a more recent evaluation of cooling tower feasibility casts serious doubt on the accuracy of the study cited by Petitioners. *See* L-2018-136, Letter from W. Maher, FPL, to NRC Document Control Desk, Environmental Report Requests for Additional Information (RAI) Responses, Attach. 19 (Aug. 8, 2018).

48 *Entergy Nuclear Operations, Inc.* (Indian Point, Units 2 & 3), CLI-16-7, 83 NRC 293, 323 n.156 (2016).

49 NUREG-1555, Standard Review Plans for Environmental Reviews for Nuclear Power Plants, Supp. 1, Rev. 1 at 9 (June 2013) (ML13106A246) ("ESRP").

impact category,[50] the duty to analyze mitigation measures under 10 C.F.R. § 51.53(c)(3)(iii) also is commensurately small.[51] Petitioners utterly fail to acknowledge or address this proportionality consideration in their various arguments.

Nevertheless, as explained below, Petitioners' various arguments regarding specific Category 2 issues fail to demonstrate any material deficiency in the ER's analysis of mitigation measures for those issues, or argue that cooling towers would be a proportional response to such deficiency. Accordingly, proposed Contention 1-E must be rejected.

1. Petitioners Identify No Duty to Evaluate Cooling Towers as a Mitigation Measure for Threatened, Endangered, and Protected Species and Essential Fish Habitat

Petitioners argue that cooling towers are needed to reduce alleged adverse impacts to endangered species—*e.g.*, a decrease in nesting of the American crocodile—from continued operation of Turkey Point in the SLR term.[52] However, Petitioners cannot demonstrate a genuine dispute with the ER because their discussion of threatened, endangered, and protected species does not—even once—reference the ER, let alone explain how it purportedly is deficient.

For example, Section 4.6.6.4 of the ER explains that "crocodiles on the site are monitored under FPL's crocodile management plan, which is focused on the creation of an environment and the enhancement of crocodile nesting habitat as well as [] monitoring the reproductive success, growth, and survival of hatchlings." The ER further explains that, in conjunction with the crocodile management plan, "the American crocodile population continues to remain in a much stronger position than before the Turkey Point CCS was established," and that "operation of

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[50] *See* Table B-1 n.3.

[51] *See Indian Point*, CLI-16-7, 83 NRC at 323 n.156; ESRP at 9.

[52] Petition at 23.

[Turkey Point] has positively affected this species." In fact, crocodiles likely did not exist at the site of the Turkey Point CCS prior to its construction, but the CCS and FPL's affirmative environmental actions have played a central role in the recovery of the species, ultimately prompting FWS to downlist the crocodile from "endangered" to "threatened."[53]

The conclusion of this section (considering all species) explains "that SLR would have no effect on threatened, endangered, and protected species in the vicinity of Turkey Point, and mitigation measures beyond FPL['s] current management programs and existing regulatory controls are not warranted." But petitioners neither cite to nor challenge this directly relevant information.

In order to demonstrate a genuine dispute, petitioners must "read the pertinent portions of the license application, . . . state the applicant's position and the petitioner's opposing view," and explain why it disagrees with the applicant.[54] Petitioners have not done so here.

Instead, Petitioners speculate that SLR would result in "harm" and "adverse impacts" to certain species.[55] But these assertions are unsupported, misleading, or omit material information from cited sources. For example, Petitioners offer a block quote from a U.S. Fish and Wildlife Service ("FWS") Biological Opinion in the licensing action for Turkey Point Units 6 and 7 ("BiOp") for the proposition that the "recent increase in power production" at Units 3 and 4 *caused* an increase in salinity and a decrease in water quality in the CCS, resulting in a decrease

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53 *See* ER § 3.7.8.1.4 (citing Endangered and Threatened Wildlife and Plants; Reclassification of the American Crocodile Distinct Population Segment in Florida from Endangered to Threatened, 72 Fed. Reg. 13,027, 13,034-35 (Mar. 20, 2007) (noting Turkey Point "may not have historically supported nesting," but the crocodile's resurgence is partly attributable to Turkey Point's efforts, including "designation of nesting 'sanctuaries' where access and maintenance activities are minimized" and "exotic vegetation control and encouraging the growth of low-maintenance native vegetation")).

54 Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,170; *Millstone*, CLI-01-24, 54 NRC at 358.

55 Petition at 23-24.

from 9 crocodile nests in 2015 to 8 nests in 2016.[56] However, Petitioners omit the FWS's *actual* conclusion that the "cause" of the temperature increase and water quality decrease is "unclear."[57] Moreover, Petitioners omit the final sentence in that paragraph noting that FPL's crocodile management plan (*i.e.*, an existing mitigation measure) "*appears to be working* to some extent."[58] In other words, this source *contradicts*, rather than supports, Petitioners' suggestion that some impact has not been adequately considered.[59] And to the extent Petitioners argue that the ER does not adequately consider mitigation measures for CCS salinity-related impacts to threatened or endangered species, they fail to acknowledge FPL's CCS salinity reduction efforts, as described in further detail in Section V.B.2, below.

Petitioners also assert that the CCS "has driven the westward migration of a hypersaline plume, resulting in salination of freshwater wetlands that are habitat for a range [of] threatened and endangered species."[60] For this assertion, Petitioners again cite the FWS BiOp.[61] However, the cited discussion says *nothing* about a "hypersaline plume," "salination" of wetlands, or even the CCS generally. In fact, the cited discussion opines on an entirely different topic altogether: "commercial and residential development projects and infrastructure projects."[62] Thus, Petitioners' citation is misleading and provides *no support* for their assertion that SLR would

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56 *Id*. (quoting Letter from R. Hinzman, FWS, to A. Williamson, NRC, Biological Opinion for Combined License for Turkey Point Nuclear Plant, Units 6 and 7 at 20 (June 23, 2017) (ML17177A673) ("BiOp")).

57 BiOp at 20. The report merely states that FPL's power uprate is one of a list of "[s]uspected contributing factors" that also includes "lower than average precipitation in the area." *Id*.

58 *Id*. (emphasis added).

59 Furthermore, the latest data indicates a significant increase: "14 nests so far this hatchling season." Theresa Java, *Turkey Point's canal berms ideal for crocodile clutches*, KEYS NEWS (Aug. 8, 2018), https://keysnews.com/article/story/turkey-points-canal-berms-ideal-for-crocodile-clutches.

60 Petition at 24.

61 *Id*. n.107 (citing BiOp at 44).

62 BiOp at 44.

cause adverse impacts to threatened or endangered species that have not already been considered and evaluated in the ER's mitigation analysis.[63]

Ultimately, FPL's formal adopted environmental impact mitigation plans go beyond what NEPA requires. And Petitioners' misreading or misunderstanding of the documents they cite, and disregard for information in the ER, is an insufficient basis for an admissible contention.[64]

2. Petitioners Identify No Duty to Evaluate Cooling Towers as a Mitigation Measure for Groundwater Use Conflicts

Petitioners argue that the use of cooling towers would reduce alleged adverse impacts to the Category 2 issue of groundwater use conflicts during the SLR term. For example, Petitioners claim that "even more groundwater" will be withdrawn during the SLR term, and that operation of the CCS will continue to introduce hypersaline water to the aquifer and ultimately "reduce the amount of groundwater" in South Florida. However, Petitioners' underlying assertions are neither supported nor connected to this particular Category 2 issue. Additionally, Petitioners identify no defects in the ER,[65] which evaluates potential impacts and considers existing and potential mitigation measures related to groundwater use conflicts, in full compliance with NEPA and Part 51.[66]

As explained in the GEIS, this Category 2 issue relates to a plant's "pumping of groundwater" that has "the potential to create conflicts with other local groundwater users"; the

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63 The BiOp pertains to the Turkey Point 6 & 7 proposed action, but evaluated the CCS and concluded that the proposed action of building an entirely new 2-unit plant at the Turkey Point Site was "not likely to jeopardize the continued existence of the crocodile" and would "not adversely modify the critical habitat of the crocodile." *Id*. at 45.

64 *Private Fuel Storage, LLC* (Indep. Spent Fuel Storage Installation), LBP-98-7, 47 NRC 142, 181, *aff'd on other grounds*, CLI-98-13, 48 NRC 26 (1998); *Yankee Atomic Elec. Co.*, LBP-96-2, 43 NRC 61, 90 (1996), *rev'd in part on other grounds and remanded*, CLI-96-7, 43 NRC 235 (1996); *Ga. Tech.*, LBP-95-6, 41 NRC 281, 300 (1995).

65 ER at 4-22 to 4-23; ER Supplement, Attach. 1.

66 10 C.F.R. §§ 51.53(c)(3)(ii)(C) and 51.53(c)(3)(iii).

GEIS also notes that "allocation is normally determined through a State issued permit."[67] Consistent with the GEIS and relevant guidance, Section 4.5.3 of the ER provides a detailed discussion, and references the various state and local government agencies, permits, and processes that govern groundwater use. It also explains that withdrawals from the Floridian and Biscayne Aquifers are strictly governed by the Florida Department of Environmental Protection ("FDEP") and the South Florida Water Management District ("SFWMD") regulatory processes, which evaluate the "impacts of the uses on existing land uses, pre-existing water rights, and the environment," and are subject to "public review and challenge."[68] As explained further below, the informed technical judgments of the responsible state and local regulators on these issues are not subject to challenge in this proceeding.[69]

By way of background, the ER describes various regulator-approved mitigation efforts that are currently underway, including: (1) "freshening" of the CCS, which entails withdrawing mildly saline water from the Upper Floridian Aquifer for use as makeup flow for the CCS, in order to dilute CCS salinity; and (2) the recovery well system ("RWS"), which is designed to extract hypersaline water from the Biscayne Aquifer and dispose of it via deep geologic injection in the Boulder Zone.[70]

The ER notes that regulators have already approved withdrawal of brackish water from the Upper Floridian Aquifer for the "freshening" efforts, and concluded that such withdrawals

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67 GEIS at 4-48.

68 ER at 4-23.

69 *Entergy Nuclear Vt. Yankee, LLC* (Vt. Yankee Nuclear Power Station), CLI-07-16, 65 NRC 371, 377 (2007) (reversing the Board's admission of a contention asserting that the applicant's ER inadequately addressed the impacts of increased thermal discharges into the Connecticut River during the license renewal period).

70 *See* ER 3-93 to 3-95; ER Supplement, Attach. 1.

are not expected to have significant impacts on regional water use.[71] It also explains that regulators have concluded that the RWS (*i.e.*, the regulator-mandated extraction of hypersaline water from the Biscayne Aquifer) presents only a "minimal" potential to impact water availability because "[t]here are no existing legal users" of that hypersaline water within the immediate drawdown contour, and the withdrawals are not expected to result in significant water level reductions offsite.[72] Additionally, the Board's decision in the Turkey Point 3 and 4 license amendment case (in which it independently evaluated the effects of the mitigation efforts) is consistent with these descriptions in the ER.[73]

The conclusion of the groundwater use conflicts discussion in the ER reads as follows:

> It is not anticipated that groundwater withdrawal increases above permitted quantities will be required during the license period; therefore, FPL concludes that impacts from groundwater withdrawals are SMALL and do not warrant additional mitigation measures.[74]

Petitioners disregard, rather than dispute, this analysis. In fact, this section of the Petition does not even cite, quote, or analyze the relevant portions of the ER, whatsoever. An admissible contention must directly controvert a position taken in the application and explain why it is deficient in some material respect.[75] Because Petitioners do not do so here, they have failed to raise a genuine dispute, as required by 10 C.F.R. § 2.309(f)(1)(vi).

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71 *See, e.g.*, ER Supplement, Attach. 1 at 1-2. The ER Supplement was explicitly referenced in the NRC's Notice of Hearing Opportunity. *See* 83 Fed. Reg. at 19,304.

72 *See, e.g.*, ER Supplement, Attach. 1 at 3-4.

73 *See also Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 3 & 4), LBP 16-8, 83 NRC 417, 455-57 (2016) (concluding FPL's freshening efforts will not "significantly impact other legal users of the Upper Floridian Aquifer through the projected drawdown caused by the withdrawals," and that its RWS efforts "will not have a significant impact on saltwater intrusion" and do not involve withdrawal of fresh water).

74 ER at 4-23.

75 Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,170 & 33,172.

Relatedly, Petitioners offer various unsupported conclusions that are contrary to factual information readily available in the ER. For example, Petitioners claim that operation of the RWS would "assert *additional* pressure on existing groundwater use conflicts."[76] But as the ER explains, groundwater withdrawals for the RWS are *already authorized* by existing permits.[77] And Petitioners offer no explanation for their assertion that the RWS—which was approved by regulators in order to *extract and dispose of* the very hypersaline water in the Biscayne Aquifer of which Petitioners complain—would somehow result in a groundwater use conflict. Nor is there any plausible connection to a groundwater use conflict because, as the ER explains, there *are no users* competing for access to this hypersaline water, and its extraction will not cause significant water level reductions offsite. Petitioners simply have not identified a potential groundwater use conflict, much less one that will not be managed by ongoing state and local regulatory oversight.

Second, Petitioners cite to the testimony of Dr. Panday as support for the proposition that the RWS "would not abate continued leaching of hypersaline water" from the CCS.[78] However, the cited discussion references the "freshening" efforts, not the RWS.[79] Thus, it fails to support their criticism of the RWS. Petitioners simply appear to conflate the various aquifers and mitigation efforts. Ultimately, Petitioners' misunderstandings are not an adequate basis for an

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[76] Petition at 26 (emphasis added).

[77] ER at 4-23.

[78] Petition at 26 & n.113 (citing Letter from S. Morse, State of Florida, Office of Public Counsel, to C. Stauffer, Florida Public Service Commission, Direct Testimony and Exhibits of Sorab Panday, Encl. at 35:7-36:12 (Aug. 23, 2017) ("Panday Testimony") (Petition Attach. L)).

[79] *See* Panday Testimony, Encl. at 35:8 (discussing FPL's efforts to "freshen up the CCS"). Furthermore, Dr. Panday's criticism notwithstanding, the cognizant regulators found the freshening efforts were technically sound and thus approved the Consent Order, which also includes a backstop provision requiring FPL to implement *additional* measures if those efforts do not achieve the CCS salinity target within four years. *See* ER at 3-93. Any *additional* measures would be subject to the same regulatory approval process for consideration and evaluation of any potential groundwater use conflicts.

admissible contention. Moreover, State and County regulators have approved FPL's mitigation actions and will continue to oversee and enforce their implementation by FPL. Although NRC must exercise its independent judgment with regard to the ultimate conclusions about a project's environmental impacts, the GEIS makes clear that a license renewal applicant's reliance on mitigation actions required and enforced by state and local agencies is reasonable and appropriate. This is especially true in the present context, where the "NRC's authority does not extend to requiring operating nuclear plants to replace or modify their cooling systems to reduce impacts."[80] As the Commission noted in an earlier license renewal proceeding, the Clean Water Act "precludes [the NRC] from either second-guessing the conclusions in [National Pollution Discharge Elimination System ("NPDES")] permits."[81]

The NRC "may properly assume that an applicant or licensee will comply with concrete and enforceable conditions and requirements imposed by statutes, regulations, licenses, or permits issued by competent federal, state, or local governmental entities."[82] In this case, those entities include the FDEP, SFWMD, and Miami-Dade County Department of Environmental Resources Management ("DERM"). FPL's required "monitoring and mitigation measures, combined with the active oversight and policing of the state and local environmental agencies

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80 GEIS, Vol. 2, Public Comments, Rev. 1, App. A at A-220 (ML13106A242).

81 *Vt. Yankee*, CLI-07-16, 65 NRC at 377 (reversing the Board's admission of a contention asserting that the applicant's ER inadequately addressed the impacts of increased thermal discharges into the Connecticut River during the license renewal period). *See also Tenn. Valley Auth.* (Yellow Creek Nuclear Plant, Units 1 & 2), ALAB-515, 8 NRC 702 (1978) (holding that NRC is prohibited from imposing requirements on nuclear power plant licensees with regard to water quality). *Cf. Hydro Res., Inc.* (2929 Coors Road, Suite 101, Albuquerque, NM 87120), CLI-98-16, 48 NRC 119, 122 (1998) (holding that presiding officers should "narrowly construe" issues "to avoid where possible the litigation of issues that are the primary responsibility of other agencies").

82 *Progress Energy Fla., Inc.* (Levy County Nuclear Power Plant, Units 1 & 2), LBP-13-4, 77 NRC 107, 217-18 (2013). *See also Turkey Point*, LBP-17-5, 86 NRC at 29 (citing *Ark. Power & Light Co.* (Arkansas Nuclear One Unit 2), ALAB-94, 6 AEC 25, 28 (1973); *So. Cal. Edison Co.* (San Onofre Nuclear Generating Station, Units 2 & 3), ALAB-308, 3 NRC 20, 30 (1976)).

. . . provide the NRC with *reasonable assurance that sound monitoring and mitigation measures will actually be implemented and will be successful*."[83]

Significantly, FDEP, the agency responsible for issuing FPL's NPDES permit for the CCS, imposing CCS-related mitigation measures, and overseeing FPL's compliance with those requirements, has *not* directed FPL to replace the CCS with mechanical draft cooling towers or identified cooling towers as its preferred alternative for purposes of compliance with the Clean Water Act ("CWA"). As such, this case is readily distinguished from the Indian Point and Oyster Creek license renewal proceedings, in which the NRC Staff discussed closed-cycle cooling (*i.e.*, cooling towers) as an alternative to the once-through cooling systems used at those plants. In both cases, as part of the state NPDES permitting process under CWA Section 316(b), the relevant state regulatory agency—the New York State Department of Environmental Conservation ("NYSDEC") and the New Jersey Department of Environmental Protection ("NJDEP")—had identified construction and operation of a closed-cycle cooling system at the site "as its preferred alternative to meet current national performance standards for impingement and entrainment losses."[84] That is not the case here. Moreover, in the Indian Point and Oyster Creek license renewal supplemental EISs, the NRC Staff found the potential for MODERATE

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[83] *Levy*, LBP-13-4, 77 NRC at 219. *Cf. Ariz. Pub. Serv. Co.* (Palo Verde Nuclear Generating Station, Units 1, 2 & 3), LBP-82-117A, 16 NRC 1964, 1991 (1982) (declining to rule on validity of wastewater effluent use agreement due to lack of jurisdiction, and concluding that "comity requires the Commission to accept the position taken by its sister federal agencies as well as by other state and local governmental authorities.").

[84] *See* "Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 38 Regarding Indian Point Nuclear Generating Unit Nos. 2 and 3," NUREG-1437, supp. 38, vol. 1 at 8-3 (Dec. 2010) (ML103350405); *see also id.* at 8-1 to 8-2 ("As in the draft SEIS, the NRC staff considered an alternative to the existing IP2 and IP3 cooling water systems *because* the [NYDEC] identified closed-cycle cooling (*e.g.*, cooling towers) as the best technology available (BTA) to reduce fish mortality in the draft New York State Pollutant Discharge Elimination System (SPDES) discharge permit.") (emphasis added); Generic Environmental Impact Statement for License Renewal of Nuclear Plants, Supplement 28 Regarding Oyster Creek Nuclear Generating Station," NUREG-1437, supp. 28, vol. 1 at 8-3 (Dec. 2010) (ML070100234); *see also id.* at 8-26 ("The NJDEP identified construction and operation of a closed-cycle cooling system (Section 8.1.1) as its preferred alternative to demonstrate compliance with Section 316(b) regulations.").

impingement and entrainment impacts due to the use of once-though cooling systems at those plants.[85] As discussed in ER Section 4.6.1, potential impacts due to impingement and entrainment of aquatic organisms like fish and shellfish at Turkey Point are limited to the CCS canals (*i.e.*, there are no impacts from impingement on fish and shellfish of Biscayne Bay, Card Sound, or other waters) and have been determined to be SMALL, such that further mitigation is not warranted.[86]

These facts, coupled with the legal principles and precedent discussed above, undermine Petitioners' claim that the ER must consider cooling towers as a mitigation measure. Indeed, in CLI-07-16, the Commission conveyed its expectation that in future cases involving similar petitioner claims—as here—its adjudicatory boards would defer to the agencies that issued the permits for the cooling systems in question.[87] Moreover, in CLI-16-18, the Commission found that there is "[no] reason, for purposes of [] NEPA review . . . to doubt that FPL will comply with environmental conditions required by State and local authorities" given ongoing oversight by those authorities.[88] Ultimately, Petitioners do not offer a genuine dispute to FPL's reliance on existing mitigation measures related to the Category 2 issue of groundwater use conflicts.

Additionally, Petitioners make multiple arguments related to Category 1 water *quality* issues (*e.g.*, referencing "water *quality* laws," "contamination" of groundwater, and "salinities";[89] "leaching of hypersaline water" into groundwater, "net addition of salt to the

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85 *See* NUREG-1437, supp. 38, vol. 1 at 4-70; NUREG-1437, supp. 28, vol. 1 at 4-60.

86 *See* ER at 4-30 to 4-32.

87 *Vt. Yankee*, CLI-07-16, 65 NRC at 389 (citing *Pub. Serv. Co. of N.H.* (Seabrook Station, Units 1 and 2), CLI-78-1, 7 NRC 1, 28 n.42 (1978)); *see also Indian Point*, LBP-08-13, 68 NRC at 156.

88 *Turkey Point*, CLI-16-18, 84 NRC at 174-75 n.38. *See also id.* at 174 ("[Intervenor] has not identified any legal error in the Board's decision not to impose mitigation measures on FPL or direct other 'substantive' actions related to water quality or saltwater migration."

89 Petition at 25 (emphasis added).

aquifer," and "salination of a potable water aquifer")[90] to support their argument that cooling towers would reduce impacts related to groundwater *use conflicts*. However, as described in the GEIS and Part 51, groundwater *use conflicts* are distinct from groundwater *quality*. The NRC separately evaluated the issues of "groundwater quality degradation resulting from water withdrawals," and "groundwater quality degradation (plants with cooling ponds in salt marshes),"[91] and codified those as "Category 1" issues that do not require plant-specific evaluations.[92] Moreover, the Commission has made clear that "an issue cannot be identified as Category 1 if the NRC has not made a generic determination that additional mitigation measures are unlikely to be warranted, *given 'mitigation practices' already in place*."[93] Nevertheless, Category 1 issues are not subject to attack in adjudicatory proceedings absent a waiver (which Petitioners, by their own choice, have not attempted to obtain here).[94] Petitioners cannot use a cursory challenge on the Category 2 issue of groundwater use conflicts as an end-run around this regulatory prohibition. Accordingly, these arguments are outside the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii).[95]

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[90] *Id*. at 26. Petitioners further speculate, without support, that these purported water quality impacts ultimately result (through some unspecified and attenuated chain of causation) in "impacts to freshwater wetlands and other surface waters." Petitioners do not identify a specific license renewal "issue" to which these impacts purportedly would correspond; however, these issues likely would be designated as Category 1. *See* Table B-1.

[91] There also is an alternative issue for "groundwater quality degradation (plants with cooling ponds at in-land sites)." Table B-1. But that issue is not applicable here; the GEIS specifically references Turkey Point as an example of a plant with a cooling pond in a salt marsh. *See* GEIS at 4-50; *see also* ER at 4-24 (§ 4.5.4.4).

[92] Table B-1.

[93] *Entergy Nuclear Generation Co. & Entergy Nuclear Operations, Inc.* (Pilgrim Nuclear Power Station), CLI-10-14, 71 NRC 449, 471-72 (2010) (quoting Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 61 Fed. Reg. 28,467, 28,474 (June 5, 1996)) (emphasis added).

[94] *Vt. Yankee*, CLI-07-3, 65 NRC at 22.

[95] The Commission and the federal courts consistently have held that because Category 1 issues already have been addressed globally by Appendix B to Part 51, "they cannot be litigated in individual adjudications, such as license renewal proceedings for individual plants." *Massachusetts v. U.S.*, 522 F.3d 115, 120 (1st Cir. 2008) (citing 10 C.F.R. § 2.335; *Turkey Point*, CLI-01-17, 54 NRC at 12, 20-23 (2001)).

Finally, Petitioners claim that these (out-of-scope) groundwater *quality* impacts will "reduce the amount of groundwater available to users in South Florida, including the Florida Keys, thereby exacerbating groundwater use conflicts."[96] Petitioners offer zero explanation—or support—for this assertion. As the Commission has explained, this type of sheer speculation[97] is insufficient to satisfy the "strict by design" contention admissibility criteria.[98]

Ultimately, FPL reasonably concludes, in full satisfaction of NEPA and Part 51 requirements, that state and local processes designed specifically to regulate groundwater withdrawals, including corresponding technical assessments and public input processes, will adequately mitigate potential groundwater use conflicts during the SLR term. Because Petitioners have not identified a material defect in the ER's discussion of groundwater use conflicts, they have not demonstrated a genuine material dispute with the ER, contrary to 10 C.F.R. §§ 2.309(f)(1)(ii), (iv)-(vi).

3. Petitioners Identify No Duty to Evaluate Cooling Towers as a Mitigation Measure for Radionuclides Released to Groundwater

In their final line of argument on proposed Contention 1-E, Petitioners assert that cooling towers must be considered as a mitigation measure in the ER because they purportedly "would *eliminate* discharges of wastewater into the environment and, thus, *eliminate* risk of further release of tritium into the environment."[99] As an initial matter, this assertion is both unsupported and untrue. The operation of cooling towers necessarily entails wastewater creation and

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96 Petition at 26.

97 *USEC*, CLI-06-10, 63 NRC 451, 472 (2006).

98 *Millstone*, CLI-01-24, 54 NRC at 358.

99 Petition at 28-29 (emphasis added).

environmental release.[100] Furthermore, as explained below, nothing in Petitioners' brief six-sentence discussion on this topic demonstrates a deficiency in FPL's consideration of mitigation measures in the ER.

In Section 4.5.5 of the ER,[101] FPL evaluates potential impacts from radionuclides released to groundwater, and considers the need for corresponding mitigation measures, as required by the regulations in Part 51.[102] For example, the ER describes a number of mitigation measures such as the "groundwater protection program [] discussed in Section 3.6.2.5," "[r]adwaste release administrative controls," and the "groundwater monitoring program" "discussed in Section 3.6.4.2."[103] FPL ultimately concludes that:

> Since the groundwater monitoring program was initiated in 2010, no plant-related gamma isotopes or hard-to-detect radionuclides have been detected. Therefore, due to continued operations within the requirements of established operating procedures, permits, and site monitoring programs, FPL concludes that impacts from radionuclides to groundwater are SMALL and do not warrant additional mitigation measures beyond [Turkey Point's] existing groundwater monitoring program and administrative controls.[104]

As alleged support for this very brief line of argument, the Petition cites only a newspaper article, for the proposition that "elevated tritium levels" existed near the CCS in 2016,[105] and a discussion in the ER regarding "minor" releases of radioactive materials between 2012 and 2016, for which monitoring results were "below reportable levels."[106] Notably,

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100 *See, e.g.*, *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Units 6 & 7), CLI-18-1, 87 NRC __, __ (Apr. 5, 2018) (slip op. at 26) (explaining that "Blowdown," *i.e.*, tritiated wastewater from cooling towers, will need to be injected into the aquifer).

101 ER at 4-25 to 4-29.

102 10 C.F.R. §§ 51.53(c)(3)(ii)(P) and 51.53(c)(3)(iii).

103 ER at 4-26.

104 *Id*. at 4-27.

105 Petition at 28.

106 ER at 4-2.

Petitioners do not claim that either of these releases were above "permissible levels in the Commission's regulations," as would be necessary—as a matter of law—for the ER's impact conclusion to be anything other than SMALL.[107] Moreover, Petitioners do not examine the "groundwater protection program," or the "radwaste release administrative controls," nor do they offer any reasoned critique of FPL's mitigation analysis. Rather, they simply make the conclusory assertion that "wastewater will spread into the environment."[108] Petitioners' bare speculation in this regard is not enough to form the basis for an admissible contention.

Ultimately, the mitigation controls and programs cited in the ER—which are formulated, finalized, and adopted—and which Petitioners disregard rather than dispute—exceed the applicable requirements in NEPA and Part 51. Because Petitioners have neither identified a genuine material dispute with the ER on this topic, nor attempted to explain why cooling towers would be a proportional response to any purported defect, they have not demonstrated the existence of a duty to evaluate cooling towers as a mitigation measure, or otherwise demonstrate an admissible contention.

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Because Contention 1-E fails to satisfy at least one criterion in 10 C.F.R. § 2.309(f)(1), it must be rejected.

VI. PROPOSED CONTENTION 2-E (CUMULATIVE IMPACTS) IS IMMATERIAL, UNSUPPORTED, AND FAILS TO DEMONSTRATE A GENUINE DISPUTE WITH THE ER

In this contention, Petitioners offer two arguments. First, they allege that the ER fails to adequately address cumulative impacts to water resources caused by postulated increases in sea

[107] Table B-1 n.3.

[108] Petition at 28.

level and air temperature.[109] Second, Petitioners argue that FPL may not rely on state permitting processes to assume cumulative impacts to groundwater resources will be adequately managed.[110]

As explained further below, Petitioners' unsupported arguments fail to demonstrate a genuine material dispute with the ER. To the extent Petitioners assert the ER—pursuant to some purported requirement in Part 51—must consider impacts *caused by* climate change *on* water resources, they provide no legal basis for their assertion. Nor could they. As explained in Subsection A below, no such duty exists. In fact, the NRC explicitly declined to require such information in the license renewal context. Furthermore, as described in Subsection B, Petitioners' various substantive arguments fail to satisfy contention admissibility requirements. Finally, Subsection C explains that Petitioners' unsupported challenge to FPL's reliance on groundwater permits regarding management of cumulative effects likewise fails to demonstrate a genuine material dispute with the ER because it disregards rather than disputes the information in the ER. For all of these reasons, proposed Contention 2-E must be rejected.

A. Part 51 Does Not Require License Renewal Environmental Reports to Describe Impacts to Water Resources *Caused by* Climate Change

Petitioners argue that the ER is deficient because it fails to adequately address cumulative impacts to water resources caused by reasonably foreseeable increases in sea level and air temperature.[111] As explained below, Part 51 imposes no such requirement on FPL. Thus, Petitioners have not identified a genuine material dispute with the ER.

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[109] *Id*. at 31.

[110] *Id*.

[111] *Id*.

Part 51 requires applicants to "provide information about other past, present, and reasonably foreseeable future actions occurring in the vicinity of the nuclear plant that may result in a cumulative effect."[112] Cumulative effect means "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions."[113]

As relevant here, ER Sections 4.12.4.1 (Surface Water), 4.12.4.2 (Groundwater), and 4.12.4.3 (Climate Change) consider the potential incremental impacts of SLR on the corresponding resource areas when considered alongside past, present, and reasonably foreseeable future actions in the vicinity of Turkey Point—as required by Part 51. But, Petitioners fault the ER for failing to consider impacts *caused by* climate change on surface water and groundwater resources.[114] However, Petitioners point to no authority that imposes a requirement to do so. Nor is there one.

In 2013, the NRC amended its Part 51 regulations to reflect updates regarding the environmental impact issues that must be addressed in license renewal environmental reviews.[115] During the public comment period for that rulemaking, "[s]everal commenters discussed the need to include a discussion of the effects of climate change on plant operations and the effect of continued operations during the license renewal period on environmental resources affected by climate change."[116] The NRC considered these comments, but explicitly noted that "[t]he final

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112 10 C.F.R. § 51.53(c)(3)(ii)(O).

113 40 C.F.R. § 1508.7; *see also* 10 C.F.R. § 51.14(b) (adopting CEQ's definition).

114 Petition at 37.

115 Revisions to Environmental Review for Renewal of Nuclear Power Plant Operating Licenses, 78 Fed. Reg. 37,282 (June 20, 2013).

116 *Id*. at 37,290.

rule was not revised to include any reference to GHG emissions or climate change."[117] In other words, the Commission made an explicit decision *not* to require license renewal applicants to include discussion of these issues in environmental reports. Petitioners cite no authority to the contrary, and none exists.

The NRC explained that it will, however, "include within each SEIS a plant-specific analysis of . . . any cumulative impacts caused by potential climate change upon the affected resources during the license renewal term."[118] But this NRC Staff *policy* was prompted by public comments received in the Part 51 rulemaking, not a legal requirement.[119] Similarly, in the EIS prepared for the Turkey Point 6 and 7 licensing action, the NRC Staff's decision to consider the "potential effects of climate change for all resource areas" was driven by a suggestion in CEQ guidance.[120] However, that guidance is not based on any *legal* requirement.[121] But more importantly, that guidance was withdrawn by CEQ in 2017, and therefore no longer applies.[122] Nevertheless, even if NRC Staff did ultimately decide to discuss the effects of climate change on resource areas in its SEIS (on the basis of withdrawn guidance), Petitioners point to no legal

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117 *Id*. at 37,291.

118 *Id*.

119 *Id*. at 37,290 (citing CLI-09-21 and public comments as the basis for Staff actions regarding GHG and climate change); *see also Duke Energy Carolinas, LLC* (William States Lee III Nuclear Station, Units 1 & 2) and *Tenn. Valley Auth.* (Bellefonte Nuclear Power Plant, Units 3 & 4), CLI-09-21, 70 NRC 927, 931 (2009) (providing instruction to Staff only regarding GHG, not climate change).

120 *See* NUREG-2176, Environmental Impact Statement for Combined Licenses (COLs) for Turkey Point Nuclear Plant Units 6 and 7, Vol. 3, App. I at I-1 (ML16301A018) ("Turkey Point 6 & 7 EIS") (citing Memorandum from C. Goldfuss, CEQ, to Heads of Federal Departments and Agencies, Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews (Aug. 1, 2016) ("CEQ Guidance"), *available at* https://ceq.doe.gov/guidance/ceq_guidance_nepa-ghg-climate_final_guidance.html).

121 *See generally* CEQ Guidance.

122 Withdrawal of Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews, 82 Fed. Reg. 16,576 (Apr. 5, 2017).

obligation for FPL to include such information in its ER. Nor is there such a requirement. Even assuming, hypothetically, that some duty to consider the "reasonably foreseeable affected environment" that results from climate change could be ascribed to the NEPA statute, the NRC explicitly chose *not* to amend its Part 51 regulations to require *applicants* to include such information in environmental reports.[123] Accordingly, they have not identified a basis for an admissible contention, or a genuine material dispute with the ER, contrary to 10 C.F.R. §§ 2.309(f)(1)(ii), (iv) and (vi).

B. Petitioners' Arguments Regarding Cumulative Impacts to Water Resources Caused by Climate Change Are Unsupported and Fail to Demonstrate a Genuine Material Dispute

Notwithstanding the above discussion, even assuming Part 51 did require license renewal environmental reports to consider impacts to water resources *caused by* climate change, proposed Contention 2-E still would be inadmissible. As an overarching matter, the ER's discussions of cumulative impacts related to both surface water and groundwater explicitly incorporate by reference the EIS prepared for the Turkey Point 6 and 7 licensing action,[124] which includes the information Petitioners demand.[125] And Petitioners neither challenge that incorporation by reference, nor purport to identify any deficiency in the information incorporated. Thus, there is no *genuine* dispute with the ER. Moreover, Petitioners' various unsupported arguments likewise fail to demonstrate a genuine material dispute with the ER.

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123 *See* 78 Fed. Reg. at 37,291. Furthermore, "[i]t is settled law that an applicant is not bound by NEPA, but by NRC regulations in Part 51." *Powertech (USA), Inc.* (Dewey-Burdock In Situ Uranium Recovery Facility), LBP-10-16, 72 NRC 361, 435 (2010).

124 ER at 4-68. *See also* 10 C.F.R. § 51.53(a) (noting license renewal environmental reports "may incorporate by reference any information contained in a prior . . . final environmental document previously prepared by the NRC staff that relates to the . . . site.").

125 *See* Turkey Point 6 & 7 EIS, App. I.

Petitioners claim that climate-change related air temperature increases must be considered in the cumulative effects analysis for water resources because "higher air temperatures" lead to "more saline conditions" in the CCS, and higher salinities in the CCS will adversely impact groundwater resources.[126] However, they offer no explanation for a purported connection between air temperature and CCS salinity; nor do they plead the existence of any support for this conclusion. Unsupported assertions such as this cannot form the basis of an admissible contention.

In similar fashion, Petitioners allege the ER "fails to analyze cumulative impacts on water resources associated with the reasonably foreseeable increase in air temperature."[127] However, the ER's discussion of "cumulative impacts on water resources" states that it considered the trend of "increasing air temperature" and "national and global . . . warming trends."[128] To the extent Petitioners' argument is one of omission, the plain text of the ER shows that the argument is untrue. And to the extent it is one of sufficiency, Petitioners fail to acknowledge this discussion, much less identify some purported deficiency. Either way, this argument fails to demonstrate a genuine material dispute with the ER.[129]

On the topic of sea level rise, Petitioners devote several pages of discussion to generic assertions regarding climate change, including reference to a "greater than 1-in-10 chance" that sea level will rise more than "10 feet by 2100."[130] But as the NRC noted in response to similar comments on the Turkey Point 6 and 7 EIS, "Such extreme sea-level rises would inundate much

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126 Petition at 38.

127 *Id*. at 38.

128 ER at 4-69.

129 Procedural Changes in the Hearing Process, 54 Fed. Reg. at 33,170; *Millstone*, CLI-01-24, 54 NRC at 358.

130 Petition at 35-38.

of South Florida making it uninhabitable. However, NEPA requires consideration of likely future scenarios not extreme future scenarios."[131] The NRC further explained that its safety oversight process is designed to address changing natural hazards to protect public health and safety.[132] Nevertheless, Petitioners reference this discussion of extreme sea level rise to argue that flooding at Turkey Point creates the "potential for overtopping or breach of the canal system, leading to direct discharges" of radioactive water.[133] Petitioners offer no support for this speculative scenario. They offer no factual information regarding the height of the canal system, nor do they consider any engineered barriers, or account for the NRC's safety oversight process to explain how their scenario is plausible.[134] As the Commission has explained, a contention "will be ruled inadmissible if the petitioner 'has offered no tangible information, no experts, no substantive affidavits', but instead only 'bare assertions and speculation.'"[135]

Accordingly, Contention 2-E also must be rejected for failure to satisfy 10 C.F.R. § 2.309(f)(1)(v).

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131 Turkey Point 6 & 7 EIS, Vol. 4 at E-144 (ML16300A312).

132 *Id*. at E-374. *See, e.g.*, *Turkey Point*, CLI-18-1, 87 NRC at __ (slip op. at 26) (explaining that "'[t]he Staff will proactively, routinely, and systematically seek, evaluate, and respond to new information on natural hazards,' including flooding due to sea level rise pursuant to the framework that [the Commission] approved last year for ongoing assessment of natural hazard information.").

133 Petition at 38.

134 *See Fla. Power & Light Co.* (Turkey Point Nuclear Generating Plant, Units 6 & 7), LBP-11-6, 73 NRC 149, 217 n.78 (2011) (explaining that a technical demonstration regarding the plausibility of a theoretical environmental impact from sea level rise would be necessary for an admissible contention because the NRC's safety oversight process otherwise addresses extreme natural hazards); Letter from F. Vega, NRC, to M. Nazar, FPL, Turkey Point Nuclear Generating, Units 3 and 4 – Staff Assessment of Flooding Focused Evaluation (EPID Nos. 000495/05000250/L-2017-JLD-0029 and 000495/05000251/L-2017-JLD-0029), Encl. at 8, 13, 15 (July 3, 2018) (ML18158A548) (concluding that "effective flood protection will exist for the reevaluated flood hazards" because FPL committed to "modify the flood barrier wall" and create an "action plan to address flood protection barrier height" in response to sea level rise).

135 *Fansteel*, CLI-03-13, 58 NRC at 203 (quoting *Oyster Creek*, CLI-00-6, 51 NRC at 208).

C. Petitioners' Arguments Regarding Ongoing Compliance with State and Local Water Permits and Regulatory Processes Are Unsupported and Fail to Demonstrate a Genuine Material Dispute

In their second line of argument in support of Contention 2-E, Petitioners take issue with FPL's assertion that state and local water permits and regulatory processes will ensure that cumulative impacts on groundwater resources will be adequately managed through the period of the SLR. NRC guidance in Regulatory Guide 4.2 explicitly allows such an assumption when "contributions of ongoing actions within a region to cumulative impacts are regulated and monitored through a [state or federal] permitting process" and "these actions (e.g., facility operations) are in compliance with their respective permits."[136] Based on their reading of this guidance, Petitioners argue FPL is not entitled to rely on that assumption due to a previous permit violation.[137] However, as explained below, Petitioners misconstrue the language of the guidance document they cite, and, in any event, FPL "continues to comply" with its groundwater-related obligations. Accordingly, this line of argument fails to demonstrate a genuine material dispute with the ER.

By way of background,[138] FPL maintains a NPDES permit issued by FDEP to operate the CCS. On April 25, 2016, FDEP issued a Notice of Violation ("NOV") to FPL related to saltwater intrusion into the area west of the CCS. Pursuant to the NOV, FPL consulted with various stakeholders to develop corrective actions to reduce the size of, and the CCS contribution to, the hypersaline plume. On June 20, 2016, FPL and FDEP executed a Consent Order ("CO")

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136 RG 4.2 at 49.

137 Petition at 32 (citing Consent Order).

138 *See generally* ER at 3-93 to 3-95.

memorializing those corrective actions, which include operation of the RWS and CCS "freshening" activities.

Around the same time, on October 2, 2015, DERM also issued an NOV to FPL for alleged violations of County water quality standards and groundwater criteria. On October 7, 2015, DERM entered into a Consent Agreement ("CA") with FPL. The CA, collectively with an addendum thereto dated August 15, 2016, requires various corrective actions, similar to the CO.

As paragraph 18 of the CO explains, FPL's compliance with the CO will be deemed to "address issues identified in" FDEP's NOV.[139] Paragraph 26 of the CA contains a similar provision waiving enforcement action on the NOV "[i]n consideration of the complete and timely performance by FPL of the obligations" in the CA.

The ER's discussion of cumulative impacts regarding groundwater states as follows:

> Given that FPL continues to comply with its permits for groundwater withdrawals and injection, the FDEP CO for freshening of the cooling canals, and the CA with Miami-Dade County for remediation of the hypersaline plume, cumulative impacts would be managed.[140]

Citing the FDEP NOV, Petitioners argue that Regulatory Guide 4.2 "does not authorize applicants to assume cumulative impacts are managed following permit violations"[141] because "*continual compliance* with applicable permit conditions and regulations" purportedly is

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[139] As the ER explains at 3-91 (emphasis added):

> As a result of the expanded groundwater monitoring [in 2009], it was determined that a number of corrective actions were required to address impacts resulting from the hypersalinity of the CCS. *FPL has not violated any of the operational requirements in the environmental permits associated with the CCS. Rather, the expanded monitoring enhanced the ability of FPL and the relevant regulatory authorities to ascertain the extent to which the hypersaline condition of the CCS was impacting the saline groundwater below and landward of the plant*. Ultimately, that monitoring pointed to the need for corrective actions to curtail and retract the landward migration of hypersaline groundwater. *In compliance with the directives of the various environmental agencies charged with oversight of the CCS, FPL is now in the mitigation and remediation phase. Already FPL's actions are achieving improvements in CCS salinity.*

[140] ER at 4-69.

[141] Petition at 32.

required.[142] But Regulatory Guide 4.2 does not assert (as Petitioners suggest) that a historical notice of violation somehow *permanently* bars application of the adequate management assumption. The plain language of the guidance—stipulating that actions be "in compliance with their respective permits"—is present tense. In other words, a *previous* violation is irrelevant so long as the action presently is "in compliance with" applicable requirements. Petitioners have simply misinterpreted Regulatory Guide 4.2.

Moreover, various sections of the ER (including an entire chapter titled "Status of Compliance"),[143] which Petitioners do not challenge, provide detailed support for FPL's assertion that it "*continues to comply*"—in other words, currently is in compliance with—

- its permits for groundwater withdrawals and injection;
- the FDEP CO; and
- the DERM CA.

Therefore, FPL's assertion that these processes will adequately manage cumulative groundwater impacts through the SLR term is consistent with Regulatory Guide 4.2.

Additionally, longstanding NRC precedent establishes that, under the "well-recognized presumption of administrative regularity," it is "reasonable . . . to expect that the state regulatory authority charged with permitting [an action] will adequately enforce its own regulations."[144] More specifically, the Commission has recognized "FPL's compliance" with applicable state and local regulatory and oversight activities, and stated that there is "[no] reason, for purposes of [] NEPA review . . . to doubt that FPL will comply with environmental conditions required by State

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142 *Id*. at 39 (emphasis added).

143 ER § 9.0; *see also, e.g.*, *id*. §§ 3.6.1.4.5, "Compliance History," 2.2.3.2, "Cooling Canals."

144 *Turkey Point*, LBP-17-5, 86 NRC at 29 (citing *ANO*, ALAB-94, 6 AEC at 28; *San Onofre*, ALAB-308, 3 NRC at 30).

and local authorities."[145] Accordingly, Petitioners have failed to demonstrate a genuine material dispute with the application and failed to provide adequate support for a contention, as required by 10 C.F.R. §§ 2.309(f)(1)(v)-(vi).

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Accordingly, because Contention 2-E fails to satisfy at least one element of 10 C.F.R. § 2.309(f)(1), it is inadmissible and must be rejected.

VII. PROPOSED CONTENTION 3-E (NEW AND SIGNIFICANT INFORMATION (NSI)) IS IMMATERIAL, UNSUPPORTED, AND FAILS TO DEMONSTRATE A GENUINE DISPUTE WITH THE ER

In this contention, Petitioners allege the ER is deficient because it fails to identify sea level rise as NSI in FPL's consideration of the following issues:

- "Surface water use conflicts (Category 2)";
- "Groundwater use conflicts (Category 2)";
- "Cumulative impacts (Category 2)"; and
- "Termination of plan[t] operations and decommissioning (Category 1)."[146]

As explained below, proposed Contention 3-E is inadmissible for multiple reasons. First, as explained in Subsection A below, Petitioners do not demonstrate that sea level rise qualifies as NSI as that term is used in NRC regulations. And, in fact, it does not meet the definition for NSI. Second, as explained in Subsection B, Petitioners offer no challenge to FPL's NSI assessment process. Third, the discussion in Subsection C explains that Petitioners' challenges regarding Category 1 issues are outside the scope of this proceeding. Finally, Subsection D details Petitioners' failure to explain how the concept of NSI purportedly applies to Category 2 issues, or how such a requirement is materially different from the general requirement in Part 51

[145] *See, e.g.*, *Fla. Power & Light Co.* (Turkey Point Nuclear Generating Units 6 & 7), CLI-16-18, 84 NRC 167, 178 n.38 (2016).

[146] Petition at 39-40.

to describe "impacts" (not just new and significant ones) for all Category 2 issues; and explains that their assorted arguments on the various Category 2 issues are generally unsupported, immaterial, and fail to demonstrate a genuine dispute with the ER. For all these reasons, proposed Contention 3-E must be rejected.

A. Petitioners' Assertion that Sea Level Rise Constitutes NSI Is Unsupported, and Incorrect

The NRC's Part 51 regulations require license renewal environmental reports to consider "any new and significant information regarding the environmental impacts of license renewal of which the applicant is aware."[147] As explained in NRC guidance (Regulatory Guide 4.2), "new and significant information" is either: "(1) information that identifies a significant environmental impact issue that was not considered or addressed in the GEIS . . . or (2) information not considered in the assessment of impacts evaluated in the GEIS . . . ."[148]

Petitioners assert that sea level rise is "both new and significant."[149] However, they neither acknowledge the relevant definition, nor attempt to explain how sea level rise would satisfy this definition. This, alone, is grounds for dismissal of Contention 3-E. An allegation that some aspect of a license application is "inadequate" or unacceptable does not give rise to a genuine dispute unless it is supported by facts and a *reasoned statement* of why the application is unacceptable in some material respect.[150]

In any case, sea level rise does not satisfy the definition of NSI because sea level rise was, in fact, "considered" in the GEIS. The words "sea level" appear at least 14 times in the

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147 10 C.F.R. § 51.53(c)(3)(iv).

148 RG 4.2 at 7-8.

149 Petition at 42.

150 *See Fla. Power & Light Co.* (Turkey Point Plant, Unit Nos. 3 & 4), LBP-90-16, 31 NRC 509, 521 & n.12 (1990).

GEIS.[151] For example, in the discussion of the Affected Environment regarding Meteorology and Climatology in Section 3.3.1, the GEIS notes that "impacts from warming of the climate system include expansion of sea water volume [and] decreases in mountain glaciers and snow cover resulting in sea level rise."[152] As another example, the discussion of Land Use-related Climate Change Impacts in Section 4.12.3.2 considers that "[s]ea level rise could result in the loss of coastal lands."[153] Thus, sea level rise is not "new" information, as that term is used in 10 C.F.R. § 51.53(c)(3)(iv), because it already has been "considered" by the NRC in the GEIS.

Because Petitioners have not demonstrated the existence of a genuine dispute on a material issue or adequately supported their assertions, contrary to 10 C.F.R. § 2.309(f)(1)(iv)-(vi), Contention 3-E must be rejected.

B. Petitioners Fail to Demonstrate a Genuine Dispute with the ER Because They Disregard Rather Than Dispute FPL's Assessment of NSI

Petitioners assert that "[t]he entirety of [] FPL's analysis [of NSI] appears in one sentence" in the ER.[154] This statement is demonstrably untrue, and demonstrates that Petitioners disregard, rather than dispute, FPL's assessment of NSI.

The ER considers NSI in both Chapter 4 and Chapter 5.[155] Consistent with relevant guidance,[156] Chapter 5 describes: (1) the process used to identify new information and (2) the process for determining the significance of any new information. Specifically, Section 5.2 of the ER details the NSI review process, including:

- Establishment of applicable and non-applicable Category 1 issues;

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[151] *See* GEIS at 3-35, 4-237, 4-238, 4-239, 4-241, 4-242, 4-249.

[152] ER at 3-32, 3-35.

[153] *Id*. at 4-237.

[154] Petition at 42.

[155] *See* ER at 1-6, tbl. 1.0-1.

[156] *See* RG 4.2 at 49-50.

- Investigative process for identifying new information;
- Ongoing process for awareness of new and emerging environmental issues;
- Process for assessment of information; and
- Considerations used in making significance determinations.[157]

This section of the ER also describes the outcome of this comprehensive review process:

> As a result of this review, FPL is aware of no new and significant information regarding the environmental impacts of license renewal associated with [Turkey Point]. Therefore, the findings in NUREG-1437, Revision 1, for the applicable Category 1 issues are incorporated by reference.[158]

At a more granular level, Chapter 4 describes the issue-by-issue consideration of NSI for Category 1 issues,[159] and assesses the "impacts" (not just new and significant ones) for Category 2 issues.[160] Thus, contrary to Petitioners' unsupported assertion, FPL assessed NSI throughout the ER. Petitioners simply ignore the full extent of FPL's assessment. Accordingly, they have failed to demonstrate a genuine dispute.

C. Petitioners' Arguments Regarding Category 1 Issues Are Outside the Scope of This Proceeding, Unsupported, Immaterial, and Fail to Demonstrate a Genuine Dispute

Petitioners argue that "Sea level rise will affect Applicant's ability to terminate plant operations and decommission the plant."[161] As an initial matter, "Termination of Plant Operations and Decommissioning" is a Category 1 issue.[162] As the Commission has clearly explained, Category 1 issues are not subject to challenge in adjudicatory proceedings—even if a petitioner pleads the existence of NSI on those topics—unless the petitioner first has obtained a

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157 ER at 5-2 to 5-4.

158 *Id*. at 5-4.

159 *E.g.*, *id*. at 4-51 (describing analysis of NSI for the Category 1 issue of Transportation).

160 *E.g.*, *id*. at 4-37 (describing analysis of potential impacts related to the Category 2 issue of Terrestrial Resources).

161 Petition at 45.

162 Table B-1.

waiver from the Commission.[163] Petitioners have neither requested nor received a waiver to challenge Category 1 issues in this proceeding. Accordingly, Petitioners' arguments as to Category 1 issues must be rejected as outside the scope of this proceeding, contrary to 10 C.F.R. § 2.309(f)(1)(iii), and cannot sustain an admissible contention.

Their substantive arguments fare no better. Petitioners assert that sea level rise will "affect [FPL's] ability to terminate plant operations and decommission the plant." Petitioners offer no support, expert or otherwise, for this assertion. They merely assert that FPL will be decommissioning the plant "well past 2100, when sea level at Turkey Point could rise between four and ten feet." This conclusion also relies on Petitioners' unsupported assertion that the Turkey Point "decommissioning process is expected to take 60 years to complete."[164] Petitioners' vague, unsupported speculation in this regard is insufficient to satisfy contention admissibility standards.

D. Petitioners' Issue-Specific Arguments on Category 2 Issues Are Unsupported and Fail to Demonstrate a Genuine Material Dispute

Petitioners purport to identify three Category 2 issues that should consider sea level rise as NSI: "Surface water use conflicts (Category 2)"; "Groundwater use conflicts (Category 2)"; and "Cumulative impacts (Category 2)."[165] As explained below, these arguments are unsupported and fail to demonstrate a genuine material dispute.

As a preliminary matter, Petitioners do not explain how the requirement to consider "new and significant information regarding the environmental impacts of license renewal"[166]

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163 *Vt. Yankee*, CLI-07-3, 65 NRC at 22.

164 Petition at 45. NRC regulations establish 60 years as an outer limit for completion of decommissioning, not a general expectation. *See* 10 C.F.R. § 50.82(a)(3).

165 Petition at 39-40.

166 10 C.F.R. § 51.53(c)(3)(iv).

purportedly would apply to Category 2 issues. Practically speaking, the general requirement to analyze "impacts" on Category 2 issues[167] is broader—and envelopes—any purported requirement to consider only *new and significant* impacts related to those same issues. Thus, to the extent an applicant describes "impacts" pursuant to 10 C.F.R. § 51.53(c)(3)(ii) for specific Category 2 issues, it also complies with the requirement to consider NSI for those same issues.

Furthermore, the regulatory history of the NSI regulation makes clear that it was added to Part 51 to address concerns that *codifying* findings on Category 1 issues prescribed a rigid approach; thus, the Commission added the NSI provision to add flexibility to the framework for Category 1 issues.[168] Additionally, the Commission explained that it considers three things before issuing an FSEIS:

- "public comments related to new issues identified from the scoping and public comment process";
- "Category 2 issues"; and
- "*any new and significant information regarding previously analyzed and codified Category 1 issues*."[169]

Likewise, Regulatory Guide 4.2 explains that the ER should contain "any new and significant information that relates to a *Category 1* issue" and does not offer an analogous instruction for Category 2 issues.[170] Accordingly, Petitioners arguments generally fail to identify a material issue appropriate for adjudication, and must be rejected.

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[167] *Id.* § 51.53(c)(3)(ii) ("The environmental report must contain analyses of the environmental impacts of the proposed action . . . for those issues identified as Category 2 issues.").

[168] *Entergy Nuclear Vermont Yankee, LLC and Entergy Nuclear Operations, Inc.* (Vermont Yankee Nuclear Power Station), CLI-06-20, 64 NRC 131, 156-58 (2006) (explaining that the NSI requirement was added to the final rule in response to CEQ and EPA concerns that the proposed rule was too rigid regarding codified findings) (quoting 61 Fed. Reg. at 28,470).

[169] 61 Fed. Reg. at 28,485 (emphasis added).

[170] RG 4.2 at 8 (emphasis added).

Furthermore, Petitioners' issue-specific arguments on their purported Category 2 issues also are unsupported, outside the scope of this proceeding, and fail to demonstrate a genuine dispute, as explained in further detail below.

1. Petitioners' Arguments Regarding Sea Level Rise and Cumulative Effects Fail to Demonstrate a Genuine Dispute with the ER

Petitioners argue that the ER's cumulative effects analysis "fails entirely to discuss the sea level rise-related impacts upon affected resources."[171] This argument is essentially identical to the issue raised in Contention 2-E (alleging, among other things, that the ER "fails to adequately address cumulative impacts" resulting from "reasonably foreseeable increases in sea level[]").[172] As explained in FPL's response to Contention 2-E, Petitioners arguments do not amount to an admissible contention because: (1) Part 51 does not require an applicant's ER to evaluate impacts to resource areas *caused by* climate change; (2) the ER incorporates by reference the Turkey Point 6 & 7 EIS, which contains the NRC's evaluation of impacts to resource areas *caused by* climate change, and which Petitioners do not challenge; and (3) to the extent Petitioners allege specific environmental impacts, they fail to support such allegations. Petitioners' argument here is inadmissible for the same reasons.[173]

2. Petitioners' Arguments Regarding Sea Level Rise and Surface Water Use Conflicts Lack Basis, Are Outside the Scope of This Proceeding, and Fail to Demonstrate a Genuine Dispute with the ER

Petitioners argue that the ER is deficient because it does not contain "any analysis of new and significant information regarding sea level rise relating to . . . Surface water use conflicts

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171 Petition at 44.

172 *See id*. at 30-31. The only potential difference is that Petitioners' argument here appears to be one of omission (*i.e.*, asserting § 4.12 "fails entirely to discuss" sea level rise), whereas Contention 2-E could be viewed as one of adequacy (*i.e.*, asserting § 4.12 "fails to adequately address" sea level rise).

173 *Millstone*, LBP-04-15, 60 NRC at 95; *see also Summer*, CLI-10-1, 71 NRC at 21-22.

(Category 2)."[174] As an initial matter, it is unclear to which license renewal issue Petitioners refer—there are three issues codified in Table B-1 using the phrase "surface water use," but Petitioners do not specify which one they seek to challenge. [175] Nevertheless, as explained below, none of those issues are subject to challenge in this proceeding.

The only Category 2 issue related to surface water use identified in Table B-1 is "Surface water use conflicts (plants with cooling ponds or cooling towers using makeup water from a river)."[176] However, as explained in the ER, Turkey Point does not use "makeup water from a river."[177] Accordingly, this issue is inapplicable to Turkey Point and therefore not subject to challenge in this proceeding.[178] The other two issues related to surface water use—"Surface water use and quality (non-cooling system impacts)" and "Surface water use conflicts (plants with once-through cooling systems)"—are Category 1 issues.[179] Accordingly, they are not subject to challenge here because Petitioners have neither sought nor obtained a waiver to do so.[180] And to the extent Petitioners may have intended to challenge some *other* unspecified license renewal issue related to "surface water use conflicts," they simply have not identified that issue.

Additionally, Petitioners' arguments on this topic (which are commingled with their arguments on groundwater use conflicts) are also unsupported, and fail to demonstrate a genuine material dispute with the ER, as explained in Subsection 3, below.

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174 Petition at 40, 44.

175 Table B-1.

176 Table B-1.

177 ER at 6-2.

178 *Id*.

179 *Id*.

180 *Vt. Yankee*, CLI-07-3, 65 NRC at 22.

3. Petitioners' Arguments Regarding Sea Level Rise and Groundwater Use Conflicts Are Outside the Scope of This Proceeding, Unsupported, and Fail to Demonstrate a Genuine Material Dispute

Petitioners also argue that the ER is deficient because it does not contain "any analysis of new and significant information regarding sea level rise relating to . . . Groundwater use conflicts (plants that withdraw more than 100 gallons per minute) (Category 2)."[181] The GEIS explains that the groundwater use conflicts issue pertains to a plant's "pumping of groundwater" that has "the potential to create conflicts with other local groundwater users," and notes that "allocation is normally determined through a State issued permit."[182] As detailed below, Petitioners fail to assemble a cogent argument relevant to the Category 2 issue of groundwater use conflicts. Moreover, Petitioners do not discuss or analyze any information contained in the ER's consideration of groundwater use conflicts. Ultimately, Petitioners have not provided adequate support for their conclusion that the ER is somehow deficient as to this issue, and they have not identified a genuine dispute with the ER.

Petitioners commingle their arguments regarding "surface water use conflicts" (which are not subject to challenge here)[183] and groundwater use conflicts in a single subsection of the Petition at pages 44 and 45.[184] However, Petitioners do not identify which assertions pertain to which issue. Thus, the parties and the Board are left to speculate as to the arguments Petitioners intended to make. The entire discussion consists only of these five sentences:

1. "The Environmental Report erroneously fails to account for the effect sea level rise will have on freshwater availability, ground water resources, and release of polluted cooling water into Biscayne Bay."

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[181] Petition at 40, 44.

[182] GEIS at 4-48.

[183] *See supra* Section VII.D.2.

[184] Petition at 44-45.

2. "The Environmental Report's analysis of water resources impacts rests on the assumption that the cooling canal system is a "closed-loop" system and will not release of radionuclides or other pollution into the environment—an assumption that will no longer be valid once sea level rise has eliminated the "closed-loop" nature of the cooling canal system."[185]

3. "Climate change will result in sea level rise and more extreme and more frequent storm surges at Turkey Point."

4. "Sea level rise will result in a frequent interchange of water from Biscayne Bay and the cooling canal system."

5. "These effects paint a "seriously different picture of the environmental consequences of the action than previously considered," and therefore must be considered."

As best FPL can ascertain, none of Petitioners brief arguments in this section of the Petition pertain to the issue of groundwater use conflicts. Nevertheless, as more fully explained in response to Contention 1-E,[186] the ER fully evaluates potential groundwater use conflicts, and describe the various state and local permits that govern related issues. [187] Nothing in this discussion articulates an admissible challenge to the ER's consideration of groundwater use conflicts. Accordingly, Petitioners arguments here do not support an admissible contention.

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Because Petitioners arguments are unsupported, outside the scope of this proceeding, and fail to raise a genuine dispute, as required by 10 C.F.R. §§ 2.309(f)(1)(iii), (v), and (vi), Contention 3-E must be rejected.

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[185] Petitioners also allege that the CCS is, in fact, *not* a closed-loop system because it interacts with surface water and groundwater. Petition at 44 n.189. However, such interactions are clearly understood and embedded in the definition of closed-cycle cooling as used by the NRC. *See, e.g.*, GEIS at 4-42 (recognizing "Closed-cycle cooling is not completely closed.").

[186] *See supra* Section V.B.2.

[187] ER at 4-22 to 4-23; ER Supplement, Attach. 1.

VIII. PROPOSED CONTENTION 4-E (AFFECTED ENVIRONMENT) IS IMMATERIAL, UNSUPPORTED, AND FAILS TO DEMONSTRATE A GENUINE DISPUTE WITH THE ER

In this contention, Petitioners allege that the Affected Environment portion of the ER (in particular, the Meteorology and Air Quality, Potential for Flooding, and Groundwater Resources subsections) fails to describe the "reasonably foreseeable affected environment" during the SLR period.[188] Petitioners argue that a "description of the environment *as it exists today* is legally insufficient" under NEPA requirements.[189] More specifically, Petitioners fault the ER for purportedly excluding discussion of various climate-change related topics, including "sea level rise, increased air temperature, increased surface water temperature, acidification, annual precipitation, drought, and increased storm intensity."[190] Petitioners also broadly assert that this purported failure impacts the ER's analyses of environmental impacts, mitigating actions, and alternatives analysis, rendering them legally insufficient as well.[191]

As explained in Subsection A below, Petitioners identify no legal obligation under Part 51 that requires license renewal environmental reports to consider the "reasonably foreseeable" affected environment. And no such obligation exists. Accordingly, proposed Contention 4-E fails to identify an issue material to the outcome of the proceeding. Moreover, as discussed in Subsection B, Petitioners' resource-specific arguments are variously immaterial, unsupported, and fail to demonstrate a genuine dispute with the ER—largely because they entirely disregard, rather than dispute, the extensive relevant information it contains. Ultimately, Contention 4-E must be rejected as inadmissible.

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188 Petition at 47, 55-58.

189 *Id*. at 48.

190 *Id*.

191 *Id*. at 47.

A. Part 51 Does Not Require the ER to Describe the "Reasonably Foreseeable" Affected Environment

Petitioners' fault the ER for purportedly failing to describe the *reasonably foreseeable* affected environment, and argue this failure renders the ER "legally insufficient" under NEPA.[192] But Petitioners cite no controlling legal authority for this proposition, and Part 51 contains no such requirement. To the extent proposed Contention 4-E seeks to impose upon FPL a requirement that does not exist in Part 51, it also is an impermissible challenge to Commission regulations, and thus outside the scope of this proceeding.

First, Part 51 does not, as Petitioners allege, contain a requirement that environmental reports describe the "reasonably foreseeable affected environment." Part 51 regulations at 10 C.F.R. § 51.53(c)(2), which Petitioners cite as the basis for their contention, require merely that environmental reports "describe in detail the affected environment around the plant." The *plain language of the regulation* does not require what Petitioners claim. In contrast, when the Commission has intended to create a duty to consider a "reasonably foreseeable" aspect of something, it has done so *clearly and expressly*.[193] For example, Part 51 requires environmental report cumulative impacts discussions to consider "reasonably foreseeable future actions."[194] Thus, the Commission simply chose *not* to do so in 10 C.F.R. § 51.53(c)(2).

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192 *Id*. at 48.

193 *Cf., e.g.*, *Central Bank of Denver v. First Interstate Bank*, 511 U.S. 164, 176-77 (1994) ("Congress knew how to impose aiding and abetting liability when it chose to do so," it did not use the words "aid" and "abet" in the statute at issue, and hence did not impose aiding and abetting liability); *Franklin Nat'l Bank v. New York*, 347 U.S. 373, 378 (1954) (finding "no indication that Congress intended to make this phase of national banking subject to local restrictions, as it has done by express language in several other instances"); *FCC v. NextWave Personal Communications, Inc.*, 537 U.S. 293, 302 (2003) (when Congress has intended to create exceptions to bankruptcy law requirements, "it has done so clearly and expressly").

194 10 C.F.R. § 51.53(c)(3)(ii)(O).

NRC guidance corroborates this interpretation. Various NRC guidance documents explain—in considerable, resource-by-resource detail—the information Part 51 demands of applicants in the Affected Environment section of environmental reports.[195] This guidance includes no discussion of the "reasonably foreseeable affected environment," nor does it indicate that any of the following aspects of the environment must be described: "sea level rise, increased air temperature, increased surface water temperature, acidification, annual precipitation, drought, and increased storm intensity."[196]

Notwithstanding, Petitioners argue that "[a] description of the affected environment as it exists today is *legally insufficient*" to satisfy NEPA requirements—as if it were a well-settled principle of controlling law.[197] To the contrary, the phrase "reasonably foreseeable affected environment" appears in only *one* published federal court case—that being the *AquAlliance* case cited by Petitioners.[198] However, even that case (which is a district court case, thus *not* controlling precedent) fails to provide adequate support for Petitioners' argument.

In the court's decision, the phrase "reasonably foreseeable affected environment" merely appears as a quote from a draft CEQ guidance document.[199] Importantly, that language had *no bearing* on the outcome of the litigation. To the extent Petitioners assert that the *AquAlliance* case supports their claim that consideration of "reasonably foreseeable affected environment" is a legal requirement, they simply misread the holding in that case. In fact, the court said nothing

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195 RG 4.2 at 13-25; ESRP § 3.0.

196 Petition at 48.

197 *Id*.

198 *Id*. (citing *AquAlliance v. U.S. Bureau of Reclamation*, 287 F.Supp.3d 969 (E.D. Cal. 2018)).

199 *AquAlliance*, 287 F.Supp.3d at 1028 (citing "Draft NEPA Guidance on Consideration of the Effects of Climate Change and Greenhouse Gas Emissions" (Feb. 18, 2010)). That guidance was subsequently withdrawn. *See* Withdrawal of Final Guidance, 82 Fed. Reg. at 16,576.

about a legal duty to describe the "reasonably foreseeable affected environment" in environmental documents.[200] Accordingly, proposed Contention 4-E lacks an appropriate basis, is immaterial, unsupported, and fails to raise a genuine dispute with the ER, contrary to 10 C.F.R. §§ 2.309(f)(1)(ii) and (iv)-(vi).

"[C]ontentions that advocate stricter requirements than agency rules impose" also are outside the scope of adjudicatory proceedings.[201] To the extent proposed Contention 4-E advocates a requirement that FPL describe not only the affected environment, but also the "reasonably foreseeable affected environment"—a stricter requirement than 10 C.F.R. § 51.53(c)(2) imposes—it also is outside the scope of this proceeding and must be rejected.

B. Petitioners' Resource-Specific Arguments Are Immaterial, Unsupported, and Fail to Raise a Genuine Dispute

1. Meteorology and Air Quality

Petitioners argue that the ER's Affected Environment discussion of Meteorology and Air Quality "omits information about reasonably foreseeable increases in the ambient air temperature during the license renewal period."[202] Petitioners again, however, disregard rather than dispute the relevant discussion in the ER.

As relevant to proposed Contention 4-E, Section 3.3 of the ER describes the affected environment as to Meteorology and Air Quality. This discussion provides all relevant information specified in applicable NRC guidance.[203] But Petitioners don't cite, acknowledge,

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200 *AquAlliance*, 287 F.Supp.3d at 1031-32 (holding that an agency's environmental conclusions were deficient because they did not square with the underlying data in the EIS).

201 *Crow Butte Res., Inc.* (Marsland Expansion Area), LBP-13-6, 77 NRC 253, 284 (2013), *aff'd*, CLI-14-2, 79 NRC 11 (2014) (citing multiple previous decisions holding the same); *see also, e.g.*, *Turkey Point*, LBP-01-6, 53 NRC at 159, *aff'd on other grounds*, CLI-01-17, 54 NRC 3 (2001).

202 Petition at 55.

203 *See* RG 4.2 at 15-16; ESRP 3.2.

discuss, or challenge any content in Section 3.3 of the ER—none, whatsoever. Thus, Petitioners' challenge does not—indeed, could not—demonstrate a genuine material dispute with the ER.

Furthermore, Petitioners' various arguments regarding this topic are unsupported and speculative. For example, Petitioners suggest that "higher [ambient air] temperatures affect the cooling canal system's heat exchange capacity either directly, by warming the water, or indirectly via degraded water quality."[204] They cite Section 4.6.2.4 of the ER as support for this proposition.[205] However, the cited discussion does not support Petitioners' proposition. Rather, it explains that, in 2014, CCS heat exchange capacity was impacted by:

> lower than average precipitation into the CCS during 2011 through early 2014; reduced circulation within the CCS; periods of degraded water quality in the CCS during 2012 and 2013 (increased salinity, turbidity, and algal concentration); and decreased CCS heat exchange efficiency from historical levels in 2013 and 2014, likely due to significant blockages and increased sediment levels principally in the northern segments of the CCS.[206]

This discussion says *nothing* about a correlation between "ambient air temperature" and CCS heat exchange capacity. Nor does it explain Petitioners' proposition that ambient air temperatures somehow indirectly "degrade[] water quality." A Petitioners' misreading of a document is insufficient basis for an admissible contention.

Likewise, Petitioners speculate that Turkey Point may not be able to "run as efficiently as predicted, or at all," purportedly due to increases in "ambient air temperature."[207] Petitioners offer no support—none at all—for this bare speculation. And to the extent Petitioners argue that FPL will need to "implement [some unspecified] measures" in the future if CCS temperatures

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[204] Petition at 56.

[205] *Id*. n.250.

[206] ER at 4-33 to 4-34.

[207] Petition at 55-56.

exceed current technical specifications, they provide no corresponding support, or explanation of why this matter (presumably governed under 10 C.F.R. Part 50), even if true, would be environmentally significant and thus material to the outcome of the proceeding. Ultimately, Petitioners' arguments fail to demonstrate the level of support required for an admissible contention, and fail to demonstrate a genuine dispute with the application on a material issue of law or fact.

2. Potential for Flooding

Petitioners argue that the ER's Affected Environment discussion of the Potential for Flooding "omits relevant information about reasonably foreseeable and significant sea level rise."[208] Once again, Petitioners disregard, rather, than dispute the relevant Affected Environment discussion in the ER. Furthermore, Petitioners' line of argument is entirely speculative and unsupported.

The ER describes the Affected Environment regarding the Potential for Flooding in Section 3.6.1.3, which supplies all relevant information identified in the NRC guidance on this topic.[209] This section discusses information such as FEMA floodplain data, various flood control projects, and the highest historical tide measured near the site. But Petitioners disregard rather than dispute the content of Section 3.6.1.3 of the ER. Commission regulations require more to demonstrate a genuine dispute with the application.

Additionally, Petitioners' arguments are speculative and unsupported. Petitioners cite to FPL's post-Fukushima flood hazard reevaluation and other statements regarding sea level rise—purportedly to demonstrate that it is "reasonably foreseeable"—and then leap to a conclusion that

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[208] *Id*. at 56.

[209] *See* RG 4.2 at 16-17; ESRP 3.4.

sea level rise could render Turkey Point "unable to achieve the stated 1,632 megawatts output due to flooding."[210] This assertion is pure conjecture. As noted in FPL's response to Contention 3-E, the NRC's 10 C.F.R. Part 50 safety oversight process explicitly considers changes in the severity or frequency of natural hazards, such as flooding from storm surge and sea level rise, and can require corresponding design or operational modifications to address those changing hazards. The very document Petitioners cite—FPL's post-Fukushima flood hazard reevaluation—demonstrates this process in action—an ongoing 10 C.F.R. Part 50 process that is outside the scope of this proceeding.

Furthermore, to the extent Petitioners cite the Declaration of Mr. Lochbaum,[211] they have not identified a material issue. In that Declaration, Mr. Lochbaum argues that the NRC cannot make its ultimate *safety* finding regarding "reasonable assurance" under 10 C.F.R. § 54.29 because FPL's post-Fukushima flood hazard reevaluation only evaluated hazards through the end of the current license terms. However, as with a similar contention in the licensing proceeding for Turkey Point Units 6 and 7, Petitioners fail to explain why the regulation they cite as the basis for this contention, 10 C.F.R. § 51.53(c)(2), "which is a NEPA-implementing regulation that requires an applicant to discuss the impact of the proposed action '*on the environment*' . . . requires the ER to discuss the impacts of sea level rise on the safe operation of the plant."[212] Accordingly, to the extent proposed Contention 4-E "alleges an operational safety matter has not been adequately analyzed in the ER, it fails to demonstrate the issue is material to the findings

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[210] Petition at 57.

[211] *Id*. at 48 n.207 & 56 n.251.

[212] *Turkey Point*, LBP-11-6, 73 NRC at 216 (emphasis in original).

the NRC Staff must make to support its environmental review, contrary to 10 C.F.R. § 2.309(f)(1)(iv)."[213]

Ultimately, Petitioners fail to demonstrate the requisite support for an admissible contention, contrary to 10 C.F.R. § 2.309(f)(1)(v). Furthermore, contrary to 10 C.F.R. § 2.309(f)(1)(iv) and (vi), these arguments fail to demonstrate that a discussion of future sea level rise must, as a matter material to the outcome of this proceeding, be included in the "Affected Environment" section of the ER.

3. Groundwater Resources

Finally, Petitioners argue that FPL's ER "fails to address the reasonably foreseeable condition of groundwater resources during the relevant time period, 2032–2053."[214] Once again, Petitioners fail to acknowledge or challenge any information in the relevant ER discussion. Moreover, the sole line of argument offered by Petitioners amounts to nothing more than unsupported speculation.

The Affected Environment for Groundwater Resources is described in Section 3.6.2 of the ER, which describes groundwater aquifers, the local hydrogeology, hydraulic properties, potentiometric surfaces, the groundwater protection program, and sole source aquifers. Like the other resource areas above, this section of the ER provides all relevant information recommended by NRC guidance.[215] But Petitioners offer no explanation for why it purportedly is deficient in some material respect. Once again, Petitioners cannot demonstrate a genuine material dispute with an application if they ignore the relevant substance of that application.

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213 *Turkey Point*, LBP-11-6, 73 NRC at 216.

214 Petition at 57-58.

215 *See* RG 4.2 at 17; ESRP 3.4.

Petitioners' only argument here appears to be a quarrel with an assertion in a different part of the ER—specifically the impact evaluation for groundwater use conflicts discussion in Section 4.5.3.4. There, FPL explained that it does not anticipate groundwater withdrawal increases above presently-permitted quantities during the SLR period.[216] Petitioners speculate that, "[i]n fact, it is *highly probable* that groundwater resources will be inadequate, putting Turkey Point's need for groundwater in conflict with the need for drinking water of the population of South Florida."[217] But Petitioners offer nothing to support this assertion. 10 C.F.R. § 2.309(f)(1)(v) requires far more than unvarnished speculation to demonstrate adequate support for an admissible contention.

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Because Contention 4-E fails to satisfy at least one element of 10 C.F.R. § 2.309(f)(1), it is inadmissible and must be rejected.

IX. PROPOSED CONTENTION 5-E (ENVIRONMENTAL IMPACTS) IS IMMATERIAL, UNSUPPORTED, AND FAILS TO DEMONSTRATE A GENUINE DISPUTE WITH THE ER

In this contention, Petitioners allege that the ER is deficient because it purportedly does not consider "how the salinization of freshwater wetlands caused by the cooling canal system will impact threatened or endangered species, and otherwise harm important plant and animal habitats," allegedly contrary to two provisions in Part 51 requiring impacts of the proposed action to be considered: one related to fish and shellfish resources; and another related to

[216] Petition at 58 (citing ER at 4-23).

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

important plant and animal habitats and threatened or endangered species.[218] As discussed further below, proposed Contention 5-E is inadmissible for multiple reasons.

A. Petitioners' Arguments Regarding Fish and Shellfish Resources Are Unsupported and Fail to Demonstrate a Genuine Dispute

Part 51 requires environmental reports to analyze the impacts of the proposed action for all Category 2 issues. More specifically, as relevant to this aspect of proposed Contention 5-E, applicants must "assess the impact of the proposed action on fish and shellfish resources resulting from thermal changes and impingement and entrainment."[219] The Category 2 issues associated with this requirement are:

- Impingement and entrainment of aquatic organisms (plants with once-through cooling systems or cooling ponds); and
- Thermal impacts on aquatic organisms (plants with once-through cooling systems or cooling ponds).[220]

FPL considers impacts regarding these issues in Sections 4.6.1 and 4.6.2 of the ER, respectively.

Contrary to Petitioners' description of the contention,[221] proposed Contention 5-E actually contains no discussion of impingement, entrainment, or thermal issues related to fish or shellfish resources. Nor do they cite, quote, or otherwise discuss FPL's consideration of these issues in Sections 4.6.1 or 4.6.2 of the ER—or purport to identify or explain some deficiency therein. Accordingly, this aspect of proposed Contention 5-E fails entirely to demonstrate a genuine dispute with the application, or provide adequate support for an admissible contention on this issue.

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[218] *Id*. at 59 (citing 10 C.F.R. §§ 51.53(c)(3)(ii)(B) and (E)).

[219] 10 C.F.R. § 51.53(c)(3)(ii)(B).

[220] Table B-1; RG 4.2 at 34-37.

[221] Petition at 59 n.259, 63 n.279, 64 n.285.

B. Petitioners' Arguments Regarding Impacts to Freshwater Wetlands Caused by the CCS Are Outside the Scope of This Proceeding

Petitioners allege the ER is deficient because it purportedly does not consider impacts to "freshwater wetlands caused by the cooling canal system,"[222] and ensuing impacts to important plant and animal habitats and threatened or endangered species. Petitioners do not identify the specific license renewal issue from Table B-1 they purport to challenge. Nevertheless, as explained below, Petitioners' arguments pertain to a Category 1 issue for which no plant-specific analysis is required.

As relevant here, 10 C.F.R. § 51.53(c)(3)(ii)(E) (cited by Petitioners as the basis for this contention) requires consideration of impacts to "important plant and animal habitats" and "threatened or endangered species."[223] The Category 2 issues that correspond to this requirement are:

- Effects on Terrestrial Resources (Non-Cooling System Impacts); and
- Threatened, Endangered, and Protected Species and Essential Fish Habitat.[224]

Petitioners fault the ER for failing to include a site-specific analysis of purported impacts to "freshwater wetlands *caused by the cooling canal system*."[225] Because Petitioners do not allege *non*-cooling system impacts, proposed Contention 5-E could not be considered to challenge the issue in the first bullet. To the extent proposed Contention 5-E could be read as a challenge to the issue in the second bullet, those arguments are addressed in Section IX.C, below. But to the extent Petitioners allege an omitted discussion of impacts to "important plant

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222 *Id*. at 59.

223 10 C.F.R. § 51.53(c)(3)(ii)(E).

224 Table B-1; RG 4.2 at 34-37.

225 Petition at 59 (emphasis added).

and animal habitats," these issues have been generically considered by the NRC and codified in Part 51 as the Category 1 issue of "Cooling system impacts on terrestrial resources (plants with once-through cooling systems or cooling ponds)."[226] Therefore, they are outside the scope of this proceeding.

In evaluating the Category 1 issue of "Cooling system impacts on terrestrial resources (plants with once-through cooling systems or cooling ponds)," the GEIS explained that:

> Groundwater quality can be degraded by contaminants present in cooling ponds and cooling canals. . . . In addition, biota could be exposed to contaminants at locations of groundwater discharge, such as wetlands or riparian areas.[227]

This discussion squares with Petitioners' theory that "groundwater quality" has been "degraded by contaminants" such as ammonia or saline water[228] "present in . . . cooling canals; and biota [have been] exposed to [those] contaminants at locations of groundwater discharge, such as wetlands." Likewise, NRC regulations explain that this Category 1 issue includes impacts from "reduced habitat quality" and impacts to "wildlife exposed to the contaminated water or aquatic food sources."[229] Thus, the NRC has already generically evaluated this precise issue. In fact, the NRC *explicitly* considered "the flow of hypersaline groundwater from the [Turkey Point] cooling canals toward the Everglades" when it evaluated this issue; ultimately,

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[226] Table B-1; GEIS at 4-64 to 4-69 (considering "wetlands" as a "terrestrial resource" in evaluating this issue).

[227] GEIS at 4-68.

[228] *See* Petition at 62. Petitioners cite a recent letter from DERM for its discussion of ammonia. *Id*. at 62 n.275. But that document demonstrates that the issue is being handled within the process set forth in the DERM CA, a process upon which FPL reasonably relies. *See* Letter from W. Mayorga, DERM, to M. Raffenberg, FPL (July 10, 2018) (Petition Attach. P) (the "RE:" line of the letter indicates that it was sent in the normal course of activities conducted pursuant to the CA).

[229] Table B-1.

the NRC concluded its effects would be SMALL, and codified it as a Category 1 issue in Part 51.[230]

Accordingly, proposed Contention 5-E is outside the scope of this adjudicatory proceeding because it attacks Commission regulations and Petitioners do not have a waiver to do so.[231]

C. Petitioners' Arguments Regarding Impacts to Threatened or Endangered Species Are Unsupported, Immaterial, and Fail to Demonstrate a Genuine Dispute

To the extent that Petitioners' alleged impacts could be viewed as within the scope of the Category 2 issue of "Threatened, Endangered, and Protected Species and Essential Fish Habitat," they still have not raised an admissible contention. Petitioners assert that "[t]he discharge of saline groundwater from the cooling canal system is now degrading" "freshwater wetlands that are important habitat for plants and animals, including multiple endangered species."[232] FPL does not dispute that the CCS interacts with the groundwater in the aquifer below, or that the aquifer immediately below the CCS is saturated with higher salinity water.[233] But Petitioners do not provide sufficient support for their speculative theory that this interaction "is now degrading" wetlands or otherwise adversely impacting threatened, endangered, or protected species, or essential fish habitat in some material way not considered in the ER. Section 4.6.6 of the ER explains that "FPL is not aware of any adverse impacts regarding threatened, endangered, and

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230 GEIS at 4-68 to 4-69.

231 *Vt. Yankee*, CLI-07-3, 65 NRC at 22.

232 Petition at 60-61.

233 ER at 3-111. As noted in the report cited by Petitioners, Petition at 60 n.264, this interaction "has always been recognized"—even before regulators approved construction of the CCS. *See* D. Chin, The Cooling-Canal System at the FPL Turkey Point Power Station at 12 (undated) (Petition Attach. O).

protected species *attributable to the site*."[234] Petitioners cite no authority that contradicts this assertion.

Dispositively, Petitioners do not cite, quote, or discuss the content of Section 4.6.6 of the ER, which provides FPL's extensive species-by-species analysis of potential impacts of the proposed action on threatened or endangered species.[235] Moreover, given the thorough discussion throughout the ER regarding administrative controls, regulatory programs, mitigation measures, and monitoring programs (*e.g.*, the crocodile management plan discussed above in Section V.B.2, and the CCS salinity reduction efforts discussed above in Section V.B.3), and consultation requirements with FWS, National Marine Fisheries Service ("NMFS"), Florida Fish and Wildlife Conservation Commission ("FFWCC"), and other agencies—none of which Petitioners evaluate or challenge—Petitioners simply have not demonstrated how their arguments are environmentally significant and thus material to the outcome of this proceeding, or demonstrate a genuine dispute with the application.

In support of their argument that saline water from the CCS is "degrading" wetlands, Petitioners reference a July 2018 letter from DERM to FDEP (requesting information on a proposed permit modification) explaining that salinity in a canal west of the CCS has increased in recent years.[236] Petitioners imply that the CCS is the cause of the increased salinity; however, the cited discussion makes *no assertion* regarding the cause(s) of the increase.[237] The letter merely observes that the canal with increased salinity "is connected to upstream secondary

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234 ER at 4-43 (emphasis added).

235 *Id*. at 4-37 to 4-43.

236 Petition at 62 n.272 (citing Letter from L. Hefty, DERM, to L. Crandall & T. Rach, FDEP at 3 (July 18, 2018) (Petition, Attach. M) ("DERM Extension Request")).

237 DERM Extension Request at 3.

canals."[238] The letter says nothing about existing or "further" "degradation" of wetlands, or the ability or likelihood of saline canal water to "enter" any wetlands. Petitioners' misreading of the document is insufficient grounds for an admissible contention.

Furthermore, Petitioners cite the FWS BiOp from the Turkey Point 6 and 7 licensing action for the proposition that six endangered species "depend on" wetland habitat in the Model Lands Basin.[239] As an initial matter, the Model Lands Basin is not coterminous with the "wetland habitat" referenced in the FWS BiOp.[240] Moreover, FWS notes that four of the six species named by Petitioners have no defined "critical habitat."[241] Thus, the BiOp does not support Petitioners' assertion that those species "depend" on the Model Lands Basin. Further, FWS evaluated the Turkey Point 6 and 7 action (*i.e.*, construction of an entirely new power plant—which arguably involves greater environmental impacts than a mere license renewal)—and concluded that it would *not* adversely modify the critical habitat of the crocodile or jeopardize the continued existence of any endangered species.[242] Ultimately, this document provides no support for Petitioners' assertion that the CCS is "degrading" critical habitat of endangered species. Accordingly, Petitioners have not provided sufficient support for an admissible contention, contrary to 10 C.F.R. § 2.309(f)(1)(v).

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Accordingly, because Contention 5-E fails to satisfy at least one element of 10 C.F.R. § 2.309(f)(1), it is inadmissible and must be rejected.

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238 *Id*.

239 Petition at 60 (citing BiOp at 44).

240 The FWS defined the "action area" for each species separately; and most of those "action areas" encompass only the site footprint and certain connected areas. BiOp at 19, 21-22, 24.

241 *Id*. at 13.

242 *Id*. at 45.

X. CONCLUSION

For the foregoing reasons, Petitioners have not submitted any admissible contention in this Turkey Point SLR proceeding. Accordingly, the Board must deny the Petition in its entirety.

Respectfully submitted,

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Dated in Washington, D.C.
this 27th day of August 2018

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of	)	Docket Nos. 50-250-SLR and 50-251-SLR
FLORIDA POWER & LIGHT COMPANY	)	ASLBP No. 18-957-01-SLR-BD01
(Turkey Point Nuclear Generating Units 3 and 4)	)	August 27, 2018

CERTIFICATE OF SERVICE

Pursuant to 10 C.F.R. § 2.305, I certify that, on this date, a copy of the foregoing "Applicant's Answer Opposing Request for Hearing and Petition to Intervene Submitted by Friends of the Earth, Natural Resources Defense Council, and Miami Waterkeeper" was served upon the following persons by Electronic Information Exchange (the NRC's E-Filing System) and by electronic mail as indicated by an asterisk (*), in the above-captioned docket.

U.S. Nuclear Regulatory Commission
Office of the Secretary of the Commission

U.S. Nuclear Regulatory Commission
Atomic Safety and Licensing Board Panel
E. Roy Hawkens, Chairman
Sue Abreu, Administrative Judge
Michael F. Kennedy, Administrative Judge

U.S. Nuclear Regulatory Commission
Office of the General Counsel
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